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ISN 81733

NATURAL RESOURCES MANAGEMENT PROJECT PAPER AMENDMENT FOR NAMIBIA

ENTITLED

LIVING IN A FINITE ENVIRONMENT

(LIFE)

(690-0251.73)

AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT DATA SHEET

1. TRANSACTION CODE: C (A = Add, C = Change, D = Delete)

Amendment Number: 3

DOCUMENT CODE: 3

COUNTRY ENTITY: NAMIBIA

3. PROJECT NUMBER: 690-0251.73

4. BUREAU OFFICE: USAID NAMIBIA — AFR

5. PROJECT TITLE (maximum 40 characters): REGIONAL NATURAL RESOURCES MANAGEMENT-NAMIBIA

6. PROJECT ASSISTANCE COMPLETION DATE (PACD): MM DD YY 0 8 3 1 9 7

7. ESTIMATED DATE OF OBLIGATION (Under B, enter 1, 2, 3, or 4)

A. Initial FY 9 2 B. Quarter 4 C. Final FY 9 4

8. COSTS ($000 OR EQUIVALENT $1 =)

A. FUNDING SOURCE	LAST FY B. FX	LAST FY C. L/C	LAST FY D. Total	LIFE OF PROJECT E. FX	LIFE OF PROJECT F. L/C	LIFE OF PROJECT G. Total
AID Appropriated Total	3,000		3,000	10,500		10,500
Grant	3,000		3,000	10,500		10,500
Loan						
Other U.S. 1						
Other U.S. 2						
Host Country		1,000	1,000		4,098	4,098
Other Donors					945	945
TOTALS	3,000	1,000	4,000	10,500	5,043	15,543

9. SCHEDULE OF AID FUNDING ($000): 32,030

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH. CODE	D. OBLIGATIONS TO DATE 1. Grant	D. 2. Loan	E. AMOUNT APPROVED THIS ACTION 1. Grant	E. 2. Loan	F. LIFE OF PROJECT 1. Grant	F. 2. Loan
(1)	SADF	200	098		3,000		10,500	
(2)								
(3)								
(4)								
TOTALS					3,000		10,500	

10. SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each): 031 050 200 610 620 964

11. SECONDARY PURPOSE CODE: 100

12. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each): A. Code: BR ENV PVOU PVON

B. Amount:

13. PROJECT PURPOSE (maximum 480 characters)

The purpose of this project is to improve the social and economic well-being of people living in marginal agricutlural areas and buffer zones to national parks and game reserves by implementing sustainable community-based wildlife and natural resources conservation and utilization.

14. SCHEDULED EVALUATIONS: Interim MM YY 0 4 9 5; Final MM YY 0 4 9 7

15. SOURCE/ORIGIN OF GOODS AND SERVICES: X 000 X 941 X Local X Other (Specify) 935

16. AMENDMENTS/NATURE OF CHANGE PROPOSED (This is page 1 of a ____ page PP Amendment.)

This amendment adds the Namibian component, titled "Living in a Finite Envrionment (LIFE)" to the Regional Natural Resources Management Project (NRM).
The Namibian component, has a LOP funding of $10.5 million over the period FY92 to FY97

17. APPROVED BY

Signature: Richard L. Shortlidge, Jr.

Title: USAID REPRESENTATIVE, Mission to Namibia

Date Signed: MM DD YY 0 9 0 2 9 2

18. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION: MM DD YY 09 13 09 92

Authority: 92 STATE 280948

LIVING IN A FINITE ENVIRONMENT (LIFE)

NATURAL RESOURCES MANAGEMENT PROJECT AMENDMENT - NAMIBIA

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SUMMARY AND RECOMMENDATIONS

A. Recommendations

It is recommended that the USAID Representative to Namibia approve the LIFE Project as presented in this Project Paper Amendment for a LOP funding of $10.5 million over a five year implementation period. As recommended in Harare Cable no. 8054 the USAID/Zimbabwe Director requested AID/Washington to delegate authority to Namibia to approve the project and to negotiate and execute a Project Grant Agreement with the Government of the Republic of Namibia (GRN). This DOA was given in State Cable no. 280948. The bilateral Project Grant Agreement will specify that a Cooperative Agreement with an International or US PVO for implementation of all project components and a research grant to the Zoological Society of San Diego for the Etosha catchment area research component be negotiated and executed.

B. Summary

The project will provide assistance to the GRN's Ministry of Wildlife, Conservation and Tourism, NGOs and other organizations to carry out a range of activities in the poor rural communities of Caprivi, both East and West, Bushmanland and the Etosha catchment area designed to conserve Namibia's biodiversity and to manage its natural resources in a sustainable manner. The purpose is to improve the social and economic well-being of the people residing in these poor rural communities living on marginal agricultural and/or buffer zones to national parks and game reserves to carry out sustainable, community-based, natural resource conservation and utilization activities.

Namibia is beset with the interrelated development problems of declining land productivity and loss of biodiversity, and starkly disparate socio-economic conditions that resulted from colonialism, apartheid and a protracted liberation war and an immediate post-independence period which has seen the widening of income levels within the black community as those with wealth and financial resources have become richer and those without have become poorer.

Declining land productivity, rapid population growth, land degradation, deforestation, lack of water and salinity of existing water supplies as well as a reduction in the size and diversity of wildlife populations are serious threats to Namibia's ecological system. The deteriorating environmental conditions can only be arrested with the full participation of the indigenous Namibian people who live on marginal land in the rural communal areas or in the buffer zones adjacent to game parks or protected land. The empowerment of these rural communities to manage and have access to the benefits derived from the land they live on is a prerequisite for halting, and hopefully reversing, the degradation of Namibia's land and for promoting the conservation of its natural resources, including wildlife.

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The LIFE project has four complementary, interrelated components that all support community-based natural resource management:

(1) Community-based Natural Resource Management Activities;
(2) Planning and Applied Research;
(3) Environmental Education; and
(4) Regional Coordination and Exchange of Information.

The four project components support the core concept of the sustainable management of Namibia's natural resources by rural communities in the three geographic regions of Caprivi, Bushmanland and the Etosha catchment area.

The first component will finance community-based pilot activities, which will start in Caprivi and Bushmanland and may expand to the Etosha catchment area following completion of the research and planning in this area. These activities will be selected based on their relevance to the ecological, natural resources and human needs of the respective regions.

The second component will fund planning and applied research that is relevant to community-based resource management project activities in these three regions. Research on socio-economic conditions will be done before the start of any pilot initiatives in the Etosha area to ensure that benefits will accrue to the local communities; and, monitoring and evaluation activities will provide valuable information that can be used to adapt on-going projects, develop new ones and share lessons learned with other countries in the SADCC region.

The third component will finance environmental education activities that, directly strengthen the community-based initiatives by providing training for community leaders, community liaison officers and the people in the project's target areas. Enhanced awareness of environmental issues and how to resolve them, will empower local people to design, develop and implement sustainable natural resources activities which are of direct economic and social benefit to them.

The fourth component links the Namibian experience to similar regional programs in Zimbabwe, Malawi, Zambia and Botswana through regional research, conferences, workshops and seminars coordinated by the SADCC Sector Coordinator for Forestry and Wildlife in Malawi.

The project will be implemented over a five year period from FY 92 to FY 97. The anticipated project completion date is August 31, 1997.

By the end of the project, an institutional framework will exist that is characterized by decentralized decision-making and a stronger partnership among the GRN, NGOs and affected rural communities. There will be an increased number of established community-based, decision-making bodies related to natural resource management, and more involvement of Namibia's private sector in supporting sustainable natural resource management and utilization. Participating communities will be empowered to

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control the benefits derived from the land they live on and their interaction with the government and private sector is expected to be improved.

The project was designed by USAID/Namibia staff; the Environmental Planning Unit of the MWCT; representatives from the NGO community; the Regional Legal Advisors based at USAID/Pretoria and USAID Swaziland; Regional Contract Management Officers from REDSO/ESA; USAID/Zimbabwe and USAID/Botswana staff and various consultants with expertise in the environment, conservation, sociology, economics, gender and institutional development and project design. A collaborative approach was used throughout the process which was initiated in August 1991.

The analyses of technical, economic and financial, institutional and social aspects of the project show the project to be feasible and implementable in the regions specified in the project paper. The following conditions precedent to disbursement and special covenants will be included in the Grant Agreement:

1. Conditions Precedent to Disbursement of Funds to the GRN:

(a) First Disbursement: Prior to the first disbursement under the Grant, or to the issuance by A.I.D. of documentation pursuant to which disbursement will be made, the Grantee will, except as the Parties may otherwise agree in writing, furnish to A.I.D. in form and substance satisfactory to A.I.D.:

(1) A written opinion from the Office of the Attorney General, acceptable to A.I.D., that the Agreement has been duly authorized and/or ratified by, and executed on behalf of, the Grantee, and that it constitutes a valid and legally binding obligation of the Grantee in accordance with all of its terms and conditions; and

(2) A statement of the names of the persons holding or acting in the office of the Grantee specified in Section 8.2, and of any additional representatives, together with a specimen signature of each person specified in such statement.

(b) Condition Precedent to Disbursement of Funds to the Nongovernmental Cooperating Recipient for Sub-Agreements to Finance Income Generating, Community Based Wildlife Utilization Activities where Retention of such income by the Community is Impermissible under Namibian law: Prior to the disbursement of funds bu A.I.D. through the planned Cooperative Agreement between A.I.D. and a nongovernmental Cooperating Recipient, or the issuance by A.I.D. of documentation pursuant to which disbursement may be made, to finance income generating, community based activities involving the utilization of wildlife or other natural resources where retention of such income in contrary to or otherwise impermissible under Namibian law, the Government of the Republic of Namibia, except as the Parties to this Project Agreement otherwise agree in writing, shall furnish to A.I.D., in form and substance satisfactory to A.I.D., evidence that legislation, regulations, procedures or other authority necessary to permit and authorize communities to manage, utilize and retain income from such natural resource has been enacted or executed

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and is being implemented.

3. Covenants:

a. The Grantee agrees to use its best efforts to ensure that trainees under the Project are selected from among historically, socially and economically disadvantaged Namibians to the maximum extent practical and feasible.

b. The Grantee agrees that no A.I.D. funds shall be disbursed or otherwise utilized under this Project to provide financial or in-kind support directly to law enforcement or military forces for purposes of the protection of natural resources, including anti-poaching activities, until such time as the Parties hereto agree otherwise in writing and existing authority under United States law is expanded to clearly authorize such financial support. A substantially similar covenant shall be included in all subagreements or contracts under this Grant Agreement.

c. Project Evaluation: The Parties agree to establish an evaluation program as part of the Project. Except as the parties otherwise agree in writing, the program will include, during the implementation of the Project and at one or more points thereafter:

(i) evaluation of progress toward attainment of the objectives of the Project;

(ii) identification and evaluation of problem areas or constraints which may inhibit such attainment;

(iii) assessment of how such information may be used to help overcome such problems; and

(iv) evaluation, to the degree feasible, of the overall development impact of the Project.

C. Cost estimates and plans are incorporated in the design of the project, consistent with the requirements of Section 611 (a) of the foreign Assistance Act of 1961, as amended.

D. An Initial Environmental Determination attached hereto as Annex I was prepared by REDSO/ESA Environmental Officer and approved by AID/Washington per State 224468.

Date: September 2, 1992

PROJECT AUTHORIZATION AMENDMENT NO. 3

Country/Entity:	Namibia and Southern Africa Regional
Project Title:	Natural Resources Management - Namibia (Namibian Component Titled: Living in a Finite Environment (LIFE))
Project Number:	690-0251.73

1. Pursuant to the Foreign Assistance Act of 1961, as amended; the Foreign Operations, Export Financing and Related Programs Appropriations Act of 1991 and the Continuing Resolution P.L. 102-266, of April 1, 1992, appropriating funds for the period April 1, 1992 to September 30, 1992; and Africa Bureau Delegation of Authority (DOA) 551, as amended, I hereby authorize the addition of the Namibia component to the Regional Natural Resources Management Project under the Southern Africa Regional Program. The Namibia component involves planned obligations of not to exceed ten million five hundred thousand United States Dollars (US$10,500,000) in grant funds over a five year period from the date of this authorization to August 31, 1997, subject to the availability of funds in accordance with the A.I.D. OYB/allotment process, to finance foreign exchange and local currency costs for the Namibia component of the project. The planned life of the Namibia component of the project is five years from the date of the initial obligation.

2. I hereby also authorize an increase in the planned obligations under the overall Regional Natural Resources Management Project to thirty-two million thirty thousand United States Dollars ($32,030,000) over an eight year period commencing with the initial authorization on August 18, 1989, and ending on August 31, 1997, subject to the availability of funds in accordance with the A.I.D. OYB/allotment process, to finance foreign exchange and local currency costs for the Project.

3. The overall project consists of assistance, within the framework of SADCC project No. 5.0.18, to facilitate regional cooperation among Zimbabwe, Botswana, Zambia, Namibia and Malawi in managing and protecting the natural resource base of the SADCC region for purposes of sustainable social and economic development as well as protection of ecological diversity and to disseminate knowledge of community management of wildlife resources among SADCC member States.

The project is aimed at (1) strengthening the capacity of participating governmental and nongovernmental organizations to protect, maintain and utilize wildlife and other natural resources, (2) improving the social and economic well-being of the targeted people residing in the communal areas through conservation and utilization programs, and (3) demonstrating, through practical examples, the economic, social, technical and

ecological feasibility and replicability of community-based wildlife and natural resource utilization programs for marginal and buffer areas to national parks and game reserves.

4. The Project is being implemented through a Memorandum of Understanding among A.I.D. and the Governments of the Republics of Zimbabwe, Zambia, Botswana and Malawi, as SADCC Sector Coordinator for Forestry, Fisheries and Wildlife. In 1990, following the independence of Namibia, the Government of Namibia was requested by the SADCC Secretariat to indicate which ongoing or planned SADCC projects it wished to participate in. In its letter to the SADCC Sector Coordinator in Malawi, the Ministry of Wildlife, Conservation and Tourism communicated the Government of Namibia's desire to become a member of the USAID/SADCC Regional Natural Resources Management Project, subject to the availability of donor funding to cover its inclusion in this project. With this amendment to the Project, Namibia will become a fully integrated partner in this A.I.D. financed SADCC activity.

5. In addition to the Memorandum of Understanding, the Project is being implemented through individual bilateral project agreements between A.I.D. and each of the participating SADCC member States. The Namibian component will be implemented through a similar bilateral project agreement to be executed in FY 1992. The Namibian bilateral project agreement, which is to be negotiated and executed by the A.I.D. Representative to Namibia, shall be subject to the following essential terms and covenants and major conditions, together with standard and other terms and conditions as A.I.D. may deem appropriate.

A. Source and Origin of Commodities, Nationality of Services:

The source and origin of commodities and nationality of services (except ocean shipping) financed under the project shall be the United States (Geographic Code 000), Namibia, other SADCC Member States excluding Angola, and other countries included in A.I.D. Geographic Code 935 with respect to foreign exchange and local currency costs, except as A.I.D. may otherwise agree in writing. All reasonable efforts shall be made to maximize procurement from the United States wherever feasible. Ocean shipping financed by A.I.D., shall, except as A.I.D. may otherwise agree in writing, be financed only on flag vessels of the United States or countries included in A.I.D. Geographic Code 941.

B. Conditions Precedent to Disbursement:

1. First Disbursement Prior to the first disbursement under the Grant, or to the issuance by A.I.D. of documentation pursuant to which disbursement will be made, the Grantee will, except as the Parties may otherwise agree in writing, furnish to A.I.D. in form and substance satisfactory to A.I.D.:

(a) A written opinion from the Office of the Attorney General, acceptable to A.I.D., that this Agreement has been duly authorized and/or ratified by, and executed on behalf of, the

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Grantee, and that it constitutes a valid and legally binding obligation of the Grantee in accordance with all of its terms; and

(b) A statement of the names of the persons holding or acting in the office of the Grantee specified in Section 8.2, and of any additional representatives, together with a specimen signature of each person specified in such statement.

2. Condition Precedent to Disbursement of Funds to the Nongovernmental Cooperating Recipient for Sub-Agreements to Finance Income Generating, Community Based Wildlife Utilization Activities where Retention of such income by the Community is Impermissible under Namibian Law:
Prior to the disbursement of funds through the planned Cooperative Agreement between A.I.D. and a nongovernmental Cooperating Recipient, or the issuance by A.I.D. of documentation pursuant to which disbursement may be made, to finance income generating, community based activities involving the utilization of wildlife or other natural resources where retention of such income is contrary to or otherwise impermissible under Namibian law, the Government of the Republic of Namibia, except as the Parties to this Project Agreement otherwise agree in writing, shall furnish to A.I.D. in form and substance satisfactory to A.I.D., evidence that legislation, regulations, procedures or other authority necessary to permit and authorize communities to manage, utilize and retain income from such natural resource has been enacted or executed and may be implemented.

C. Special Covenants

1. The Grantee agrees to use its best efforts to ensure that trainees under the Project are selected from among historically, socially and economically disadvantaged Namibians to the maximum extent practical and feasible.

2. The Grantee agrees that no A.I.D. funds shall be disbursed or otherwise utilized under this Project to provide financial and in-kind support directly to law enforcement or military forces for purposes of the protection of natural resources, including anti-poaching activities, until such time as the Parties hereto agree otherwise in writing and existing authority under United States law is expanded to clearly authorize such financial support. A substantially similar covenant shall be included in all subagreements or contracts under this Grant Agreement.

3. Project Evaluation: The Parties agree to establish an evaluation program as part of the Project. Except as the parties otherwise agree in writing, the program will include, during the implementation of the Project and at one or more points thereafter:

(a) evaluation of progress toward attainment of the objectives of the Project;

(b) identification and evaluation of problem areas or

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(a) evaluation of progress toward attainment of the objectives of the Project;

(b) identification and evaluation of problem areas or constraints which may inhibit such attainment;

(c) assessment of how such information may be used to help overcome such problems; and

(d) evaluation, to the degree feasible, of the overall development impact of the Project.

Authorized by: Richard L. Shortlidge, Jr.
Richard L. Shortlidge, Jr.
A.I.D. Representative
USAID Mission to Namibia

Dated: September 2, 1992

Authority: 92 STATE 280948

Drafted by: RLA: Donald Keene 18 August 1992 Fax

Clearances: RLA: Donald Keene 18 August 1992 Fax

PROG: Mark Johnson 9/2/92

HNRDO: Barbara Belding Draft - 8/31

CONT: Carl Lewis C Lewis 9/2

LIFE

List of Acronyms and Abbreviations

ABS	Annual Budget Submission
ADMADE	Administrative Management Design Program in Zambia
A.I.D.	Agency for International Development
AID/RD	AID/ Washington's Research and Development Office
CAMPFIRE	Communal Areas Management Programme for Indigenous Resources in Zimbabwe
CBD	Commerce Business Daily
CBO	Community-based Organization
DERU	Desert Ecological Research Unit
EE	Environmental Education
EEC	European Economic Community
ELCIN	Evangelic Lutheran Church in Namibia
EXO	Executive Office or Officer
FINIDA	Finnish International Development Agency
FY	Fiscal Year
GRN	Government of the Republic of Namibia
GTZ	Deutsche Gesellschaft fur Technixche Zusammenarbeit
IA	Invitation for Application
IEE	Initial Environmental Examination
IQC	Indefinite Quantity Contract
IRDNC	Integrated Rural Development and Nature Conservation
LIFE	Living in a Finite Environment Project
LIRDP	Luangwa Integrated Resource Development Project in Zambia
LOP	Life-of-Project
MEC	Ministry of Education and Culture
MOHSS	Ministry of Health and Social Services
MWCT	Namibian Government's Ministry of Wildlife, Conservation and Tourism
NEPRU	Namibian Economic Policy Research Unit
NFA	Non-Federal Audit
NGO	Non-Governmental Organization
NISER	Namibian Institute for Social and Economic Research

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NNDFN	Nyae Nyae Devlepment Foundation of Namibia
NNF	Namibia Nature Foundation
NORAD	Norwegian Agency for Development
NRMP	Regional Natural Resources Management Project
OMB	Office of Management and Budget
PACD	Project Assistance Completion Date
PCC	Project Coordinating Committee
PID	Project Identification Document
PIL	Project Implementation Letter
PIO	Project Implementation Order
PSC	Personal Services Contractor
PVO	Private Voluntary Organization
REDSO/ESA	Regional Economic Development Office/ Eastern and Southern Africa
RCO	Regional Contracting Officer
RIG	Regional Inspector General
RLA	Regional Legal Advisor
SADCC	Southern Africa Development Coordination Conference
SARP	Southern Africa Regional Program
SC	LIFE Project Steering Committee
SIDA	Swedish International Development Authority
SOW	Scope of Work
UNICEF	United Nations Children Fund
USAID	United States Agency for International Development
USG	United States Government
WWF	World Wildlife Fund

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PROJECT PAPER

SUPPLEMENT

PROJECT PAPER

SUPPLEMENT

LIVING IN A FINITE ENVIRONMENT (LIFE)

REGIONAL NATURAL RESOURCES MANAGEMENT PROJECT - NAMIBIA

(690-0251.73)

1. Background

Leaving behind a colonial history of more than 150 years, Namibia became a sovereign state on 21 March 1990. In the wake of colonialism, Apartheid and a long liberation war, socio-economic conditions for Namibians remain starkly unequal. There is a white, prosperous Namibia and a black, impoverished Namibia. The disparity began with the arrival of European settlers. Namibia's living natural resources, especially its wildlife, were an important source of wealth for the indigenous people. The colonial regimes brought with them the concept of "King's Game", meaning that wildlife once belonging to local people became the property of the State.

Under colonial rule, the legal use of Namibia's wildlife was the exclusive privilege of white colonialists. For black communal land inhabitants, wildlife was no longer seen as a resource. Under the Apartheid system, racially-motivated hunting laws and government policies concerning conservation of wildlife and other natural resources made national parks basically off-limits to black Namibians, effectively denying them access to the country's resources and economic opportunities. People living in proclaimed game reserves were made potential criminals if they killed wild game or collected veld plants for food. Government representatives enforced white ownership laws and, in the process, created hostile relationships with local black residents.

Namibia has a dual agricultural (defined as both crops and livestock) economy characterized by a commercial farming sector based on large privately owned farms and ranches generally on the best land, and a small scale largely subsistence farming sector on communally held, marginal lands. Fifteen percent of Namibia's surface area comprises National Parks, communal (state-owned) land accounts for 40 percent, and the remaining 45 percent is commercial farm land divided into about 5,000 fenced farms, mainly ranches. Apart from Namaland in the south, the communal farming areas are situated in an arc in the north of the country from the arid coastal areas of Kaokoland through eastern Caprivi to Hereroland. There are also pockets of ethnic groups in and adjacent to national parks and reserves such as the Topnaar living in the Kuiseb River basin of the Namib-Naukluft Park.

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Most of the country, 97 percent, is characterized by a relatively low grazing capacity. The best land is in the north-central and north-eastern parts of the country . Only the north-eastern regions, 3% of the land area, are capable of rain-fed crop production. However, the poor quality of this land makes it marginally suitable for rain-fed millet and sorghum and to a lesser extent maize production. Areas such as Bushmanland in the east are marginal for farming enterprises and are generally able to sustain only small numbers of livestock and dryland gardens. Because of the poor quality of soils, limited supply of surface and underground water, and other factors, alternative production systems must be considered. Wildlife and veld plants, given their adaptability to poor environments and potential for economic development, provide viable complementary and sustainable alternatives. Also appropriate utilization of these natural resources affords a degree of protection during times of drought.

About 50 percent of the population lives in Owambo, with another 4 or 5 percent in the northern part of Kavango. Low human population densities in areas such as Bushmanland, Caprivi, Kaokoland, the Kuiseb River and Damaraland provide opportunities for rural communities to develop wildlife utilization activities. Although inhabited by fewer people, these are some of Namibia's poorest and most marginalized populations, particularly since the ending of the war, has left areas in Caprivi and Bushmanland without alternate sources of wage employment. The areas of high population densities require appropriate technologies for more sustainable use of the resources, particularly of fuelwood and other sources of energy and water and soil conservation. The development of environmental education programs with emphasis placed on participation in problem solving by local communities is crucial.

The size and diversity of wildlife populations of the north have been seriously reduced in the last two decades due to drought, disease, war, poaching, human settlements and domestic livestock. Exceptions include the recovery of the black rhino population in Damaraland and elephant populations in and around Etosha National Park. Despite the problems of diminished game populations, the productive potential for wildlife, veld plants and other natural resource remains largely untapped. However, failure to act soon to integrate sustainable natural resource management into landuse planning and community development in these marginal areas will result in a total loss of these valuable resources and biodiversity as human population and livestock pressures intensify, further reducing the chances for long run sustainable economic development in Namibia. The risk to Namibia is that inappropriate planning, management and utilization will create a Sahelian environment in less than twenty years. Such an outcome would rob the Namibian people of any chance for prosperity in the future.

2. Problem Statement

A research report entitled: Oshanas: Sustaining People

Environment and Development in Central Owambo, Namibia, captures succinctly Namibia's interrelated environmental and economic development problems which go beyond the boundaries of the Owambo region:

> "Marginal agricultural soils and sporadic or irregular rainfall are environmental factors that place substantial limits on development in semi-arid areas such as Owambo. Changes in the natural resource base are superimposed on this. In common with countries of the Sahel and the rest of semi-arid Southern Africa, competition for land among farmers, pastoralists and wildlife has resulted in three main losers: first, wildlife populations; second, people dependent on natural resources through hunting and gathering; and third, pastoralists. These losses leave an increasing number of agriculturalists more vulnerable than ever to crop failure and starvation. Human impact on natural vegetation has an increasingly important influence on the ability of people to cope both with periodic declines in rainfall or with ecological and economic decline. This situation is not unique. It is faced in other semi-arid regions in Africa: Botswana, Mali, Niger, northern Kenya and the Sudan.
>
> Planners and politicians in Namibia face two essential choices: first to follow a path towards a Sahel situation or second, to take a longer term view, and work to regain and retain rural self-sufficiency. The second choice has rarely been taken in Africa, not because of lack of ecological insight, but because it is socially and politically extremely difficult. It requires implementation of plans that achieve an acceptable quality of life for people in the region whilst maintaining human and livestock numbers at a level that the region can sustain. At this level, environment, economy and politics are inextricably linked..." (Oshanas, p.3)

The LIFE project addresses both ecological (the reduction of vegetation and wildlife which has led to the depletion of biodiversity and increased desertification) and socio-economic problems (uncontrolled expansion of domestic livestock). Land productivity is declining and land degradation, deforestation and bush encroachment are now among the most urgent problems facing Namibia today. High population growth and overstocking of livestock are leading to over-exploitation of the land, water, grass and forest resources. Trees are felled to clear land for growing crops and to provide fuel, construction materials, and raw materials for the production of household goods and crafts. Rapid population growth in the past 50 years estimated at just over 3.0 per annum has meant that larger, unsustainable numbers of trees are felled to maintain the living standards of an ever expanding population of rural poor people. The situation has been exacerbated by the war, when large tracts of forest along roads were cleared by the military occupation forces. Many areas

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of Owambo which 40 years ago were forested have been completely denuded and are rapidly taking on the appearance of a desert.

Lack of water and salinity of existing water supplies are also critical problems facing the majority of the population. While there are several successful initiatives to increase water availability through appropriate, low-cost technology, it must not be forgotten that ancient ground water resources are being removed more rapidly than they are being replaced by rain-water penetrating the soil. This situation is likely to be made far worse by current efforts to open up additional water points because of the 1992 drought and plans underway for a large scale expansion of the pipeline and new boreholes in Damaraland, Kaokoland and Hereroland.

Traditionally, Namibia's people relied on veld plants and wildlife to complement their domestically grown crops and livestock. During the frequent periods of drought and crop losses, the veld provided the food people needed to avoid famine and starvation. However, loss of traditional cultures, over concentration of people and livestock at a few manmade water points and the relocation of people for politically motivated reasons have eroded and in some areas destroyed the coping abilities of impoverished people during times of drought, making thousands of people more dependent on external emergency food and water assistance as graphically illustrated by the current drought which in terms of actual rainfall in 1991/92 was not an exceptionally unusual year for Namibia. In a sense, 1991/92 is a harbinger of a future in which the environment and people of Namibia will be increasingly less able to cope with recurring dry periods unless appropriate long-range strategies and plans are developed and implemented which take into account Namibia's fragile ecological system.

The ecologically-sound utilization of Namibian resources requires participation by <u>all</u> Namibians. With political independence won and a democratic government in place, a new alliance of all Namibians must be forged to support sustainable use of Namibia's unique environment for the benefit of all citizens. The Government of Namibia has clearly stated its policy of natural resource management as one that promotes sustainable use for the benefit of the people. Article 95 in the Constitution states:

> "The State shall actively promote and maintain the welfare of the people by adopting ... policies aimed at ... the maintenance of ecosystems, essential ecological processes and biological diversity of Namibia, and utilization of living natural resources on a sustainable basis for the benefit of all Namibians, both present and future ..."

The GRN policy recognizes the need to integrate the management of natural resources with community development in order to improve the quality of life. Bridging the yawning gap between the socio-economic conditions of black and white

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Namibians as well as the emerging economic differences among blacks as the rich get richer and the poor get poorer are the challenges of a post-independence Namibia.

3. Rationale and Strategy

The Project's basic rationale is that re-empowerment of local communities by restoring their authority over their land, water and other natural resources, is a necessary condition for sustainable natural resource management in Namibia and rescuing it from the pending ecological disaster. Local communities must have appropriate control over, access to and responsibility for the wise and sustainable use of natural resources. This implies the full participation of local communities in decision-making, planning, implementation and evaluation of any project or program that directly affects them and their renewable and non-renewable natural resources. Therefore, representative institutions, appropriate to the resource management and acceptable to the communities involved, must be developed for decision-making, management and consultation and equipping local people with the knowledge and skills they will need to wisely manage their resources now and into the future.

With the constitution in place, the challenge is to develop plans, strategies and community based interventions for achieving Namibia's stated objectives. The Government of Namibia and several collaborating non-governmental organizations (NGOs) are currently pursuing a community-based resource management approach coupled with environmental education. USAID proposes through the LIFE Project to support these pilot community-based management initiatives by providing funding, technical assistance, training and commodities. It is anticipated that through the collaboration among Government, NGOs, the private sector, donors, community leaders and the people themselves, new strategies and viable approaches for sustainable and environmentally sound economic development will emerge for the benefit of both Namibia and the broader Southern Africa region.

Cognizant of the newness of nationhood and the inevitable inadequacy of pre-independence legislation, attitudes and structures for resource management, the LIFE Project strategy provides a multi-faceted approach to assist with the building of a consensus for environmentally sound use of natural resources. Given the economic, cultural, ethnic and ecological diversity in Namibia, the strategy starts from the conviction that no one model will provide the answer in all situations. Rather, it uses an adaptive approach incorporating local participation, monitoring and feedback. The Project must be seen as an experiment with community-based approaches to decentralized proprietorship (i.e., stewardship) and income generation from natural resources, selected from among strategies pioneered in Namibia and neighbouring countries.

The GRN Cabinet has directed the Ministry of Wildlife, Conservation and Tourism to develop a policy that would extend to communal lands the same rights that govern wildlife

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utilization and the benefits on commercial land. Officials in the Ministry of Wildlife, Conservation and Tourism (MWCT) have drafted enabling legislation that allows for decision-making power to be vested in local institutions, and for communities and individuals to derive direct benefits from the sustainable management of the resources.

This draft policy proposes that the legal right to utilize and benefit from wildlife on communal land would be devolved to a rural community that forms a "conservancy." A conservancy, in the context of communal areas, would be a group of local residents who have formed a legally constituted entity for the purpose of conserving and utilizing wildlife and other natural resources within a clearly defined physical area. Even without such legislation, however, there are existing practical examples of local communities in Damaraland, Kaokoland and Caprivi effectively managing and benefiting directly from natural resources management.

USAID's natural resources strategy is to undertake a phased approach. The first phase is the five year LIFE project focused on Caprivi, Bushmanland and the Etosha catchment area. Assuming successful completion of the LIFE project and the availability of USAID or Southern Africa Regional Program resources, a second phase or project is foreseen in FY 1997 which would expand the pilot initiatives to other regions of the country. This approach recognizes that certain activities need to be initiated in sequence, that not all regions in Namibia are presently ready for implementation, and that human and institutional capacity is limited and must not be spread too thin by attempting to tackle all regions simultaneously. Also it takes into account the tremendous diversity in ecological and ethnic environments which characterize Namibia which necessitates a gradual broadening of the approach to the various graphic regions to test and develop acceptable and viable solutions to Namibia's resource management problems. It also allows the stakeholders (the Government, communities, NGOs, private sector, USAID and other donors) an opportunity to evaluate progress toward the attainment of the Government's objectives before embarkening on a wider implementation of the project. A phased approach will also avoid overburdening implementing NGOs and the Ministry of Wildlife, Conservation and Tourism. It also will allow the Government time to put in place and test the appropriate ordinances and legislation to permit communities to benefit directly from sound resource management. Furthermore, it affords the Government and NGOs the opportunity to expand gradually their institutional capacity to service a decentralized community-based system of resource management.

4. <u>Program Factors</u>

The Living In a Finite Environment (LIFE) Project is the Namibia component of the Natural Resources Management Project (NRM) No. 690-0251, which started in 1989, and is coordinated by AID's Southern Africa Regional Program (SARP) office in Harare, Zimbabwe. The NRM project consists of assistance, within the

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framework of SADCC project No. 5.0.18, to facilitate regional cooperation among Zimbabwe, Botswana, Zambia and Malawi in managing and protecting the natural resource base of the SADCC region for purposes of sustainable social and economic development as well as protection of ecological diversity, and to disseminate knowledge of community management of wildlife resources among SADCC member States. The five-year LIFE project will begin in September 1992 and the Project Assistance Completion Date is August 31, 1997. In the last year of the project a comprehensive evaluation will be conducted to assess its success and incorporate the results of research and socio-environmental studies into plans for a second phase project to be designed in FY 1997, if AID funds are available for this purpose.

In June 1990, the Administrator of AID signed the Environmental Initiative which encourages missions around the world to place high priority on environmental and natural resources issues. The LIFE Project is fully consistent with AID, Africa Bureau and mission priorities in the environment, biological diversity and sustainable management of natural resources. The Development Fund for Africa also contains an earmark of ten percent for natural resources activities.

a) Relationship to USAID Program Strategy

USAID/Namibia's Program Strategy was developed in November 1991 and approved by Washington in January 1992. The USAID/Namibia program emphasizes formal and nonformal basic education and sustainable natural resource management. The Strategy recognizes that Namibia's long-term future depends in large part on how its abundant but fragile natural resource base is managed to the benefit of the majority of its people. The program seeks to improve and widen the use of Namibia's unique and diverse natural resources. The LIFE project is the vehicle for USAID's response to Namibia's needs in the area of sustainable natural resource management.

The Project expands USAID/Namibia's community based education efforts into the area of natural resource management. The READ project, which is now being designed in close collaboration with LIFE, will concentrate on non-formal education for adults including a nationwide program of environmental education. The READ project's environmental education component is particularly complementary to the community based environmental education undertakings in LIFE. USAID/Namibia's on-going Basic Education Reform Sector Assistance Program is assisting the GRN to develop an affordable quality primary education for all Namibian children, including a relevant life science curriculum.

b) Relationship to GRN Country Strategy

The LIFE project is consistent with the draft policy of the GRN's MWCT, which establishes the framework for community-based

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resource utilization. The proposed MWCT environmental policy is as follows:

"It is the policy of this Ministry to encourage the rational and integrated planning of land use according to ecological principles in all rural areas within Namibia and to encourage the formation of suitable participatory structures so that local communities may enjoy maximum sustainable benefits from the natural resources (including wildlife) which they depend upon."

This policy proposal evolved from a series of conferences and workshops held in Windhoek in February 1991 by the Environmental Planning Unit of the MWCT. Eight critical topics were addressed:

1. The organization and administrative structure of the MWCT;
2. Human resource management and practices in the MWCT;
3. Conservation of biodiversity and habitat protection;
4. Land-use planning; a strategy for sustainable development;
5. Research;
6. Communications, extension and environmental education;
7. Finances; and
8. Legislation.

In attendance were representatives from GRN's ministries such as the Public Service Commission, National Planning Commission, and Ministry of Agriculture, Water and Rural Development, non-governmental organizations such as the Desert Ecological Research Unit, Integrated Rural Development and Nature Conservation and the Wildlife Society of Namibia, and the private sector such as Rossing and Consolidate Diamond Mining (CDM). All participants were satisfied with the proposed policy document. In May 1991 the necessary mandate was given to the MWCT by Cabinet to translate the guiding principles contained in the policy document into a set of policies and necessary enabling legislation. These are being finalized and are expected to be in place within the next year.

The MWCT has also launched an affirmative action program to provide more opportunities within the Ministry to disadvantaged Namibians, as part of the GRN's efforts to broaden employment opportunities for non-white Namibians. This program is among the first of its kind by the Government in post-independent Namibia. By supporting ongoing MWCT community-based natural resource planning activities and the development of its human resources, the LIFE project will assist the GRN in accomplishing its policy objectives of integrating the management of natural resources within the context of a decentralized approach to community development which improves the quality of life of the majority of Namibians and affords disadvantaged Namibians greater opportunities in the natural resources sector.

c) <u>Relationship to Regional and Bilateral Activities</u>

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The socio-ecological surveys conducted by the MWCT and NGO community over the last year among rural communities in Caprivi, Bushmanland and Kuiseb and the experience from community based initiatives in Damaraland and Kaokoland have shown that rural people in Namibia retain their deep-rooted conservation ethic. Rural people want their children and grandchildren to see and experience wildlife. Rural people are not against conservation, but against the way in which it has been applied in the past which has excluded and alienated them from their traditions and culture which are in extricably linked to natural resources.

A different approach to conservation, which takes into account people's needs, which consults with people and involves them directly in decision-making and allows them to benefit from conservation, has been successfully applied in several countries of Southern Africa over the past few years, most with AID support.

In Zimbabwe, under the Communal Areas Management Program for Indigenous Resources (CAMPFIRE) project, the country's wildlife department has devolved authority over wildlife utilization to local communities, enabling them to gain direct income from conservation. One of the main sources of income for these communities is trophy hunting. Communities have gained the right to sell trophy hunting concessions and derive substantial income from it. The communities plough some of the cash income back into the CAMPFIRE project and some for administrative costs, but at least 50% of the profit goes to the community. The members of the community decide themselves whether the money should be paid out as a cash dividend to individual households or should be used for development projects such as clinics, schools or grain mills.

In Zambia, the ADMADE (Administrative Management Design Program) has the following components: (a) village wildlife management committees to allow greater involvement of local people in the planning of wildlife utilization; (b) local residents trained and deployed as village scouts to protect wildlife in their own areas; (c) sustained-yield use of wildlife managed by local villages; (d) increased employment for local residents to improve the manpower base for wildlife management and to stimulate a local economy based on sustainable use of wildlife; and (e) income generation through the sale of concession fees for the sustainable hunting of trophy animals. The ADMADE program has resulted in a considerable decline in poaching in areas where it operates as well as a considerable increase in income to local communities.

In Namibia, successful community-based projects have been developed in Damaraland and Kaokoland by local NGOs and the MWCT. In Kaokoland a community of Himba and Herero people has received funds from tourists who use their land and resources. In Damaraland and Kaokoland, the cooperation gained from local people in conserving wildlife has resulted in game being available for culling for meat. The key to local cooperation has been a community game guard system which has given communities

a new sense of responsibility for wildlife as a resource.

The importance of these regional and Namibian examples is the link between conservation, wildlife utilization and rural development. Significant sources of income are being derived by local communities from the use of wildlife, which also gives them a vested interest in conserving game animals. Local communities have also been empowered to take decisions concerning wildlife management, and the distribution of benefits. Communities are achieving greater local self-sufficiency and relying less on direct government support. Jobs have been created and rural people have received training in various activities, expanding their capacity to manage their own affairs.

d) Relationship to Other Donor Activities

The GRN's foreign assistance program is coordinated by the National Planning Commission. A donors' conference in 1990 for the period ending in 1994 yielded assistance pledges totalling $696 million. However, less than half these resources have materialized. The United States has emerged as a major bilateral donor along with Germany and Sweden.

Since independence in March 1990, Namibia has joined the major international organizations, including membership in the World Bank and the International Finance Corporation. The country is also a member of the Lome Convention. With the exception of the education sector, there has been limited formal donor coordination since independence. UNDP and the National Planning Commission are expected to initiate a formal natural resources sector meeting within the next year. In the meantime, substantial informal donor coordination in this sector is occurring among those donors most interested in the environment and natural resources.

USAID is the only major donor positioned at this time to assist the GRN and the NGO community with the implementation of community focused natural resource program. The Nordics are involved in marine and coastal resource management, particularly fisheries. NORAD, for example, is training marine fish inspectors through a grant to the Rossing Foundation. Swedish SIDA is funding formal environmental education curriculum production at the secondary level and an environmental awareness program. Also SIDA has financed the comprehensive environmental assessment of the Oshana area of Owambo which was cited earlier in this paper. A similar SIDA funded study is underway in the southern region. Florida State University under a contract with the Ministry of Education is working on science education at the primary level and will be incorporating environmental subjects into the curriculum. Both SIDA and NORAD are funding institutional strengthening within the Bushman community. This included a regional meeting of the San people in Windhoek in June 1992. UNICEF is also supporting integrated rural development activities. The EEC has a mandate to undertake natural resource

activities, but has yet to complete an assessment and determine its activities. FINIDA works in the area of agro-forestry, particularly in the north. Germany is providing substantial assistance for the development of rural water systems in Northern Namibia. The African Development Bank will shortly be conducting a borehole feasibility study in Damaraland and Kaokoland.

The local private sector, including gold mining companies and several major corporations, is heavily involved in supporting conservation efforts. For example, Gold Fields Namibia is financing the development of an environmental education center at the Waterberg National Park. The Ohlthaver & List Group is funding the Namibia Nature Foundation (NNF) through the provision of a director and office space. Approximately 30 firms have contributed to NNF managed environmental activities. This range of support includes direct funding, office space, construction grants, and in-kind contributions to specific activities. Rossing Uranium Limited through its contribution to the Rossing Foundation is financing environmental education. It is anticipated that USAID's commitment to the sector will encourage even greater involvement of the private sector in the years ahead. This will be aggressively pursued to create a sustainable source of funding for natural resource activities. To facilitate this the Chairman of the Unified Chambers of Commerce will be a member of the Project Steering Committee.

5. Project Description

a) Goal and Purpose

The goal of the Life Project is to enhance the capabilities of poor, rural communities living on marginal lands to meet their basic human needs by broadening Namibia's resource base and managing its natural resources in a sustainable manner. As part of the Regional Natural Resources Management Project, the general purpose is to improve the social and economic well-being of residents of targeted rural communities (defined as marginal and buffer zones in Namibia) by implementing sustainable community-based wildlife conservation and utilization programs. The marginal and buffer areas of the country to be included in the LIFE project are Caprivi (both East and West), Bushmanland and the Etosha National Park catchment area.

The specific purposes of the Namibia component in these three geographic regions are to:

(1) increase the social and economic well-being of poor rural communities living in marginal agricultural areas or in buffer zones to national parks and protected areas, through sustainable and economically viable community-based natural resource management;

(2) improve community-based groups capabilities to manage natural resources in a sustainable manner, through strengthening local, regional, and national organizations

and institutions which provide services to these communities;

(3) develop appropriate and relevant natural resource management strategies and approaches for community management of natural resources which have wider applicability in Namibia's diverse and marginal areas; and

(4) establish closer ties and linkages with similar activities in the Southern Africa region and elsewhere in Africa and the world.

b) <u>End of Project Status</u>

While the Project is expected to improve directly bio-diversity, planning and general resource management in the affected marginal areas, it will contribute to the attainment of overall improved resource management in Namibia. There will be greater awareness and sensitivity to the environment and better management of natural resources. Participating communities will be empowered to control the benefits derived from the land they live on and interaction with the government is expected to improve. As specific measures of basic human needs, the Project is expected to result in increased household incomes, improved nutrition, more employment opportunities and more environmental awareness and skills at the community level.

By the end of the Project, an institutional framework will exist that is characterized by decentralized decision-making and a stronger partnership among the GRN, NGOs, the private sector and rural communities. There will be an increased number of established community based decision-making bodies related to natural resource management, with representation from community sub-groups on related committees. NGOs that are involved in natural resource management and community development will have improved administrative and organizational structures and more disadvantaged Namibians will be trained for employment by the GRN and the private sector. By the end of the Project, NGOs will have improved their chances of operating independent of external assistance through expanded funding from the private sector and wider donor community. As indicated, there will be a stronger involvement of Namibia's private sector in supporting natural resource management. Additional strategies for natural resource management will also have been developed and disseminated to appropriate government agencies and NGOs.

Baseline data for assessing the Project's impact will be compiled during the first year of the Project. These data will consist of three profiles:

Profile 1:
<u>Characteristics Of The Area Covered By The Specific Activity</u>. This will include information on physical and environmental characteristics such as climate, soil types, vegetation and land use patterns.

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Profile 2:
Socio-Economic And Demographic Features of the population residing in the area. This will encompass variables such as numbers of people, their location and living patterns, sources of income and employment, community leadership and decision-making.

Profile 3:
Natural Resource Base. This will include estimates of wildlife populations by species and the availability of other natural resources for sustainable exploitation, how these resources are being presently used, their current/potential economic value to various stakeholders, and knowledge/attitudes/practices of communities towards these resources. Data will be collected on the community's attitudes and perceptions about conservation authorities working in their areas and how responsive these authorities have been to problems associated with wildlife or other resources.

With these profiles in place, the Project will analyze and evaluation how these various factors are affected during the course of the project's implementation. At the end of the Project, it is expected that the following closely linked objectives will have been achieved:

1. Natural Resource Empowerment Of Local Communities. Legislation will be in place which empowers local communities with the right to manage and economically benefit from the sustainable management of resources on their lands.

2. Changes In Revenue Streams To Communities From Sport Hunting. There will be changes in the hunting license distribution system so that a large portion of the money derived from sport hunting (e.g., trophy fees) return directly to the concerned community for the purpose of resource management and community development. Similar changes should be considered for legislation involving forestry and other valuable resources that may be found.

3. Increased Community Revenue From Natural Resource Management. Significant increases will occur in the community's income being derived directly and indirectly from wildlife and other natural resource utilization;

4. Decreased Human/Wildlife Conflicts. There will be significant decreases in the number and incidences of conflicts between wildlife and human populations;

5. Improved Wildlife Habitat And Populations. There will be significant increases in improvement of wildlife habitat and gains in wildlife populations;

6. Improved Wildlife And Natural Resources Management. There will be significant increases in sustainable wildlife and natural resource utilization and management practices being

observed by the community;

7. Increased Environmental Awareness. There will be significant increases in community's awareness of environmental issues;

8. Active Collaboration With Conservation Authorities. There will be significant increases in communities' ability to effectively interface and interact with conservation authorities; and

9. Improved Community Land and Resource Use Planning. There will be significant increases in communities' capacity to plan, develop and implement community based initiatives in sustainable natural resource utilization.

10. Community Ties To Private Sector. There will be closer links to the private sector which may begin collaborating directly with the local community to market and sustainably exploit their resources (tour operators, professional hunters, logging concerns, meat processing companies, handicraft marketing, etc.).

c) Project Components

The LIFE project has four complementary, interrelated components that all support community-based natural resource management: (1) Community-based natural resource management activities themselves; (2) planning and applied research support; (3) environmental education; and (4) regional coordination and exchange of information.

The four project components support the core concept of the sustainable management of Namibia's natural resources by rural communities. The first component will support specific community-based pilot activities, which will start in Caprivi, Bushmanland and possibly expand into the communal areas surrounding the Etosha National Park upon completion of the comprehensive research program for the Etosha catchment area being conducted by the Etosha Ecological Institute and the Zoological Society of San Diego. These activities will be selected based on their relevance to the ecological, economic and social needs of the people in these regions. The second component will support planning and applied research that is relevant to community-based resource management project activities in these three regions. Research on socio-economic conditions will be done before the start of new pilot initiatives to ensure that benefits will accrue to the local communities; and, monitoring and evaluation of ongoing activities in Caprivi and Bushmanland will provide valuable information that can be used to adapt those projects, develop new ones and share lessons learned within Namibia and with other countries in the SADCC region. The third component will finance environmental education activities, that, in turn will strengthen the community-based initiatives by providing training for community decision makers,

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teachers, community liaison officers and game guards. The fourth component links the Namibian experience to similar regional programs in Zimbabwe, Malawi, Zambia, and Botswana through regional research, conferences, workshops and seminars coordinated by Malawi as well as other countries in the East and Southern Africa regions.

(1) Community-based Natural Resource Management:

The Community-based natural resource management component will strengthen and expand the on-going community-based conservation and development activities initiated by NGOs and the GRN in Caprivi and Bushmanland and possibly the Etosha area. This component has two aspects which will be funded through subgrants from the International or US PVO: (a) pilot activities that will be implemented as part of on-going or planned NGO conservation and development programs; and (b) the institutional strengthening of NGOs and community-based organizations working in these regions. Most activities under this component are adaptive or experimental and maximum use will be made of local NGOs for implementation.

The pilot activities supported will take into account the following criteria:

- o Proposed activities must be directly linked to at least one of the three geographic and one of the four programmatic areas of the project. These are community-based resource utilization, institutional capacity building, applied research, or environmental education in Bushmanland, Caprivi or the Etosha catchment area;

- o Technical, economic, social and environmental feasibility studies must accompany the proposal and indicate that it is socio-economically and ecologically justified;

- o Proposals must indicate which specific communities or resource users are targeted for subgrant activities; proposals must provide clear evidence that these groups have been involved in proposal development and that they will participate fully in their implementation;

- o Proposals must explain what steps have been, or will be, taken to strengthen the local communities' long term capacities to sustainably use and manage their natural resources;

- o Proposals must provide achievable and realistic targets and objectives within the time frame of the project;

- o A plan for monitoring, evaluating and reporting on the project's progress and impacts must be presented;

- o Proposals should ensure that planned activities will not

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adversely affect women or other disadvantaged groups, as well as outline constraints to their full participation and detail strategies to ensure their participation in and benefits from sound resource use;

o Proposals should demonstrate innovative and create ways to promote growth in income and employment which encourages maximum community involvement and participation;

o Proposals which, present the possibility for replication or adaption elsewhere are encouraged;

o Proposals that incorporate collaboration among two or more organizations, including government services where appropriate, are encouraged;

o For proposed activities that are meant to continue after the period of the subgrant, proposals must demonstrate the sustainability of the activities, i.e., how recurrent cost will be borne in the long run, how post-intervention activities will be managed, etc.; and

o Proposals should indicate the extent to which the community is committing its own resources, both in-kind and in cash.

Applying these criteria, the following illustrative activities have been scheduled for LIFE project funding through the Cooperative Agreement with the PVO:

(a) **Caprivi:** Building on experience in Damaraland/Kaokoland and in East Caprivi, two Namibian NGOs, Integrated Rural Development and Nature Conservation (IRDNC) and the Namibia Nature Foundation, in close collaboration with the MWCT, are carrying out a community game guard program in Damaraland, Kaokoland and Caprivi and will receive subgrants for their Caprivi activities. West Caprivi is bounded to the west and east by the Okavango and Kwando Rivers respectively, to the north by Angola and the south by Botswana. The IRDNC/MWCT/NNF activity links the economic development of rural communities to wildlife and their environment and involves local communities in the management and utilization of their natural resources. Its objective is to enable the approximately 14,000 people living within the project area (which includes a proclaimed game reserve and the east bank of Kwando river from Singalamwe to Malengalenga) to coexist with wildlife. The region is also important for its biodiversity because it includes the only two examples of riverine floodplains in Namibia, some of the only remaining intact riverine vegetation and habitat for rare water birds and mammals, including sable, buffalo, hippopotamus, elephants, wild dogs, etc.

The Mbukushu, Khoe, !Kung, Yei, and the so-called "River Bushmen" groups reside in the project region. The areas have been extensively surveyed by the MWCT and IRDNC with full community participation to determine socio-ecological conditions

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and how to best resolve conflicts between people and wildlife. A key problem experienced by the people of the West Caprivi with wild animals, mainly elephants, is damage to crops.

The IRDNC/MWCT/NNF activity includes a community game guard program, the placement of Community Liaison Officers, and the development of income/employment-generating, resource use schemes. Community game guards are individuals selected by the communities themselves. They are employed and trained by IRDNC to monitor animal populations and poaching. Official anti-poaching activities will continue to be the responsibility of the MWCT under its anti-poaching units. Illegal hunting activities uncovered by the guards will be reported to community leaders for discussion and resolution, including, if necessary, the involvement of government officials. In cases where serious conflicts recur, the "problem" animal is destroyed only after the local chief and conservation officer have approved of this action. The meat, by-products, and revenue from wild animal culling are distributed to the community or held in a community trust fund to compensate the community for losses. Local communities are being empowered to be fully involved in regional planning and have authority to make decisions about the sustainable use of their resources and to derive benefits from these resources to meet their needs.

Two Community Liaison Officers (one for East and the other West Caprivi) will be recruited to undertake extension work and to support community-based organizations in the management of their resources. The position of Community Liaison Officer is not a government post, but an ombudsperson and facilitator (accountable to the local NGO and communities served) who is the community's advocate and planner for local management and utilization of the resources. One of the primary responsibilities of the Community Liaison Officer will be to develop, with the full participation of the community and facilitated by the game guards, resource management initiatives that generate benefit to the community. These benefits may be social (i.e. increased confidence, awareness, knowledge, empowerment, increased status) or economic (i.e. meat, financial revenues, employment) or other positive outcomes for the community. Examples of benefit-generating activities include: community managed tourism, hunting safaris, traditional hunting schemes, trophy hunting, handicraft production and sales and veld food schemes. Illustrative tasks of the Community Liaison Officer and game guards include:

- increase local awareness of the surrounding environmental conditions and systems, both in the present and in the future, in which residents live;

- determine specific needs and resource issues, as well as propose options for the community to consider;

- facilitate the establishment of appropriate and

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representational institutions for management of the resources;

- o assist communities, plan, design and implement specific income or employment schemes involving sustainable utilization of the community's natural resources;
- o provide technical assistance for the resource utilization schemes;
- o facilitate communication and act as a broker for the community among the private sector, the government, donors and others;
- o training activities for community-based organization members; and
- o support activities for community game guards.

The LIFE project will initially finance the Community Liaison positions, community game guards (non-paramilitary), vehicles and maintenance costs. Payment of these recurrent costs by USAID under the Project will gradually diminish as community and other resources became available. The mid-term project evaluation will focus on sustainability and will assist participating NGOs and communities to develop plans for shifting the financing of recurrent to the income generated by the community based activities. A plan for the phasing out of USAID funded recurrent costs will be in place by the end of the project's third year. The MWCT plans to incorporate the western bank of the Kwando River into the West Caprivi game reserve. It is anticipated that this will be done during the second year of the project.

(b) **Bushmanland:** The Ju/'hoan Bushman Development Foundation, now called the Nyae Nyae Development Foundation of Namibia (NNDFN), in collaboration with the MWCT, is implementing a series of activities in Bushmanland which will be supported through LIFE subgrants. These activities are designed to enable local people (approximately 2,500) to benefit from wildlife utilization through a range of activities from trophy hunting to low impact ecotourism which is socially acceptable, locally managed and stimulates income and employment growth for the local community. The Bushmanland region has also been surveyed extensively by the MWCT and NNDFN who consulted widely with the local community before beginning project activities.

Eastern Bushmanland is of particular significance for biodiversity conservation in Namibia. The region is part of the Kalahari sandveld system, but the eastern part, which is the focus of this project, is characterized by a series of seasonal water pans which serve as a focal point for people and wildlife alike. During the wet season, the area is prone to extensive flooding and the inundated areas attract large numbers of pelicans, flamingoes and other water birds. The area also

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attracts significant numbers of rare or endangered birds such as the Wattled Crane, Ethiopian Snipe, and Slaty Egret. The region supports, seasonally, a population of 300-400 elephants and is one of the few regions of Namibia where the endangered wild dog occurs. Other significant game species include the roan antelope, a remnant population of buffalo, eland, giraffe, and wildebeest. Predators include lion, leopard and cheetah.

Eastern Bushmanland has a population of about 2,500 who consist of the Ju/'hoan San people who are traditional hunters and gatherers. Communities have a small number of cattle for milk and slaughter and most villages are engaged in dryland gardening. Like the West Caprivi region, there have been tensions surrounding the use of land and wildlife between the local people and outsiders such as the government, tour operators and other ethnic communities. In the past, the conservation authorities tried to establish a game reserve in the region, but the effort was resisted by the local community as a threat to their land rights. The game reserve was never proclaimed. The biodiversity of the region has been threatened by the settlement of people at water points, especially boreholes, localized overgrazing and resulting bush encroachment, incursion of cattle herders into the region from Hereroland, and poaching from within and outside the area. Game numbers (ungulates) have declined significantly over the past decade and will soon reach critically low numbers if the trend is not reversed.

The local community has organized itself into the Nyae Nyae Farmer's Cooperative and has in turn formed the Bushmanland Environmental Planning Committee. The Committee consists of local representatives from:

- The Nyae Nyae Farmer's Cooperative,
- The Nyae Nyae Development Foundation,
- The Ministry of Wildlife, Conservation and Tourism
- The Ministry of Agriculture
- The Ministry of Lands and Resettlement
- The Private Sector (professional hunters)

It has been decided that this group will work to produce an integrated landuse plan for Eastern and Western Bushmanland. Eastern Bushmanland will be established as a Wildlife Management Area in which a mixed landuse will be based upon wildlife, some livestock and dryland farming, and forestry.

The communities are very much aware of the overgrazing that has occurred in neighboring areas and believe that their future is still tied to the survival of large game species. The local communities would like to develop their own low impact tourism industry and explore how the wildlife of the area can become a key resource for the development of Eastern Bushmanland.

Currently, wildlife populations are very low in Eastern Bushmanland due to the drought, a change of pattern in veld fires, termite pasture destruction, veterinary fencing, and animal and human predation. The main factor, however, is believed to be the lack of strategically located water points so wildlife can take advantage of the excellent veld food:

Species	Estimated #'s 1990	Estimated #'s 1982
Roan	100	160
Wildebeest	250	530
Buffalo	12	70
Eland	3	500
Oryx (Gemsbok)	250	340
Giraffe	250	940
Kudu	500	850
Elephant	250	210
Hartebeest	100	200
Sassaby	0	7
Duiker	600+	600
Reedbuck	0	30
Steenbok	800+	870
Warthog	60	370
Ostrich	100	280

Predators	Estimated #'s 1990	Estimated #'s 1982
Brown Hyena	20	50
Spotted Hyena	100	150
Cheetah	25	20
Lion	50	170
Leopard	100	80
Serval Cat	10	7
Wild Dog	37	110
Caracal	80	50

Source: Grellmann, Volker. 1991. The Bushman, What does the future hold? ANVO Hunting Safaris, Windhoek. 28p.

The residents of Eastern Bushmanland are interested in reintroducing the now locally extinct zebra, springbok, sable and reedbuck, while building up and sustainably managing the existing population of wildlife.

With appropriate MWCT policies, the current annual offtake of only 6 elephant, 4-5 leopards and 5-6 antelope, sport hunting has the potential to return as much as R 250,000/year to Eastern Bushmanland with a great potential of increasing revenue to the community if the wildlife population can be increased from reintroduction programs and improved wildlife management.

Similar to the IRDNC/MWCT activity in West Caprivi, the NNDFN/MWCT is implementing a community game guards program and will have Community Liaison Officers who will assist with the

development of income and employment benefit generating activities. The aim of project's activities is to conserve the biodiversity and life-supporting ecological balance of Eastern Bushmanland, while empowering the local people to manage and benefit from the direct use of natural resources such as wildlife, wild plants, and timber.

Alternative forms of supply driven tourism which have been discussed include:

- Craft marketing,
- Demonstration Villages for tourists,
- Training Bushmen to become professional trophy hunting guides,
- Developing pay-to-use camping facilities,
- Providing a Bushman Guide Service for tourists coming into the area; both foot and vehicle safaris, and
- Conducting ornithological tours when the local pans are seasonally inundated and serve as important waterbird habitat.

More traditional use of natural resources, that are likely to be part of the NNDFN/MWCT project, for sustainable economic development include hunting of dangerous game, forest management, sustainable exploitation of veld products for income-generation (e.g., beekeeping), marketing of vegetables, livestock marketing.

In addition to the activities described above, fuel-efficient stoves (to lessen the demand for forest wood) and charcoal makers (as a potential source of income generation), as well as, water conservation technologies may be introduced which will help local communities better conserve and benefit from these precious resources.

The LIFE project will assist the NNDFN/MWCT by providing community liaison officers, funding community game guards, vehicles and equipment to carry out project activities. As in the case of Caprivi, the recurrent cost components will increasingly be financed by non-USAID sources over the life of the Project. A plan for this reduced reliance on LIFE project financial resources will be developed by the third year of the project.

Within Caprivi and Bushmanland, subgrants will be made to those NGOs already working and to others for community-based resource management projects. Given women's key roles in using these resources to meet household needs, many of the subgrants are expected to support activities and organizations involving women.

(c) <u>Institutional Strengthening for Resource Management</u>

Institutions, appropriate to the resource management tasks and acceptable to the communities involved, need to be established and strengthened in order for local participants to exercise control of local resources and their benefits. The functions of local level institutions that will qualify for assistance under this project element include:

- Technical wildlife management,
- Generation, intake and administration of financial and other resources,
- Allocation of responsibilities and benefits within the community,
- Promotion of the development of local enterprises,
- Representation to the higher levels of administration,
- Environmental education, formal and non-formal,
- Natural resource accounting,
- Natural resource marketing,
- Low impact ecotourism, and
- Craft production and marketing.

Community-based organizations operating in the targeted geographic areas will receive support for services, material and equipment that are used directly for management activities and for organizational skills development, such as training and technical assistance in planning, accounting and financial management, administration, and evaluation. This assistance to community organizations will be carried out through subgrants to NGOs by the PVO.

USAID is in the process of conducting financial management assessments of potential NGO subgrant recipients to identify their strengths and weakness to plan and implement projects. Training will be provided to NGO subgrantees as required to ensure the proper financial management of subgrant activities. The result of the financial assessments are expected to be completed by September 1992 and will be incorporated into the incountry training program of the PVO.

To strengthen Namibian NGO capacity, subgrants will be provided to local NGOs, especially those already involved in the administration of umbrella subgrants in the two regions. The most important of these NGOs is the Namibia Nature Foundation. The NNF is likely to receive one of the initial institutional strengthening grants under LIFE because it already serves as an "umbrella" local NGO that handles small grants from donors such as GTZ, WWF, NORAD and the EEC and has a well established structure for evaluating, selecting and managing donor funds. It presently manages a project portfolio of around US$1.0 million. Support will be required, however, if the NNF is to assume additional project management responsibilities in the LIFE Project areas and to raise funds from private and other donors to sustain the community based initiative in Bushmanland, Caprivi and the Etosha catchment area.

(d) <u>Training</u>

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Both long and short-term training of Namibians is an important part of the LIFE project and will be incorporated into each project component. Special attention will be given to Namibians from Caprivi, Bushmanland and the Etosha area who in the past have not had access to preservice and inservice training. The training component will also provide support to the MWCT's Affirmative Action plan. The MWCT and several NGOs have identified preliminary training needs in a number of fields, including program administration, natural resource economics, finance, management, communication, environmental education and ecotourism including alternative tourism, as well as in specific technical skill areas such as basic building/construction, craft production and wood working skills and first aid.

The LIFE project will assist the MWCT and NGOs with training programs for the Community Liaison Officers, MWCT and NGO personnel, community groups and community leaders. However, long-term degree training outside Namibia will be limited to GRN personnel. The incountry diploma training will be open to Namibians from the communities and private and pubic sectors who are working in or serving the needs of the three geographic regions. Illustrative training areas include the following:

MWCT

- Community-based conservation theory and skills, communications and facilitation skills
- Management skills
- Accounting and finance
- Leadership
- Natural resources management (e.g. wildlife, range, forestry
- Environmental impact assessment
- Socio-economic impact assessment
- Environmental natural resources economics
- Gender planning
- Community based environmental education

NGOs

- English conversation training
- First Aid
- Driving skills
- Vehicle maintenance
- Camp management
- Small Business management/Finance
- Ecotourism/Tourist operation and management
- Animal and plant identification
- Basic building/construction skills
- Construction of wetland systems from grey water
- Erection and maintenance of water installations
- Public relations and communications skills
- Basic bookkeeping
- Computer literacy
- Personnel Management
- Community Development
- Social marketing for natural resource management
- Gender planning and evaluation

o Woodworking/Carpentry skills
o Low impact ecotourism

2. Planning and Applied Research

(a) Overview

Given the adaptive and experimental nature of community-based resource management projects and the need to develop viable lessons learned that can be applied on a broad scale, the applied research component of the Life Project will pay specific attention to the intended and unintended impacts of project and sub-project interventions. All activities will need to include the collection and analysis of base-line data for selected indicators and periodic monitoring of these indicators over the life of the project. Also there is the need to broaden and deepen Namibia's existing private and public research capacities.

Generally, the "adaptive management" concept is most useful in ongoing project planning as it provides a means for taking into account short-term changes. The basic principle of the adaptive management theme is that there is monitoring and feedback between research and management, and that management approaches should be used as experimental tests of our understanding of the ecological systems and what is required for their sustainability. The approach thus stresses the importance of feedback into decision-making. The adaptive management approach is relevant to both ecological and social systems. When it has been applied in the development field, it has been referred to as a "rolling" or "flexible" design. Examples of planning and applied research activities that focus on community-based sustainable management of natural resources and directly relate to the project's community based initiatives in the geographic areas of Caprivi, Bushmanland and Owambo are:

o **Study of Declining Large Mammal Populations by the Etosha Ecological Institute and the Zoological Society of San Diego**
The GRN is working to develop self-sufficiency through a wildlife and tourist-based economy. Etosha National Park, Namibia's primary international tourist attraction, is the home of five conspicuously endangered species, i.e., the black rhino, elephant, Hartmann's zebra, black-faced impala, and cheetah. The preservation of Etosha as a large intact ecosystem which includes the buffer communal and commercial areas surrounding the National Park is critically important for maintaining international tourism and biological diversity. Unfortunately, there has been a steady decline in most major wildlife populations on Etosha's plains and, to date, no comprehensive, systematic study of factors causing the decline of ungulates has been done. The LIFE project will finance a research grant to the Zoological Society of San Diego in collaboration with the Etosha Ecological Institute to support a study of what factors have caused the decline in wildlife in Etosha and

how managers can alter these factors so that the ecosystem promotes a wildlife-based economy in Northern Namibia. Adapting this information and applying it to potential restocking of rural lands could provide a model system for wildlife conservation and management throughout the Etosha ecosystem, particularly in southern and western Ovambo, Damaraland and Kaokoland. This study is considered to be an essential element for the planning for the community based initiatives in the communal areas along the park's borders which may be initiated in the latter years of the project.

o **Fire Ecology In The Northern Kalahari Woodlands.** Fire is used extensively by the communities in Owambo, Kavango, Caprivi and Bushmanland and may alter the environment to a less productive level endangering sustainability of current management practices. Fire may contribute to a loss in variety of grasses and promote bush encroachment, or visa versa depending on when and how often it is applied.

o **Community Development And Low Impact Ecotourism Potential In Caprivi, Bushmanland And Etosha Catchment Area.** This feasibility study would investigate the economic, cultural institutional and environmental potential of low impact and socially acceptable eco-tourism (e.g., marketing of handicrafts, village based tourism, foot safaris) in these unique, fragile and difficult to access regions of Namibia.

o **Ovambo Ethnobotany Project.** Of all regions in Namibia, it is in Ovambo where depletion of favored plant resources (e.g., Colophospermum mopane for poles) is most apparent with implications for core conservation areas such as Etosha National Park. There is increasing pressure on commercially important wild plant resources (e.g., fuelwood, palm fibre, traditional dyes as Berchemia discolor), and wood for carving (e.g., Commiphora africana) since they provide a buffer against extreme poverty as people fall back on wild plant use as a source of income. Little is known of traditional conservation and resource management practices in the region, nor the sustainability of current extractive practices. In conjunction with the resource users and managers, appropriate solutions will be identified and developed to assure sustainable use of Ovambo's major plant resources.

o **Changing Patterns Of Wild Plant Use By Women In The Caprivi Area.** Throughout Africa, women are the main wild plant resource users, and the first group to suffer if craftwork, fuelwood, veld food, thatch-grass and other resources are depleted. The Caprivi is one of the most culturally and botanically diverse parts of Namibia, which

is of great interest to development and conservation planners. Although human densities in the West Caprivi are low, the same does not apply to East Caprivi, due to the influx of people from southern Angola and Zambia. Starting with a broad-based survey documenting plant names and uses in both the West and East Caprivi, this study will focus on the role of women as plant gatherers, comparing plant use in the peri-urban Katima Mulilo to that in the two selected rural villages in two different vegetation types.

o **Affirmative Action "People's Botany Projects In Bushmanland, Caprivi and The Etosha Catchment Area.** In order to stimulate the involvement of Namibian graduates, during vacation periods, employ 20 graduate students at the University of Namibia to undertake ethnobotanical surveys in their home villages over a three year period. Many graduates come from remote rural villages, are familiar with local vegetation and are aware of over-exploitation or scarcities of favored plant species. The students will act as rural facilitators during vacations and would carry out surveys of exploitation rates, traditional uses and management of these plants, as well as the current status (common, rare, extinct) and reasons for the status of important wild plants.

Within the context of community-based resource management projects, the biological sciences are used for monitoring the impact of project activities on the resources, including changes in populations and their structures among key species; rates of deforestation; and loss of species diversity, among other indicators. Applied social science can play an important role in providing the necessary analyses of the dynamics (motivational, technical, and administrative) involved and suggesting management options that are accessible and feasible to both central planners and local communities.

The socioeconomic topics to be investigated and integrated into monitoring and evaluation of community-based initiatives include the following:

- identification and analysis of culturally determined tenure, rights, responsibilities, and practices relating to environmental, social/institutional, and economic resources;

- identification and analysis, by gender, of micro-level individual, household, and community motivational and decision-making factors, including the domestic economy, and the range of economic options individuals perceive;

- impact of project interventions on leadership structures and decision-making processes;

- investigation of center-periphery relationships in

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bureaucratic, legal, and administrative structures, with the inherent conflicts over resource control these relationships involve; and

- o the current role of women in natural resources management and their perceived needs, constraints, and opportunities within their primary role as household managers.

(b) Strengthening of the MWCT in Analysis and Application of Results to Policy and Legislation

The Environmental Planning Unit in the MWCT currently has only two employed professionals, a biologist and community-based conservation specialist. Given the importance of analyzing the economic dimensions of management decisions and environmental policies, it is critical that a natural resource economist also be placed in the unit. Under this component of the LIFE project which will be handled through the cooperative agreement with the PVO, a Namibian economist from one of Namibia's disadvantage communities will be recruited and long-term post-graduate training provided in natural resource economics. Replacement personnel for this economist will be provided by the PVO while he/she is receiving training (expected to be between two and three years). An overlap of at least six months is planned to allow for a transition period and on-the-job counterpart training. Once training is completed, it is expected that the MWCT will assume all costs associated with the resource economist position in the Environmental Planning Unit.

The Environmental Planning Unit has received a grant from the AID Biological Support Program administered by World Wildlife Fund, for a Coordinator for community-based resource management for one year beginning in 1992. The LIFE project is expected to fund this position for three years, starting in the second year of the project. The position will be filled by the PVO.

(c) Training for Namibians Working in Natural Resource Management

Both GRN and NGOs cite the lack of trained personnel as a major constraint facing the development of effective natural resource management programs. While there is a need for providing short-term training to field practitioners as described above, there is also a need for long-term and short-term and technical training in the social and natural sciences, environmental education and interpretation, and in administration. Funds will be available under this component of the LIFE Project to support training of disadvantaged Namibians in the natural resource areas from the three geographic areas and NGOs working in these areas. The emphasis will be on specific training programs to enhance the research and analytical skills of these working in the environmental natural resources and social sciences to promote their involvement in community based applied research. This may involve strengthening the staff capacity of NISER, NEPRU, DERU

and other local research organization to service the three geographic areas.

3. Environmental Education

Environmental education (EE) will enable people in the communities affected by the project to understand the environment in which they live, to identify and analyze environmental problems facing their communities and to find the solutions which will enable them to sustainably utilize and benefit from natural resources. Sustainable management of Namibia's unique and ecologically diverse natural resources, including wildlife, will require the understanding and active involvement of Namibians, particularly those residing in the marginal communal areas and buffer zones involved in this project. People must become more aware of how rapidly Namibia's natural resources of land, soil, water and wildlife are diminishing, as well as the potential economic value of these resources. These people need to understand that it is within their ability to preserve their natural resources while simultaneously improving their economic position.

Government officials and certain educational institutions are aware of the need for community-level environmental education and have begun to consider ways to incorporate EE activities in their programs. The MEC has appointed an EE coordinator in the curriculum planning unit and the subjects of Environmental Studies, Life Science and Natural Economy are being added to the curriculum at the primary, secondary and senior levels, respectively.

The MWCT has an Environmental Education co-ordinator based in Windhoek who is part of the Environmental Education and Extension Section. The primary aim of this section is to develop a national awareness of the diversity within, and fragile nature of, the Namibian environment, and to encourage and promote the sustainable utilization of Namibia's natural resources. The objectives of the section are to develop a national, interactive communications network, and to facilitate natural environmental experiences and learning opportunities.

The MWCT has taken the initiative to draft an EE policy and views EE as an important part of its work. The development of an Environmental Education Center in the Etosha National Park at Namutoni is an important part of the MWCT's 1992 program and will be done in collaboration with the Rossing Foundation through a grant financed under the USAID financed READ project. The primary objective of the center is to establish environmental awareness among the public, particularly among neighboring rural communities and to promote this awareness of practical conservation and sustainable utilization of natural resources.

The MWCT is developing an extension program that will increase the people's understanding of the benefits that conservation and tourism bring to the nation. Groups from the LIFE pilot project areas of Caprivi and Bushmanland including

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primary and secondary school children, local teachers, community leaders, community game scouts, and policy makers are expected to directly benefit from the Namutoni Center and its outreach program.

There may be a need for small community-based EE centers in the Kwando area to support work in Caprivi and the Tsumkwe area of Bushmanland. These facilities may be financed by subgrants from either the LIFE or READ projects to those NGOs implementing the community based initiatives and directly integrated into their community level activities. Support services such as curriculum materials, staff, training, etc., would be provided through the READ Project's grant to the Rossing Foundation.

While the project recognizes the importance of EE initiatives in GRN and community programs and provides for such education directly and indirectly in each project component, the major EE program in Namibia will be supported through the USAID grant to the Rossing Foundation financed under the READ project (673-0004).

4. Regional Communications and Exchange of Information

The regional Natural Resources Management Project (NRMP) is being carried out in a variety of differing political, cultural, economic, and environmental settings in SADCC member countries. Since the LIFE project is similar to the country programs in Botswana, Zimbabwe and Zambia, there exist valuable opportunities for sharing experiences. Each participating SADCC country can benefit from the others, successes and mistakes by sharing information and lessons learned.

While each national program has its own focus and stage of development, there are numerous opportunities for networking and information exchanges. Each participating country, for example, is either addressing or planning a community game guard program. The sharing of information on on-going Namibian programs implemented will offer other approaches to regional projects for study and comparison. At the same time, information on the established programs in Zambia and Zimbabwe can allow Namibia to assess possible expansion of its national programs. Cross-border census and monitoring of wildlife populations would also be facilitated. In addition, specific research on topics common to regional projects can be shared. Topics might include: evaluations of resource management activities; community dynamics; empowerment of women; decentralization of authority; greater involvement of private sector; or pilot ecotourism activities. Regional or bilateral cooperative activities could include the development of regional environmental educational materials.

Both Botswana and Namibia have a common focus on the sustainable utilization of veld products, and re-establishment of indigenous veld plants. Namibia can benefit from the experience of Botswana's utilization and re-establishment of veld products as project activities. Involuntary resettlement of

human populations and the effect on resource activities is common to Zimbabwe, Botswana, and Namibia. The sharing of research on this topic among Southern Africa countries will help create a broader knowledge base and understanding of a shared situation and has reliance to the pending political and economic changes in South Africa. Namibia's scientific research and results of specific activities such as the de-horning of rhino are significant on a regional basis. Results from the Namibian and Zimbabwean de-horning programs will assist other SADCC and African countries in deciding whether to utilize this approach.

The office of the SADCC Sector Coordinator in Malawi will serve as the facilitator for regional communications and exchange of information. Regional research, conferences, workshops and seminars are coordinated through the Malawi component of the NRM. Each national participant is represented on the regional Project Coordinating Committee (PCC) which is chaired by Malawi. The body meets at least once a year in Malawi to discuss and analyze progress and constraints on overall project implementation; propose and approve regional activities and meetings; and review the terms of reference for the mid-term evaluation.

A reference center for publications, articles, and conference proceedings relating to community-based resource management, wildlife utilization, community development and other topics relevant to NRMP activities has been established in Malawi. Each participating country forwards relevant reports to the coordinating unit in Malawi. A list of holdings is distributed periodically from Malawi to all project participants, and articles are sent to participants upon request. A regional data base established in Malawi maintains records of baseline information on wildlife populations and habitat, socio-economic variables, and environmental conditions. Each participating country forwards baseline data to Malawi for inclusion in the data base. Information stored in the data base is available to all participants for analysis and review. Through the monitoring and evaluation process and the comparison of results, a unique opportunity is provided for formulation of theories regarding necessary conditions and policy environment for success, viability of different approaches, and implementation constraints. The lessons learned provide a valuable knowledge base for the design of future community-based resource utilization programs.

6. Cost Estimates and Financial Plan

(a) The Budget

The budget for the LIFE project is presented in Annex P, Tables I through VII. The estimated overall cost of the five year project is $10.5 million.

The project will be implemented through a Cooperative Agreement with a U.S. or International PVO and a Research Grant between the Zoological Society of San Diego and USAID/Namibia. None of the funds under the project will actually be disbursed

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to or through the GRN. If the Project's budget is broken down by these various modes of financing the funds will be allocated as follows:

	Total	%
US PVO	$8,028,404	76
San Diego	916,145	9
USAID	1,052,031	10
Inflation/ Contingency	503,420	5
TOTAL	10,500,000	100%

The Cooperative Agreement with the US or International PVO will provide management support to the project, long-term and short-term technical assistance, workshops, conferences, regional networking, in-country and external participant training and subgrants to Namibian NGOs and other organizations for the community based activities, planning and applied research, institutional support and environmental education. Of the $8,028,404 in this Cooperative Agreement, $2,515,614 or 31 percent will cover the management support functions. This represents 24 percent of the LOP funding. When the USAID management component is added, the proportion of the project going to cover management activities rises to 34 percent. Therefore, the bulk or approximately two-thirds of the financial resources will be used in direct support of the project's goals and objectives. The subgrants to Namibia NGOs totaling $2,496,100 amount to 31 percent of funds in the Cooperative Agreement. The remaining 45 percent of the funds covers technical assistance, training, workshops and regional coordination/networking.

The three year research project being carried out jointly by the Zoological Society of San Diego and the Etosha Ecological Research Institute of Namibia is estimated to cost $1,860,670. However, only $916,170 or 49 percent of the funds is being requested under the LIFE project. The balance of the funding will come from donations and contributions raised by the Zoological Society of San Diego.

It is planned that the $10.5 million project will be obligated in three tranches of $3.0 million in FY 92 and $4.5 million in FY 93 and $3.0 million FY 94.

(b) Host Country Contributions

In support of the community development activities, the MWCT will make the following contributions.

First, the MWCT will contribute the equivalent of $1,386,504 for activities related to the LIFE project in the Caprivi region. This includes involvement of anti-poaching personnel in protecting wildlife resources, park management staff in protecting resources and interacting with surrounding communities in problem animal control and project related meetings.

Second, in Bushmanland, the MWCT will contribute the

equivalent of $263,020 for project related activities. These activities include the involvement of personnel in protecting wildlife resources through law enforcement and maintenance of water points for wildlife, attendance at Bushmanland environmental planning committee meetings and other project related meetings with the communities, NGOs and other Ministries.

Third, in Owamboland and Kaokoland, the MWCT will contribute the equivalent of $655,713 for conservation management. Their activities include the control of problem animals such as elephants which leave Etosha, law enforcement, protection and maintenance of resources, extension activities, and servicing of the game guard system in Kaokoland.

For the direct and indirect support of the research activities in the Etosha catchment area, the MWCT will allocate the equivalent of $1,449,741 for conservation management in the Etosha National Park. The project related activities include the salaries and work of the Etosha anti-poaching unit, as well as the salaries and work of rangers and conservators involved in maintaining and protecting the park's wildlife and infrastructure. Etosha conservation staff will also interact with the local communities bordering the park for problem animal control and the development of better relations between the park and its neighbors. This is in terms of the policy of integrating the park into surrounding economies and land-use patterns which will be implemented under LIFE funding.

Overall project management will be provided by the MWCT's Environmental Planning Unit. It is estimated that 50% of their budget will be allocated to the LIFE project. This contribution represents the equivalent of $343,426. The unit coordinates community-based conservation at the national level, representing the MWCT on the LIFE project and field work in LIFE project areas. The ministry will also backstop the technical experts furnished by the PVO.

The GRN's contribution is summarized as follows:

	GOVERNMENT OF NAMIBIA (U.S. Dollar equivalent)	
	Amount (US$)	Percent (%)
Planning and Applied Research	1,449,741	35.4%
Community Development	2,305,237	56.2%
Project Management	343,426	8.4%
TOTAL	4,098,404	100%

(c) Audits/Evaluations

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Audits will be conducted each fiscal year in accordance with the standard provisions of OMB Circular A133 for grants or cooperative agreements. Under new audit requirements all non-U.S. and non governmental grantees and subgrantees receiving $25,000 per year or more of AID funds in any one calendar year under a grant, are required to have an independent audit performed of the grant in order to determine whether the receipt and expenditure of the funds provided under the grant are presented in accordance with generally accepted accounting principles and whether the grantee has complied with the terms of the agreement. The independent auditor must be selected in accordance with the "guidelines for financial audits contracted by foreign recipients" issued by the AID Inspector General and the audit must be performed in accordance with the "guidelines." Copies of guidelines have been sent to local CPA firms and will be sent to all participating NGOs. Local firms will be identified by USAID and certified by RIG/A in Nairobi. It is expected that the US PVO will conduct a single audit, encompassing subgrants funded, each year in compliance with this requirement. Two Non-Federal Audits will be funded under the Project for the San Diego Zoological Society and will be through the regional indefinite quantity contracts managed by RIG/Nairobi or under a direct contract awarded by REDSO/ESA. The audits will be during year three and five. The USAID/Namibia Controller will coordinate the audit activities for USAID.

Two evaluations will be funded under the Project. The evaluations will be during years three and five. The USAID/Namibia Project Manager will coordinate evaluation activities for USAID. The evaluations will be conducted under a direct contract or indefinite quantity contract work order arranged by USAID/Namibia.

7. Implementation Strategy

Given the diversity and complexity of the problems being addressed by the LIFE project, the project's implementation strategy is presented in the form of two tables. Table 3 gives an overview by each region of the major problems, their causes and potential solutions. In Table 4, the strategy for addressing these problems is outlined by region and by year.

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TABLE 3: Outline of Major Problems and Possible Solutions in the Regions Covered by the Project.

PROJECT AREA	PROBLEMS	CAUSES	POTENTIAL SOLUTIONS TO PROBLEMS FROM A COMMUNITY BASED STRATEGY OF SUSTAINABLE NATURAL RESOURCES MANAGEMENT
1. Caprivi	(1) Displaced persons/families (2) No employment opportunities (3) Poor support services and high incidence of disease and malnutrition among children (4) Declining wild life resources (5) Loss of domestic food crops (6) Juxtaposition of population to protected game areas	(1) Artificial peri-urban areas established by South African Defence Force. Families attracted to areas in search of work. (2) With the coming of independence, most people lost their jobs as South African Defence Force pulled out. (3) Health and educational infrastructure dismantled after the war. Loss of South African personnel not replaced by Namibians. (4) Poaching and war activities contributed to decline in wildlife. (5) Wild animals, particularly elephants, responsible for devastating crops. Made worse this year by drought. (6) Original park boundary failed to include the South Western side of Kwando River. Not done for political reasons because area was used by South African politicians as a personal hunting area.	(1) Locally recruited Game Guards to monitor wildlife population and control poaching and to facilitate the identification and implementation of community based natural resource income generation schemes. (2) The rich and diverse forests combined with the vast Kwando River delta is home to a wide selection of wildlife and plants. Area offers a variety of opportunities for ecotourism involving communities and private tour operators. (3) Income from community based wild life management could be used to upgrade social services such as health care and education. (4) Legislation is needed to incorporate the western side of the Kwando into the park land. (5) Environmental education outreach program and establishment of a satellite Environment Education center in Kwando area. (6) Establishment of a Landuse Planning Process as basis for decision making in development of area. (7) Enhanced coordination among various GRN ministries, local organizations and private sector.
2. Bushmanland	(1) Loss of traditional migration patterns and ways of living created a dependency on the government among people who historically have been independent and self-supporting. (2) Degradation of a once staple ecological system. (3) Unemployment (4) Resettlement of non-Bushman in the area. (5) Decreased wildlife populations. (6) Increased use of domestic livestock.	(1) Decision by former administrative authorities to encourage the Bushman to concentrate around peri-urban areas. (2) Emphasis in agricultural extension on cattle ranching at expense of wildlife and habitat contributed to marked decreases in wildlife populations. (3) Change from a pastoral economy to settled agricultural one. (4) Political pressure to open up Bushman for cattle grazing by Herero and other groups. (5) Veterinary Fencing (6) Poaching (7) Human Settlement at designated water points (8) Drought (9) Veld Fires (9) Terminal pasture destruction (10) Human Pop. Increase from 650 in 1960 to 4,500 in 1992.	(1) Decentralization of populations by re-establishing traditional settlements. (2) Reintroduction of once common game such as zebra, springbok, sable and reedbok. (3)Waterpoint management for wildlife. (4)Quotas based on annual wildlife counts and trends in trophy size. (5)Establishment of a Landuse Planning Process as basis for decision making in development of area. (6) Ecotourism with emphasis on the Bushman's unique culture and the wildlife and plantlife of the area. (7) Establishment of community, conservancies to manage natural resources and allow benefits to flow into the community. (8) Environmental education directed at community leaders and decision makers. (9)Establish game scout program.

TABLE 3: Outline of Major Problems and Possible Solutions in the Regions Covered by the Project.

PROJECT AREA	PROBLEMS	CAUSES	POTENTIAL SOLUTIONS TO PROBLEMS FROM A COMMUNITY BASED STRATEGY OF SUSTAINABLE NATURAL RESOURCES MANAGEMENT
3. Etosha Catchment Area	(1) Degradation of pasture land spread of bush and toxic plants. (2) Loss of forest resources - desertification (3) Declining water table and increased salinity of underground fresh water sources. (4) Concentration of people along pipeline in a few artificial peri-urban areas. (5) Increase in female headed households. (6) Loss of migratory routes for wild animals. (7) Declining numbers of large mammals.	(1) Decrease in transhumance and pastoralism. (2) Uncontrolled growth in cattle, donkeys and small stock. (3) Construction of pipeline and establishment of artificial urban centers by South African Defence Force encouraged people to congregate at these centers. Loss of wage income with their departure. (4) Rapid increase in population. (5) Departure of males to Windhoek and other areas in search of work. (6) Unauthorized fencing of communal grazing areas by richer farmers. (7) Poaching of wildlife and indiscriminate cutting of trees. (8) Destruction of the makalani palm for basket making. (9) Narrowing of Etosha park boundaries.	(1) Cultivation and conservation of wild plants/fruits affords a measure of protection during times of drought and poor rainfall. (2) A complementary balance of game and domestic stock affords a better use of pasture and grasslands. (3) Decentralization and managed growth. (4) Ecotourism in the sparsely populated areas to the north and west of the Etosha Park. (5) Introduction of community game guards to control poaching and work with communities on sustainable natural resources initiatives. (6) Formation of conservation conservancies. (7) Environmental education directed at key members of the community. Program operated out of Etosha and satellite centers in region. (8) Sustainable resource management of the makalani palm and identification of alternate plants for basket making. (9) Research on the factors causing deadlines in large mammal populations. (10) Region wide landuse plans (11) Enhanced coordination among various GRN ministries, local organizations and the private sector.

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TABLE 4: Implementation Strategy for the Project by Region and Year

REGION	YEAR 1 FY92/93	YEAR 2 FY93/94	YEAR 3 FY95/96	YEAR 4 FY95/96	YEAR 5 FY96/97
1. Overall Program Implementing Agents 1. US PVO 2.Namibia NGOs 3. Community Stakeholders 4. GRN 5. USAID 6. Namibian Private Sector	Selection of International PVO and setup of management Unit in Windhoek. (2) Award of grant to Zoological Society of San Diego. (3) Passage of legislation to permit communities to benefit from natural resources management. (4) Subgrant to Namibia Nature Foundation for institutional strengthening. (5) MWCT established coordinating organizational structures in Caprivi and Bushmanland.	(1) National workshop on community based initiatives. Feedback to Steering Group. (2) First group of longterm participants enter training. (3) Baseline data collected and targets set. (4) Subgrants awarded for applied research in support of project. (5) Quarterly progress review held. (6) Technical Assistance arrives. (7) Landuse plans reviewed and modified.	(1) National workshop on community based initiatives. (2) Quarterly progress reviews held. (3)Mid-term evaluation by outside group (4) Modification of project made based on evaluation (5) Second group of LT participants enter training first group returns (6) Landuse plans reviewed and modified.	(1) National workshop on community based initiatives (2) Quarterly progress reviews held (3) Third and final group of participants enter training second group returns (4) Landuse plans reviewed and modified.	(1) Final National workshop on community based initiatives (2) Quarterly progress reviews (3) Final evaluation held (4) All participants return (5) Landuse plans reviewed and modified. (6) Follow on project for SARP funding prepared.
2. Caprivi Implementing Agents 1. IRDNC 2. NNF 3. MWCT 4. Private Sector Tourist firms 5. NewVeld Ventures 6. The community	(1) Subgrants to Integrated Rural Development and Nature Conservation and NNF (2) Study/Plan for expanding Caprivi Game Reserve to include west bank of Kwando. (3) Analysis of low impact ecotourism potential (4) Study of employment/income opportunities (5) Natural resource based handicraft potential study (6) Baseline data collected analyzed. Impact indicators established. (7) Coordination mechanism established.	(1) Implementation continues with emphasis on landuse planning and developing community based income activities. (2) Data collected on program impact. (3) Local Environmental education program initiated. (4) Marketing of handicrafts and other veld products initiated (5) Schemes for low impact tourism initiated (6) Training of community liaison officer and game guards. (7) Caprivi Game Reserve expanded to include west bank of Kwando.	(1) Implementation of phase I program continues. (2) Mid-project evaluation undertaken (3) Plans developed to begin shifting recurrent cost from USAID grant to other sources (e.g. Joint ventures with private sector revenue from natural resource exploitation or ecotourism). (4) Training of community liaison officer and game guards.	(1) Program modified to take into account evaluation results. (2) Training continues (3) Emphasis on sustainability of availability of project activities emphasized.	(1) Program ends. (2) Final evaluation (3) Training ends.

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TABLE 4: Implementation Strategy for the Project by Region and Year

REGION	YEAR 1 FY92/93	YEAR 2 FY93/94	YEAR 3 FY95/96	YEAR 4 FY95/96	YEAR 5 FY96/97
3. Bushman-land Implementing Agents 1. Nyae Nyae 2. NNF 3. MWCT 4. The private sector 5. NewVeld Ventures/ Rossing 6. The community	(1) Subgrant to Nyae Nyae Foundation to initiate program. (2) Restrictions on tour operators in area. Emphasis on low impact tourism to allow gains in wildlife population and community-based management. (3) Emphasis on staff development such as hiring and training of camp guards. (4) Analyses of natural resources based income / employment opportunities (5) Baseline data collected and analyzed program impact indicators selected. (6) Coordination mechanism established.	(1) Implementation of program continues. (2) Data on program's impact collected. (3) Schemes for income and employment expanded (4) Training of community based staff. (5) Training of Bushmen as professional hunting guides.	(1) Implementation of program continues. (2) Mid-project evaluation. (3) Plans developed to begin shifting recurrent cost from USAID grant to other source (e.g. Joint ventures with private sector revenue from natural resource exploitation or ecotourism). (4) Training community based staff continues.	(1) Program modified to take into account results of evaluation. (2) Training continues. (3) Emphasis on sustainability of project activities emphasized.	(1) Program ends and final evaluation (2) Training ends.
4 Etosha Catchment Area Implementing Agents 1. MWCT 2.ZSSD / EEI 3. The community 4. NGOs 5. Research organizations	(1) Research on the decline of large ungulates initiated in Etosha Area by Etosha Ecological Institute and Zoological Society of San Diego.	(1) Research continues. (2) Environmental assessment undertaken (3) Socio-economic research on options for community based. Initiates undertaken with local research organizations	(1) Research continues and results incorporated into landuse plans for community based initiatives (2)First phase plan development with limited and selected communities. (3) NGO/CBO identified and selected to implement program. (4) Subgrant for pilot community based activities awarded.	(1) Program implemented (2) Community level staff trained.	(1) First phase program evaluated.

8. Implementation Arrangements

Various options for project management and implementation have been considered. One option was to use a national NGO in view of the GRN's positive relationship with NGOs as implementing agencies for Namibia's numerous new development programs. Such an NGO would have to have a range of skills and the mandated interest to take on the multi-faceted implementation tasks required by the LIFE project. The ability to recruit and manage long and short-term international and Namibian technical advisors as well as participant training and to manage AID procedures and regulations are critical to the smooth implementation of Project activities. Also the implementing organization would need to be regarded by the MWCT and the NGO community as neutral and be impartial in considering subgrant requests from applicants without conflict of interest. Also the organization would need to assist in the development of institutional capacity among the NGOs and Namibian organizations. The local organizations that come closest to being able to meet these criteria are the Namibia Nature Foundation and the Rossing Foundation.

USAID and the MWCT have decided that the best strategy is to use an international or U.S. PVO to implement the LIFE project. The PVO, once selected, will be encouraged to form a partnership with a local NGO to provide local staff, expertise and office space for its incountry operation and to bring local experience and knowledge to strengthen project implementation. An international PVO would bring particular advantages to project implementation, including assumed familiarity with AID regulations and procedures, experience managing similar projects elsewhere in Africa, and networks of contacts with projects and agencies working in natural resource management issues in the Southern Africa region and beyond. These skills coupled with the local experience and capacity of a Namibian partner is considered the preferred option for project management.

A bilateral grant agreement between the GRN and USAID will be executed. The grant agreement will authorize USAID to negotiate and sign a Cooperative Agreement with a PVO to provide management support and fund subgrants, technical assistance and training. The grant agreement will also authorize USAID to make a research grant to the Zoological Society of San Diego for the research study in Etosha to be done jointly with the Etosha Ecological Institute. Under the Cooperative Agreement with the PVO, a technical support staff of two persons for overall project management will be selected. In addition, the PVO will provide a Namibian Project Manager and a locally hired accountant.

The responsibilities of the PVO will include the provision of short-term technical assistance to the subgrantees, long and short-term technical assistance to the NGOs and GRN, and all necessary long and short-term training. The PVO will also manage the various subgrants for community-based activities, institutional strengthening and research.

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The Project Grant Agreement with the GRN will contain in its Annex 1 a detailed project description which will provide (1) a comprehensive project narrative, and (2) an overall project budget. Annex 1 will describe the responsibilities of all parties under the grant and will be supplemented by a project implementation letter which will be issued within 45 days of the signing of the Grant Agreement. This letter will amplify specifically how the project will be administered and implemented. (A Draft Grant Agreement is attached as Annex L to this paper).

The preferred methods of financing are direct payment or reimbursement, although a letter of credit may be authorized. These procedures are approved methods of financing. (See Annex P, Table VI for methods of financing and implementation). To the extent required, periodic advances may be provided to the grantees/recipients. Advances will be limited to the amount required for immediate disbursing needs in accordance with U.S. Treasury cash management guidelines. (See Annex Q for disbursement and accounting procedures for grantees/recipients).

In accordance with AID requirements, USAID/Namibia will have ultimate responsibility for LIFE project management, monitoring and financial management. USAID/Zimbabwe will retain responsibility for consolidating and coordinating overall assessments of the impact of the regional project and will act as the official accounting station for the project's accounts. USAID/Namibia will hire a U.S. Personal Services Contractor (USPSC) who will be assigned to the Human and Natural Resources Division to assist with the HNRDO project management, monitoring and implementation for this project and the READ project (673-0004). The PSC will be responsible for project management, reporting, ABS preparation, Congressional reporting, drafting PILs and PIOs as required by AID. Also USAID/Namibia will hire a FSN program specialist and a FSN project accountant who will be splitfunded between the LIFE and READ Projects. The accountant and program specialist will be located in the Human and Natural Resources Division and assist the Project Manager and US PSC in handling the management and financial aspects of the project.

Overall project management and oversight will be provided by a Project Steering Committee (SC) composed of six senior representatives drawn from the MWCT, USAID, the Integrated Rural Development and Nature Conservation, the Nyae Nyae Foundation, a Namibian training institution and the Unified Chamber of Commerce. Both IRDNC and Nyae Nyae will represent the Caprivi and Bushman communities on the committee. It is anticipated that by the second year of the Project these NGOs will be replaced on the committee by elected representatives from the communities themselves. The private business community will be represented by the Chairman of the Unified Chamber of Commerce. Given the emphasis placed on human resources development in the project, a representative from one of the major private training organizations will be chosen to serve on the committee. Other participating organizations in the project may be represented on

the committee in an advisory or non-voting status.

The PVO will review and recommend proposals to the SC for approval and participate as technical advisor and secretariat to the SC. The SC will be responsible for reviewing annual workplans and budgets and will provide policy guidance as required. The PVO will be responsible for submitting quarterly operational and financial status reports including host country contributions to the SC, USAID and MWCT.

The PVO will have responsibility for reviewing and recommending approval to the SC of subgrants to NGOs and other groups which will implement activities in community-based resource utilization, institution building, environmental education and planning and applied research. Subgrants or contracts of $50,000 or less do not require prior approval of the SC provided the activity is covered in the annual work plan. The PVO will ensure that recipient organizations have adequate management and accounting systems in place to safeguard U.S. Government funds. The PVO will hold ultimate responsibility for overall financial accounting and be responsible for ensuring the technical, social and economic viability of each of the subgrants and other activities, as well as their compliance with the guidelines established by the SC and consistent with AID and GRN procedures.

In addition, the PVO will identify, recruit and field short and long term technical assistance needs in support of community-based resource use, baseline research studies, institutional strengthening, etc., including the technical personnel that would be seconded to the MWCT. The MWCT and the PVO will work out an agreement of understanding that specifies to whom seconded technical experts are to report. It is expected that every effort will be made to select indigenous, disadvantaged Namibians for technical posts. In cases where this is not possible, disadvantaged Namibians will be selected for training immediately upon selection of the technical advisor so that they are able to assume substantive project management positions prior to the depart of the technical experts.

All project commodities will be procured by the PVO with the exception of those project commodities such as a computer and vehicle which will used by the project funded staff working in the USAID mission. Commodities purchased under the subgrants will be the responsibility of the subgrantees. AID Geographic Code 935 will be authorized in accordance with standard DFA policies. However, it remains AID policy to maximize U.S. procurement wherever practicable. USAID/Namibia, will for example, require that any travel to and from the U.S. be on U.S. carriers. USAID/Namibia also will require conformance with the 50/50 requirements of the U.S. Cargo Preference Act for ocean shipments. U.S. Gray Amendment entities will be used to the maximum extent possible for the procurement of commodities and services. Every effort will be made to ensure that Gray Amendment organizations receive copies of the Invitation for

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Application for the Cooperative Agreement.

The US Peace Corps has also indicated its interest and willingness to participate in the implementation of project activities. Beginning in FY 94 (October 1993), Peace Corps Volunteers (PCVs) will be recruited to provide technical assistance to the local NGO grantees and community groups and to assist the Ministry of Wildlife Conservation and Tourism with natural resource management and conservation. The provision of PCV's will be based on the technical assistance needs as identified by the MWCT and NGOs themselves and will be determined by their respective capacity to provide adequate work and support for each PCV requested. Relationships and responsibilities will be defined at a later date in a Memorandum of Understanding among the parties.

(a) Description of Process

1. Role of USAID

USAID/Namibia will have responsibility for project monitoring, assessing the program's impact, and financial accountability and for ensuring ultimate conformity of the project to USAID and US Government rules, regulations and procedures. Funds control will be shifted from USAID/Zimbabwe to USAID/Namibia. USAID/Zimbabwe will serve as accounting station making payments and maintaining financial records. The Chief of the USAID/Namibia's Human and Natural Resources Division will be designated as the USAID Project Officer and will be responsible for overseeing all project implementation activities, and represent USAID on the SC. He/she will be assisted by a project manager, hired under a US PSC financed half under this Project and half under the READ Project, and a FSN project specialist splitfunded with the READ Project will also be recruited.

The US PSC will report to the Human and Natural Resource Division Chief on all aspects of project implementation and will supervise the FSN staff on a day-to-day basis. The PSC's responsibilities will include continuous monitoring of all project activities, drafting of Project Implementation Letters (PILs) and Project Implementation Orders (PIOs) and semi-annual Project Implementation Reports. The PSC, in consultation with the USAID Project Officer, will maintain close contact with the international PVO and the Zoological Society of San Diego and will monitor their compliance with the terms of the Cooperative Agreement or grant, respectively. The PSC's scope of work is contained in Annex M.

The PSC and Namibian project specialist will also arrange external project evaluations in years 3 and 5. He/she, in conjunction with USAID, MWCT and the SC, will be responsible for recommending corrective action as necessary, based on the findings of evaluations and audits.

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2. Role of MWCT

The MWCT will be responsible for interpreting the GRN's national policy, establishing policy and guidance for the LIFE project, and assuring that all Project activities fit within the GRN national policy framework. The MWCT will also be responsible for chairing the Project Steering Committee and for coordinating activities with the Government. Regarding pilot activities, the Environmental Planning Unit of MWCT, on behalf of the GRN, will establish baseline project data and monitor, and evaluate all pilot activities in the three geographic areas.

In addition, the MWCT will be a member of the SC which will establish policy and guidance for the LIFE Project. The MWCT may also provide, through the subgrantees, scopes of work, annual work plans and performance reviews for the Community Liaison Officers, Natural Resource Economist, and Coordinator for Community-based Resource Management that would be recruited by the PVO and seconded to MWCT. The MWCT will also be responsible for preparing quarterly reports on its cash and in kind contribution to the project. They will be assisted in this through a contract with a local CPA firm.

3. Responsibilities of the US/International PVO Cooperative Agreement Recipient

Under the Cooperative Agreement, the PVO will have primary responsibilities to: undertake day-to-day management of the project and the financial resources made available by USAID through the Cooperative Agreement; review and recommend approval of subgrants; document and monitor subgrant activities; and provide long and short term technical assistance and training to the MWCT and Namibian NGOs/CBOs participating in the Project. Specific tasks are as follows:

- Report quarterly to the GRN and USAID on project activities, project progress and expenditures;

- Prepare an annual workplan and budget to be submitted and approved at the first of each calendar year by the Steering Committee with GRN and USAID concurrence;

- Provide a funding mechanism for activities implemented by NGOs, and other agencies in the three geographic areas involving community-based resource utilization, environmental education, planning and applied research and institutional capacity building; execute subgrants and disburse funds;

- Ensure that potential subgrantees have adequate accounting, procurement and financial management capabilities and report quarterly on their cash and inkind contributions to the Project;

- Provide long-term technical assistance including a project coordinator and Subgrant Manager for project

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management; a resource economist for the MWCT; and a coordinator for community-based resource management who will also be provided in the second year of the project;

- Strengthen NGOs by providing support, upon request, in defining and planning projects, proposal preparation, organizational development, and activities management;

- Provide short-term technical assistance, including experts, as required;

- Support the Steering Committee's work in terms of convening meetings, communications and other secretariat services as requested by the Committee;

- Identify issues in natural resource use and suggest, as requested, revisions in national policy and practices for consideration by the MWCT;

- In collaboration with the Steering Committee, monitor and evaluate subgrants activities;

- Collaborate with the managers of other related projects in the design and provision of training relevant to community participation in and benefit from use of resources;

- Identify training requirements and make recommendations to the Steering Committee;

- Carry out and implement participant training plans, prepare non-funded PIO/Ps for USAID and MWCT approval;

- Procure project commodities, including vehicles;.

- Facilitate the building of an effective project implementation team; and

- Suggest to USAID and the MWCT how the Steering Committee can become more representative of the communities benefitting from the project.

4. Role of the Steering Committee

All project activities will be coordinated and monitored by the Steering Committee, composed of six representatives as described earlier in the paper. The Chairperson of the Steering Committee will be the MWCT. Although the Steering Committee will operate on consensus, USAID and MWCT regulations require that USAID and the MWCT retain final right of approval on all project activities and expenditures to ensure conformity with their respective and applicable policies, regulations and statutes. Specific tasks of the Committee include:

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- Advise the MWCT and USAID on all project activities;

- Oversight of PVO support staff through reports at Committee meetings and written quarterly reports, annual workplans/budgets and evaluations;

- Establishment of procedures for all categories of subgrants, including community-based resource utilization, environmental education, and applied research and institution capacity building;

- Review and approve subgrant applications in accordance with criteria and priorities set by the project;

- Review of annual audits and two external evaluations during the life of the project and implement actions to correct problems identified during the audits and evaluations;

- Monitor impact of government policies and legislation concerning community resource utilizations in the three geographic areas, and make recommendations as appropriate; and

- Develop a plan during the life of the project for Namibian NGOs to maintain the key functions of LIFE on a sustainable basis at the conclusion of the project.

b) Procurement Plan

Under this project, U.S. $10.5 million in goods and services support is planned. AID Geographic Code 935 source/origin procurement will be authorized according to standard Development Fund for Africa policies. It remains AID policy, however, to maximize U.S. procurement wherever practicable. USAID/Namibia, will for example, require that any travel to and from the U.S. be on U.S. carriers. USAID/Namibia also will require conformance with the 50/50 requirements of the U.S. Cargo Preference Act for ocean shipments. U.S. Gray Amendment entities will be used to the maximum extent possible for the procurement of commodities and services. The Gray Amendment Certification is attached as Annex O.

A. Services

1. REDSO/ESA's Regional Contract Officer will execute an Invitation for Application for a Cooperative Agreement to solicit offers resulting in the award of a Cooperative Agreement to a US or international PVO which will manage most of the activities of the project. Specifically, the PVO will issue and manage the subgrants made to Namibian NGO's for the various project

components. The PVO will also (1) issue subgrants or subcontracts for all long-term and short-term training under the project; and (2) provide long-term technical assistance to the MWCT.

2. REDSO/ESA's Regional Contract Officer will execute a Specific Support Grant to the Zoological Society of San Diego to finance the Etosha research proposal which is attached as Annex K.

3. USAID will advertise and recruit a U.S. Personal Services Contractor for USAID's project management as well as FSN Personal Service Contractors for project backstopping and financial management. The U.S. PSC contract will be executed by REDSO/ESA's Regional Contract Officer with the selected individual. USAID's Executive Officer will execute the FSN PSC contracts.

4. AID/Washington FA/OP or REDSO/ESA's Regional Contract Officer will issue work orders against Indefinite Quantity Contracts for the project evaluations according to PIO/TS drafted by USAID/ Namibia. Every effort will be made to maximize the use of Gray Amendment enterprises in the selection of the IQCs.

B. Supplies

Purchase of the commodities for and/or by each activity will fall under the AID procurement regulations included in the pertinent contract or assistance instrument documents. USAID will require that administrative systems and procedures, including those which govern procurement of goods and services, are satisfactorily designed and implemented. USAID staff, with the REDSO/ESA Contract Office backstopping, will provide assistance to ensure that regulations are understood and implemented by the procuring entity.

c) Implementation Schedule

I. Invitation for Cooperative Agreement Application (IFA)

Schedule

- ProAg and PIO/T signed	September 1992
- CBD announcement sent to AID/W	September 1992
- CBD announcement published	September 1992
- IA issued to interested parties	October 1992

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- IA closes, Technical evaluation begins	November 1992
- Technical evaluation complete, Negotiations or request for best and final offer begins	December 1992
- Negotiations of best and final offer complete	January 1993
- Cost negotiation complete	January 1993
- Cooperative Agreement signed	January 1993
- Technical assistance arrives	February 1993

II. Other Procurement

Schedule

- Pro Ag and PIO/T's or C'S signed	September 1992
- PIO/T's and C'S signed	September 1992
- Advertisement made in CBD and locally for PSCs	September 1992
- Vehicle and computers for USAID project management ordered	October 1992
- Grant to Zoological Society of San Diego	September 1992
- Responses to PSC advertisement received	November 1992
- PSC selection made	December 1992
- USAID computers arrive	January 1993
- PSCs issued	January 1993
- PSC arrives	February 1993
- USAID vehicle arrives	March 1993

e) Vehicle Procurement and Implementation Plan

These project will procure a limited number of vehicles over its five year life. These will be mostly four-wheel drive, light weight heavy duty vehicles which will be used in direct support of the community based initiatives in Bushmanland, Caprivi and the Etosha Catchment Area and for overall project management and implementation. With the exception of the USAID project management vehicle, all other vehicles will be procured by the implementing PVO.

With the emphasis being placed by Washington on procurement of American manufactured goods, particularly vehicles, USAID will explore the option of purchasing four-wheel right-hand drive vehicles from U.S. manufacturers. As this project paper amendment was being prepared, Washington sent the field information on one such manufactured vehicle. In deciding upon the vehicles to purchase, USAID will examine such factors as:

(1) Availability of vehicles from U.S. sources and origin;
(2) Service and spare parts capacity in Namibia;
(3) Compatibility of vehicles with other vehicles being used by the grantees;
(4) Ability of grantee to maintain and service vehicle after the project ends;
(5) Delivery schedules; and
(6) Price inclusive of shipment.

The vehicle procured by USAID for use in its project management will be registered through the Ministry of Foreign Affairs as a diplomatic vehicle. It will be dedicated exclusively, for project management and monitoring activities. Although maintained and serviced by the Executive Office access will be controlled by the Human and Natural Resources Development Division Chief. The vehicle will have markings on it to indicate that it is a LIFE funded project vehicle.

The PVO will procure vehicles for activities in Bushmanland, Caprivi and Etosha. These vehicles will be registered in the name of the PVO and insured by it, but will be seconded to the subgrantee working in the field. The PVO and subgrantees will develop a vehicle utilization plan which will ensure that the vehicles are being deployed only in direct support of the project's activities. The PVO will monitor the utilization of the project vehicles. The subgrantees will be responsible for maintenance and operation expenses. At the end of the project, the vehicles will be donated by the PVO to the Namibian subgrantees. The vehicle for the PVO will be registered and insured in its name. All operational and maintenance aspects will be its responsibility. After the end of the project, the vehicle will be donated to the Ministry of Wildlife, Conservation and Tourism.

Vehicles needed to support the research activities of the Zoological Society of San Diego will be procured by it using non-USAID funds. They will be registered in the name of the Society and will be controlled by the Society's senior researcher at Etosha. At the end of the research grant, the vehicles will be donated by the Zoological society to the Etosha Ecological Institute to support its ongoing research program.

9. Monitoring and Evaluation Plan

To assess the achievement of planned outputs for the LIFE project, mid-term and final evaluations will be conducted. The mid-term evaluation in the third year will assess the validity

of the project design and progress to date. It will be used as a tool for planning the remainder of the project and will emphasise steps that need to be taken to ensure sustainability. The recommendations on sustainability of the community based activities will be incorporated into the plans for the gradual reduction in USAID funding of recurrent cost in the last two years of the project. A final impact evaluation will be conducted at the end of the project in the fifth year to determine whether the project has accomplished its goal and purposes and has, indeed, benefitted the targeted local communities in the three geographic regions.

The results of this evaluation as well as the research and analysis likely to be conducted by USAID/Namibia and the MWCT in the other marginal areas will be the basis for deciding on a possible second natural resources management project. This decision will also depend on the availability of A.I.D.'s bilateral or SARP regional funds at the time.

The mission monitoring procedures for host country counterpart contributions are discussed in Annex R.

10. Summary of Analyses

a. Technical Analysis

The LIFE project is technically feasible and implementable in the form proposed. Even though some of the activities of the project remain to be developed in greater detail, it is reasonable to conclude that the overall structure of the project builds logically upon the experience of other natural resource management projects in the region such as CAMPFIRE in Zimbabwe and ADMADE and LIRDP in Zambia, and that the proposed activities take account of existing capacities for resource management in Namibia such as the NGO projects in Damaraland, Kaokoland, Bushmanland, and Caprivi. The following briefly explains this positive assessment and a few areas where technical problems will if necessary, be addressed during project implementation.

The basic premise of the project is that sustainable natural resource management in Namibia depends upon active community participation and involvement. This is an important aspect of the widely accepted belief that the conservation of natural resources and social well-being of communities are mutually dependent in Africa, and that development projects and natural resource management are more likely to succeed if they are integrated and participatory. Previous experience suggests that both local and national commitment to sustainable resource use are critical. Two major components of the project, community-based management activities and planning and research support, address these two types of commitment. Community-based activities focus on community game guards, local participation in game management, and local generation and distribution of revenues from tourism and handicraft production. All of these are areas that have been selected for emphasis in other projects

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in Southern and Eastern Africa and have resulted in positive economic benefits to the respective communities.

Previous work also suggests that awareness of the potential benefits of resource management helps greatly to encourage initial participation in management schemes, and conservation education is now generally incorporated into natural resource projects. The community based environmental education component of the project addresses this need and is reinforced by the national and regional environmental education program being financed under the USAID READ project through a grant to the Rossing Foundation. The importance of measuring project results and of using the conclusions to refine project design is addressed by the planning and research and the regional coordination components of the project. The emphasis on wildlife utilization is logical because of the importance of pastoral systems in Namibia. The emphasis on education is logical because of USAID'S focus in this area and the links established between USAID and the Ministry of Education and Culture and the potential to utilize the LIFE and READ projects as catalysts in strengthening the coordination among the MWCT, the MEC, NGOs and the private sector. In sum, the project incorporates the experience of other natural resource management projects that are relevant to Namibia and is well integrated into USAID's overall program strategy.

The project promises to take advantage of the existing capacities of several well-known governmental agencies and non-governmental organizations. The latter include the Integrated Rural Development and Nature Conservation in the Kaokoveld and Caprivi areas; the Nyae Nyae Development Foundation; the Namibia Nature Foundation and the Etosha Ecological Institute. All of these are organizations with proven track records in the project areas in which they will be working. Given the small size of the Namibian research and management community, it is important that the project has positioned itself to cooperate with these organizations and agencies.

As the details of the project are developed, attention should be paid to the following technical areas. The project should test rather than assume that local communities are able to effectively manage natural resources. For example, communities may require outside assistance to monitor resource levels and to determine quotas for offtake. The project paper cites deforestation and water as resource problems in Namibia and will, it is hoped, support specific measures to link the sustainable use of forests and water resources with veld and wildlife management and measures to conserve soil fertility.

Collection and analysis of baseline data and monitoring of changes in ecosystem function and social well-being are explicit goals of the planning and research component, and specific mechanisms will be included to ensure that they are carried out. For example, involvement of Namibian postgraduate researchers at the University of Namibia with sub-projects in the three geographic areas could link monitoring to development of national

capacity for resource management. Besides the maintenance of biodiversity, forest, and population sizes and structures of key species, biological indicators of project success should also include conservation of nutrient and water cycles.

The emphasis on training is important to the sustainability of the project and institutional capacity building. Because no Namibian institution awards advanced degrees in natural resource management, multiple-year scholarships are included to allow Namibians employed by the MWCT to pursue post-graduate degrees abroad. Under graduate scholarships and diplomas in the natural, biological and social sciences related to the environment, ecology and natural resource management will be offered to MWCT employees, particularly at the field level, and young people from the three geographic areas of the project.

MWCT employees studying for advanced degrees abroad will be able to conduct their field research in Namibia. Field research in the targeted geographic areas may be conducted by the Etosha Ecological Institute, the Desert Ecology Research Institute, Namibia Institute for Social and Economic Research, the biological and social science facilities at the University of Namibia and the Namibian Economic Policy Research Unit in collaboration with the Department of Nature Conservation or under the supervision of NGO project leaders.

The Diploma in Nature Conservation currently offered by the Academy trains students to the approximate level of the Associate's degree; students take courses at the Academy and conduct field work under staff of the Department of Nature Conservation. Such a program may be expanded to allow students to conduct field work under staff of conservation and research NGOs, and upgraded to at least the level of the B.A. Current inability of NGOs to recruit managerial and technical staff within Namibia, particularly from among black or disadvantaged Namibians, is best remedied by support for diploma practical training within Namibia for Namibia's MWCT and NAGO field staff. Offering those individuals with grass-roots experience to acquire the technical and managerial skills through in country training will help to solve this problem.

The approach of the project is in line with current thinking in the area of natural resource management in both developing and developed countries. The techniques involved are likely to be relatively straight-forward or have been already tested elsewhere. The application of the techniques is what may be more difficult and interesting. It may be critical that the project design allow for logistic difficulties, safeguard the functions of monitoring and analysis of results, and provide for advanced training in association with the applied research to be conducted.

b. <u>Social Soundness and Institutional Analyses</u>

General Issues: In the past, conservation authorities were

viewed as "the enemy." However, with independence MWCT has begun a process of transformation from a ministry charged with preservation of natural resources principally for the benefit of whites and tourists to a ministry interested in natural resource utilization and conservation benefiting tourists and communities. A series of community consultations and the solicitation of project ideas from communities have been underway since 1991. Activities began in Caprivi and Bushmanland and have continued in the Kuiseb.

The MWCT is split into three parts: the top appears to be committed to utilization and conservation, supported by key implementing officers; a number of officers in the middle ranks and in the field are going along with the new philosophy but are not necessarily convinced of its utility; and others in the middle believe in the old philosophy of preservation. While the situation remains fluid, the commitment of key policymakers and program officers in the ministry to utilization and conservation, coupled with Government's commitment to community participation in development overall, suggests that LIFE can support positive changes in attitudes within the relevant Namibian institutions and the legal and regulatory framework to permit communities to directly benefit from community-based wildlife management.

Historically the natural resource NGO community has been split into two camps, those perceived as more technical in orientation (predominantly white in leadership) and those perceived as more community-development in orientation (predominantly black in leadership). While divisions do remain, these divisions do not present an overall threat to the implementation of LIFE. Both groups of NGOs have technical expertise in the areas of wildlife, natural resources, and community development. Further, the more technical NGOs are aware of the role of community development in natural resource management, and have accepted the community based approach. Also both groups have participated actively in the design of the LIFE Project.

Caprivi Problems: The area was an operational zone during the war for liberation. The war and the presence of the army in the area disrupted social and economic relations. Half the population lives in and around the former army base at Omega, seriously depleting natural resources in the area. Traditional authority structures are weak, and there is a struggle for leadership. Few formal sector jobs exist now that the South African Defence Force (SADF) has pulled out, and most people are unemployed. In addition, restrictions on hunting activities and the depletion of livestock have undermined food security.

Caprivi Potential: MWCT views Caprivi as a pilot area for community-based natural resource utilization and conservation measures. MWCT undertook a careful qualitative baseline study of Caprivi, and is intending to contract with the Namibian Institute of Social and Economic Research (NISER) for the collection of further social and economic data. They are also working with a local NGO, Integrated Rural Development and Nature

Conservation (IRDNC), which has implemented successful community-based projects in Kaokoland and Damaraland respectively. The IRDNC and MWCT have introduced a community game guard program intended to serve as the initial project component and to work toward community-based income generating activities.

The MWCT appears to be overcoming its past negative reputation among the people in Caprivi. While limited information is available on the types of income generating projects to be implemented, important issues in Caprivi will be dealt with through pre-implementation research and monitoring of interventions to ensure that problem areas are considered and responses formulated.

Bushmanland Problems: While removed from the operational zone during the war, Bushmanland was nevertheless militarized through the presence of army camps. The army served as one of the few sources of wage income in the district. The implementation of apartheid and the delimitation of Bushmanland restricted the San to one-third of their former hunting/gathering/livestock raising area. During the 1960s a number of San moved to the new administrative capital, Tjum!kui, with consequent pressures on natural resources in and around the center. Most of the populated areas of Bushmanland have been overhunted and overharvested.

Bushmanland Potential: Bushmanland represents one of the best examples in Namibia of a well-organized community-based organization (the Nyae Nyae Farmers Cooperative, NNFC) is working closely with an NGO (the Nyae Nyae Development Foundation, NNDF).

Despite the partial breakdown of San social relations especially in Tjum!kui, the creation of the NNFC and the movement of people back to previously-inhabited rural locations in Bushmanland will strengthen these relationships. In terms of distributional and gender issues, this should encourage a more egalitarian distribution of benefits across and within households and communities in keeping with traditional San culture.

There are plans to expand wildlife in the area which would support the formation of hunting groups and downstream benefits (e.g., tanning). The game guard program being implemented in Caprivi will also be expanded in Bushmanland. With a distinct culture of interest to the international community and the remoteness of the area, low-density tourism offers significant opportunities for community income generation.

c. Gender Analysis

Traditionally and culturally, women in Namibia, as in other countries in Southern Africa, have experienced discrimination in social, economic and political areas. They have not been primary participants in, nor recipients of, national or local development efforts. The position of the vast majority of women in Namibia

is especially disadvantaged. In most cases women are still subordinated to the men of the communities; they rarely participate in household and community decisions and as a consequence do not articulate their problems and needs readily.

The gender analysis considers the constraints women have experienced at the household and community levels and why women have not been active participants in development efforts in the past. The activities proposed under the LIFE project will not improve the status of one gender (either male or female) at the expense of the other, but activities will be designed to strengthen families through community-based efforts. Project activities will take precautions not to add to the burden of women by increasing time and labor requirements but rather incorporating women's constraints and needs into the design of community-based projects. While recognizing and respecting traditional roles of women, project activities will attempt to encourage women to become partners in the development process. A particularly promising area is in the management and utilization of veld foods which they traditionally have done.

Women's participation in development is complicated by their multiple roles in domestic tasks, household production and at times, off-farm income generation. Women have the major responsibility in raising children, caring for the sick and maintaining households; they are responsible for securing, collecting, processing and preparing food for family members. An increasing number of women are also engaging in employment opportunities that generate income to assist in meeting basic household needs. These consideration impede women from participation in activities that do not relate directly to household management.

Women are the key members in the community collecting and making use of veld foods/plants. Because of time and energy constraints, women tried to use resources such as fire-wood, veld production, etc. that are close to their home sites until the supply is diminished. As the population increases, forests are cut to make more land available for cultivation. Because women's first priority is to sustain life at the household level, it is with women that improvements for managing scarce natural resources can be made.

The family, as the smallest social entity in a nation, describes and prescribes the values of that nation. Because it is women's responsibility to socialize children in familial and cultural values, basic values of conserving natural resources are passed in part on to the next generation at the family level. Thus, they have a key role to play in environmental education.

While some statistical data exists about the role of women in Namibia, particularly in the Owambo and Kavango regions, the information does not paint a broad picture of national social-economic indicators needed to formulate a comprehensive report on gender constraints and opportunities. However, a recent publication by UNICEF (1991) has compiled much of the known

social-economic data relating to women and children in Namibia. In addition to information which was gleaned from existing studies, the report was supplemented with findings from a survey completed by UNICEF 1990 in five selected areas in the country. Information from this report was used in writing this section.

Female-headed households are common in Namibia as in other similar countries with strong historical patterns of labor migration. It is reported that 20-57% of non-white populations in urban areas of southern and central Namibia are headed by women. Higher levels within this range are found particularly among squatter settlements. Also a study found that 36% of the households in Katutura and 40-49% of those in Ovambo are headed by women.

Female headed households are particularly vulnerable in development activities. Time and labor constraints limit their participation in activities outside the household whether at the decision-making or at the implementation levels. Female household heads also experience difficulties in accessing services especially marketing and agricultural services because of an expressed or implied policy to have a male speak for the household. Women, even though they are the head of their household and have no man to speak for them, would rather do without needed goods or services than break the traditional taboo of confronting a men in public meetings or gatherings.

To enhance women's involvement, it is particularly important first to examine women's multiple roles in production and their contribution of essential domestic tasks related to the viability of the household as a production unit. Second, it is important to identify the key factors which constrain or enhance women's productive and domestic roles. These efforts have a critical influence at the household level, but are also central to the ability of women to interlink household production and participation in the wider economy.

d. Financial and Economic Analysis

The LIFE Project is an investment in sustainability. It combines rural development and conservation with sustainable development. The exact impact of the interventions on the economy will emerge as implementation takes place.

The project is an initiative in which the economic desirability of the investment or its contribution to society's welfare is a primary criterion. Financial profitability is relevant in so far as project activities need to be financially attractive to participants. The economic value will be manifested in direct utilization of resources and in indirect non-use through preservation and conservation. In the context of Namibia, activities which contribute directly to economically viable and sustainable development will get priority.

Project Assumptions and Problem Statement

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The economy of Namibia has a markedly dual nature. Any economic growth tends to be concentrated in the modern sector, while the undeveloped sector in the communal areas remains unaffected and marginalized. Basic needs go unmet and birth rates are high. Historically, conservation of natural resources has followed the classic colonial "eurocentric" model. Ownership and responsibility for the resources has become alienated from the community. The result has been a tendency for illegal use and poorly regulated access to natural resources by the community.

The Most Appropriate Economic Response

The communal areas need surplus creation and capital formation from within. A big step towards this can be achieved if ownership of primary local assets, namely natural resources, are restored to them. To enable them to benefit from this, communities also need to be mobilized and assisted with materials and training. This is a central theme in the LIFE project.

Rural population growth is negatively correlated with womens' education, income, and access to formal employment. The LIFE project will pay specific attention to enhancing womens' incomes and education and awareness of environmental issues.

The solution to the problem of excessive exploitation of renewable resources is in limitation of harvesting effort to the level where net economic returns are greatest. This is illustrated in resource economic theory. Optimal and sustainable use of resources in Namibia's communal areas will require effective regulation of access. The only way that this can be ensured is if the responsibility for control and management of the resource is returned to the potential users of the resource. Communities need <u>territorial use rights</u> so that they can invest in resource protection and manage the levels of use. The LIFE project will empower target communities in exactly this way and provide the resources to permit the GRN to institute its planned legislation to allow communities to benefit directly from sustainable utilization of natural resources.

The Appropriateness of the LIFE Interventions

The specific interventions planned, will achieve project objectives most efficiently by addressing the weak links in the system. Emphasis on development of management capability in communities and supporting NGOs are vital. Communities need bargaining power and NGOs must be able to assist them as "honest brokers."

LIFE will address the training backlogs of the past by filling in the more serious gaps in skills from rural household to professional level. Gaps in knowledge about the complex, biological, social and economic systems will be studied through applied research and this will permit optimization of resource allocation.

Potential Financial and Economic Benefits

Research from other parts of SADCC, especially Botswana, Zimbabwe and Zambia is used to illustrate the value of various resource use activities which could emerge in the LIFE target areas.

In Botswana, appraisal of community-based projects involving small scale game harvesting, and lease of rights for safari hunting and game viewing lodge development have shown that significant positive net economic returns are possible. However, the viability is critically sensitive to wildlife population densities, presence of high value species and presence of high value tourist attractions. It is also highly dependent on enhanced community management. In Zimbabwe and Zambia, evaluation of community projects involving lease of safari hunting rights and some game cropping suggests that viability can be threatened by inefficient channels of benefit distribution.

Wildlife viewing lodge development will provide high economic return on investment, high returns per unit area, moderate profitability and high job creation in limited, high quality areas. Safari hunting tourism will tend to provide very high economic return on investment, poor returns per unit area, moderate profitability and poor job creation in more extensive but also limited areas. Therefore, the project will encourage the active participation of the private sector in promotion of tourist accommodation near communal areas. An example of this is the development of the Lianshulu Safari Lodge along the Kwando River in Caprivi.

Small scale (artisanal) game cropping and fishing will tend to provide moderately high economic return on investment, moderate returns per unit area, moderately low profitability and high job creation in more extensive areas. Commercial timber harvesting will tend to provide moderate economic return on investment and per unit area, low profitability and high job creation in extensive areas.

Small scale product processing e.g. tanning and crafts production will tend to provide moderately low economic return on investment and per unit area, very low profitability and high job creation in extensive areas. Wildlife ranching and farming ventures using mixed game and ostrich or crocodile will require careful appraisal since in the remoter communal areas they would be likely to suffer from severe comparative disadvantages. Live game capture and dealing would also need careful appraisal including examination of veterinary and opportunity costs.

The benefits of conservation education, management and resource management training will be manifested in the degree of future success in achieving the economic objectives of LIFE. The same will apply to LIFE's investments in institutional capabilities. The return in direct utilization gains, however, is only a part of the total value of LIFE. Non-use gains in the form of biodiversity and wildlife preservation will be

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A.I.D./W FOR AFR/SA, KEITH BROWN FROM DIRECTOR MORSE AND A.I.D. REPRESENTATIVE SHORTLIDGE

E.O. 12356: N/A
SUBJECT: REVIEW OF NAMIBIA SUPPLEMENT TO REGIONAL NATURAL RESOURCES MANAGEMENT (NRM)

REF (A) HARARE 9600 (91); (B) HARARE 944 (92)

CAO CSSS
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1. SUMMARY: THIS CABLE REPORTS THE ECPR RESULTS OF THE NAMIBIA PP SUPPLEMENT TO THE REGIONAL NATURAL RESOURCE MANAGEMENT PROJECT REVIEW. IT IS A JOINT USAID ZIMBABWE AND USAID NAMIBIA MESSAGE BOTH REQUESTING ACTION BY AID/W/AFR/SA AND PROVIDING GUIDANCE TO USAID NAMIBIA. ON JULY 10, 1992, USAID ZIMBABWE REVIEWED THE DRAFT PROJECT PAPER SUPPLEMENT FOR THE ADDITION OF A NAMIBIA COMPONENT TO THE NATURAL RESOURCES MANAGEMENT PROJECT (690-0251). USAID NAMIBIA REPRESENTATIVE RICHARD SHORTLIDGE PARTICIPATED IN THIS REVIEW. BASED ON THE RESULTS OF THIS REVIEW AND SUBJECT TO THE AGREEMENTS REACHED AS PRESENTED BELOW, USAID ZIMBABWE REQUESTS THAT THE USAID REPRESENTATIVE IN NAMIBIA BE DELEGATED AUTHORITY IN ACCORDANCE WITH DELEGATION OF AUTHORITY NO. 551 TO APPROVE THE PROJECT PAPER SUPPLEMENT FOR THE NAMIBIA COMPONENT WITHOUT FURTHER REFERENCE OR CONCURRENCE OF USAID ZIMBABWE OR REDSO/ESA. USAID ZIMBABWE WILL EXECUTE THE AUTHORIZATION AMENDMENT OF THE UMBRELLA REGIONAL NRM PROJECT, BASED UPON USAID NAMIBIA'S APPROVAL OF THE PP SUPPLEMENT, TO PRESERVE ONE LOCUS FOR AUTHORIZATION ACTIONS. THE ANTICIPATED DATE OF OBLIGATION OF THE PROJECT AMENDMENT IS AUGUST 31, 1992, AND THE REVIEW COMMITTEE BELIEVES THAT THE RECOMMENDED PP SUPPLEMENT CHANGES CAN BE MADE BY THAT DATE.

factored in Analyses revision
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2. THE USAID ZIMBABWE REVIEW OF THE PROJECT PAPER SUPPLEMENT FOR THE NAMIBIA COMPONENT OF THE NATURAL RESOURCES MANAGEMENT PROJECT HAS HELD IN HARARE ON JULY 10, 1992. THE MEETING HAS CHAIRED BY USAID MISSION DIRECTOR TED D. MORSE AND ATTENDED BY THE USAID ZIMBABWE DEPUTY DIRECTOR AS WELL AS MEMBERS OF THE CONTROLLERS OFFICE, THE GENERAL DEVELOPMENT

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OFFICE, AND THE PROGRAM DEVELOPMENT AND IMPLEMENTATION OFFICE. USAID NAMIBIA REPRESENTATIVE RICHARD SHORTLIDGE REPRESENTED THE NAMIBIAN MISSION. REPRESENTATIVE SHORTLIDGE HAS COMMENDED ON THE DRAFT PROJECT PAPER SUPPLEMENT FOR ITS THOROUGHNESS AND ITS CONTRIBUTION TO MEETING OBJECTIVES FOR THE UMBRELLA REGIONAL PROJECT. THE REVIEW COMMITTEE NOTED THAT IT WAS PARTICULARLY PLEASED THAT USAID NAMIBIA HAS BEEN INSTRUMENTAL IN PROMOTING FUNDAMENTAL CHANGE IN NATIONAL LEGISLATION SUCH THAT COMMUNITIES WILL BE ABLE TO RETAIN THE BENEFITS OF NATURAL RESOURCE MANAGEMENT INITIATIVES. SUCH LEGISLATION IS LIKELY TO BE ENACTED BEFORE THE END OF 1992.

3. BACKGROUND:
(A) USAID NAMIBIA PRESENTED A DRAFT PROJECT PAPER SUPPLEMENT FOR THE NAMIBIA COMPONENT OF THE NATURAL RESOURCES MANAGEMENT PROJECT PROPOSING A TWO-PHASED APPROACH OVER A SEVEN YEAR TIME FRAME, WITH A TOTAL LIFE OF PROJECT FUNDING OF $14.0 MILLION. THE PP SUPPLEMENT REQUESTED AUTHORIZATION FOR A US$9.3 FOUR YEAR (PHASE 1) PROJECT AND APPROVAL IN PRINCIPAL OF PHASE 2. THE PROJECT PAPER SUPPLEMENT PROPOSED FOUR COMPONENTS: COMMUNITY-BASED ACTIVITIES; PLANNING AND APPLIED RESEARCH; ENVIRONMENTAL EDUCATION; AND REGIONAL COORDINATION AND EXCHANGE OF INFORMATION. THE PROPOSED PHASE I PROJECT INCLUDED COMMUNITY-BASED ACTIVITIES IN CAPRIVI, BUSHMANLAND, AND KUISEB. IN ADDITION, A SPECIFIC RESEARCH GRANT FOR THE ETOSHA CATCHMENT AREAS AND A GRANT TO A NAMIBIAN NGO FOR A BROAD-BASED ENVIRONMENTAL EDUCATION PROGRAM WERE TO BE FINANCED OUT OF PHASE I OF THE PROPOSED PROJECT. THE SECOND PHASE WOULD HAVE CONTINUED THE COMMUNITY-BASED INITIATIVES IN THE THREE ORIGINAL GEOGRAPHIC AREAS AND GRADUALLY EXPANDED THE PROJECT'S COMMUNITIES TO FOUR OTHER COMMUNAL AREAS.

(B) THE NAMIBIA PROJECT PAPER SUPPLEMENT HAS COMPATIBLE WITH THE REGIONAL P
ROJECT PURPOSE WHICH
SEEKS TO "IMPROVE THE SOCIAL AND ECONOMIC WELL-BEING OF RESIDENTS OF TARGETED RURAL COMMUNITIES BY IMPLEMENTING SUSTAINABLE COMMUNITY-BASED WILDLIFE CONSERVATION AND UTILIZATION PROGRAMS." THE SPECIFIC PURPOSE OF THE NAMIBIA COMPONENT IS TO "INCREASE THE SOCIAL AND ECONOMIC WELL-BEING OF POOR RURAL COMMUNITIES LIVING IN MARGINAL AGRICULTURAL AREAS OR IN BUFFER ZONES TO NATIONAL PARKS AND PROTECTED AREAS, THROUGH SUSTAINABLE AND ECONOMICALLY VIABLE COMMUNITY-BASED NATURAL RESOURCE MANAGEMENT."

(C) DURING THE PROJECT PAPER REVIEW IT WAS AGREED THAT THE PHASING OF THE PROJECT WOULD BE ELIMINATED; THAT

THE PROJECT FOCUS WOULD BE ON ONLY THREE GEOGRAPHIC AREAS (CAPRIVI, BUSHMANLAND, AND THE ETOSHA CATCHMENT AREA), THUS EXCLUDING THE ZUIDER; THAT THE NATIONWIDE ENVIRONMENTAL EDUCATION PROPOSAL OF THE ROSSIN FOUNDATION WOULD NOT BE INCLUDED IN THIS PROJECT PAPER SUPPLEMENT; AND THAT THE LIFE OF PROJECT WOULD BE FIVE YEARS.

4. THE USAID ZIMBABWE REVIEW OF THE DRAFT PROJECT PAPER SUPPLEMENT HAS CARRIED OUT IN THE CONTEXT OF PREVIOUS DISCUSSIONS AND GUIDANCE PROVIDED IN HARARE 9620 (91), AND HARARE 944 (92) AND DISCUSSIONS HELD IN HARARE IN MARCH 1992 WHICH WERE ATTENDED BY A.I.D. REPRESENTATIVE RICHARD SHORTLIDGE AND PROGRAM OFFICER MARK JOHNSON. THE AGREEMENTS AND GUIDANCE BELOW ARE PRESENTED IN TWO SECTIONS - A. BASIC PRECEPTS FOR FINAL PROJECT PAPER DEVELOPMENT; AND B. RESOLUTIONS OF SPECIFIC ISSUES RAISED IN THE REVIEW.

A. BASIC PRECEPTS FOR FINAL PROJECT PAPER DEVELOPMENT

THE FOLLOWING PRECEPTS, WHICH WERE AGREED TO AT THE REVIEW, ARE FUNDAMENTAL TO ALL SUBSEQUENT GUIDANCE:

(1) ALL PROJECT ACTIVITIES WILL FOCUS ON ONLY THREE GEOGRAPHIC AREAS. THESE ARE CAPRIVI, BUSHMANLAND AND THE ETOSHA CATCHMENT AREA. ACTIVITIES WITH A NATIONWIDE ORIENTATION WILL NOT BE INCLUDED IN THE PROJECT. ADDITIONAL SPECIFIC GUIDANCE IS GIVEN BELOW FOR ACTIVITIES IN THE THREE GEOGRAPHIC FOCUS AREAS.

(2) ALL PROJECT ACTIVITIES WILL BE FULLY CONTAINED. EXPLICITLY, THE PROJECT WILL NOT INCLUDE ANY ACTIVITIES WHICH MAY RAISE EXPECTATIONS OR IMPLY COMMITMENTS FOR SUBSEQUENT FUNDING THROUGH A FOLLOW-ON PROJECT. PROPOSED ACTIVITIES WHICH RELATE TO RESEARCH OR ANALYSES FOR THE DEVELOPMENT OF ACTIVITIES FOR SUCH A FOLLOW-ON PROJECT ARE MORE APPROPRIATELY FUNDED BY REGIONAL PD&S ON A CASE-BY-CASE BASIS. SARP PD&S MAY BE USED TO FUND SEPARATE DEVELOPMENT OF PROJECT RELATED ACTIVITIES.

B. RESOLUTION OF SPECIFIC ISSUES RAISED IN THE REVIEW.

(1) ONE PHASE PROJECT.
IT HAS AGREED THAT THE NAMIBIA COMPONENT OF THE NATURAL RESOURCE MANAGEMENT PROJECT WILL BE A FIVE YEAR EFFORT. THE PROJECT PAPER SUPPLEMENT WILL REFLECT THIS REVISED TIME FRAME IN THE NARRATIVE, BUDGETS AND ANNEXES. ALTHOUGH THE REVIEW COMMITTEE NOTED THAT IT IS FEASIBLE THAT THE PROJECT MIGHT BE AMENDED OR THAT THERE COULD BE A FOLLOW-ON TO INCLUDE ACTIVITIES IN OTHER GEOGRAPHIC AREAS, IT HAS AGREED THAT DISCUSSIONS OR REFERENCES RELATED TO ACTIVITIES OUTSIDE THE THREE GEOGRAPHIC FOCUS AREAS WILL BE EXCLUDED IN THE FINAL PP SUPPLEMENT.

(2) CLARIFICATION OF THREE GEOGRAPHIC FOCUS AREAS.

(A) AS STATED IN THE GENERAL PRECEPTS SECTION ABOVE, THE PROJECT WILL CARRY OUT ACTIVITIES ONLY IN THE THREE IDENTIFIED GEOGRAPHIC FOCUS AREAS OF CAPRIVI, BUSHMANLAND, AND THE ETOSHA CATCHMENT AREA. THIS CONCEPT OF GEOGRAPHIC FOCUS RELATES TO ALL PROJECT ELEMENTS - COMMUNITY-BASED INITIATIVES, ENVIRONMENTAL EDUCATION, RESEARCH, AND INSTITUTIONAL STRENGTHENING. THE RATIONALE FOR THIS FOCUS IS TO REFLECT THE PILOT NATURE OF THE REGIONAL PROJECT AND TO ALLOW THE LIMITED MANAGEMENT AND IMPLEMENTATION RESOURCES OF THE MISSION TO BE CONCENTRATED ON DISCRETE, DEFINABLE ACTIVITIES AND FACILITATE IMPACT ASSESSMENT. THE WEAK NATURE OF THE NGO COMMUNITY MAY REQUIRE SUBSTANTIAL USAID INVOLVEMENT IN IMPLEMENTATION EVEN WITH THE PRESENCE OF AN INTERNATIONAL PVO
AS THE PRIMARY
IMPLEMENTING AGENT.

(B) ONE OF THE AGREED UPON GEOGRAPHIC FOCUS AREAS DIFFERS FROM THE ONE PROPOSED IN THE DRAFT PP SUPPLEMENT. DURING THE DISCUSSIONS, IT HAS DECIDED THAT THE KUISEB AREA WOULD NOT BE INCLUDED AND WOULD BE REPLACED BY THE ETOSHA CATCHMENT AREA. WITH THE INCLUSION OF THE ETOSHA CATCHMENT AREA AS A GEOGRAPHIC FOCUS AREA, IT IS APPROPRIATE FOR THE PROJECT TO FUND THE RESEARCH PROPOSAL OF THE ZOOLOGICAL SOCIETY OF SAN DIEGO (ZSSD). IT HAS FURTHER AGREED THAT WHILE THE ETOSHA CATCHMENT AREA WILL BE ONE OF THE FOCUS AREAS OF THE PROJECT, UNTIL THE REQUIRED ANALYSIS AND DETAILED DEVELOPMENT OF COMMUNITY-BASED ACTIVITIES ARE COMPLETED, ONLY THE ZSSD ACTIVITY AND OTHER PLANNING

AND RESEARCH ACTIVITIES RELATED TO DEVELOPMENT (NOT IMPLEMENTATION) OF COMMUNITY-BASED ACTIVITIES IN THE ETOSHA CATCHMENT AREA ARE TO BE APPROVED. USAID NAMIBIA WILL MODIFY THE PP SUPPLEMENT TO INCLUDE ONLY THOSE ACTIVITIES WHICH MEET THIS GUIDANCE OF CONCENTRATION ON THREE GEOGRAPHIC FOCUS AREAS. AS NOTED ABOVE, RESEARCH ACTIVITIES WHICH RELATE TO DEVELOPMENT OF ACTIVITIES IN REGIONS OF THE COUNTRY OTHER THAN CAPRIVI, BUSHMANLAND, AND THE ETOSHA CATCHMENT AREA WHICH MAY BE CONSIDERED UNDER A FOLLOW-ON OR AMENDMENT ARE MORE APPROPRIATELY FUNDED UNDER REGIONAL PD&S.

(3) ENVIRONMENTAL EDUCATION (EE).
USAID ZIMBABWE EXPRESSED ITS SUPPORT FOR USAID NAMIBIA AND THE GOVERNMENT OF NAMIBIA'S INTEREST IN THE IMPORTANT AREA OF ENVIRONMENTAL EDUCATION. ALTHOUGH CLEARLY IMPORTANT TO NAMIBIA, THE CONCEPT OF A NATIONWIDE PROGRAM IN ENVIRONMENTAL EDUCATION, HOWEVER, IS NOT CONSONANT WITH THE REGIONAL PROJECT PURPOSE AND THE NEED TO CONCENTRATE ACTIVITIES ON A LIMITED NUMBER OF GEOGRAPHIC AREAS. IT HAS AGREED THAT THE REGIONAL AND NATIONWIDE STRATEGY PRESENTED IN THE ENVIRONMENTAL EDUCATION COMPONENT, TO BE FUNDED THROUGH A GRANT TO THE ROSSING FOUNDATION, DOES NOT FALL WITHIN THE PURVIEW OF THIS PROJECT. USAID NAMIBIA INDICATED THAT IT WILL PURSUE THE POSSIBILITY OF INTEGRATING THE ENVIRONMENTAL EDUCATION PROPOSAL FROM ROSSING WITH THE FOUNDATION'S PROPOSAL FOR ADULT EDUCATION UNDER THE NAMIBIAN BILATERAL READ PROJECT. THEREFORE, USAID NAMIBIA AND USAID ZIMBABWE AGREED THAT THE ENVIRONMENTAL EDUCATION COMPONENT OF THE PP SUPPLEMENT WILL INCLUDE ONLY EE ACTIVITIES WHICH ARE DIRECTLY AND DEMONSTRABLY SUPPORTIVE OF COMMUNITY-BASED ACTIVITIES IN THE TWO PRIMARY GEOGRAPHIC FOCUS AREAS (CAPRIVI AND BUSHMANLAND). AS NOTED ABOVE, IT IS POSSIBLE THAT EE ACTIVITIES MAY BE EXPANDED TO THE ETOSHA CATCHMENT AREA AT A LATER DATE, BUT ONLY UPON COMPLETION OF THE APPROPRIATE ANALYSIS AND DOCUMENTATION TO INCLUDE THE ETOSHA CATCHMENT AREA AS A GEOGRAPHIC FOCUS AREA FOR COMMUNITY-BASED ACTIVITIES, ENVIRONMENTAL EDUCATION AND INSTITUTIONAL SUPPORT.

(4) NGO CAPACITY, COMMITMENT, SELECTION CRITERIA.
(A) THE DRAFT PROJECT PAPER SUPPLEMENT RECOMMENDED WORKING PRIMARILY THROUGH NGOS AND, TO A LESSER DEGREE, THROUGH COMMUNITY-BASED ORGANIZATIONS (CBOS). CBOS ARE CHARACTERISTICALLY INFORMAL ORGANIZATIONS OR GROUPS OF INDIVIDUALS WITHOUT A LEGAL INSTITUTIONAL IDENTITY. ANNEX K PROVIDED A LISTING OF "PARTICIPATING ORGANIZATIONS". THE PP SUPPLEMENT POINTED OUT THAT THE NAMIBIAN NGO SECTOR IS WEAK IN ITS MANAGEMENT SYSTEMS AND ABILITY TO IMPLEMENT PROJECTS. GIVEN THIS SECTORAL WEAKNESS, THE PROJECT CORRECTLY PLANNED INSTITUTIONAL STRENGTHENING ACTIVITIES. IT HAS AGREED THAT, IN ACCORDANCE WITH THE GENERAL GUIDANCE ABOVE, THESE INSTITUTIONAL

STRENGTHENING PROGRAMS ARE TO BE FOCUSED ONLY ON NGOS OPERATING WITHIN THE THREE FOCUS AREA COMMUNITIES AT THE TIME OF PROVISION OF A.I.D. ASSISTANCE AND ARE TO BE DIRECTLY AND DEMONSTRABLY RELATED TO THE NGOS' COMMUNITY-BASED INITIATIVES IN THOSE AREAS.

(B) REVIEW OF THE CBO CAPACITY TO IMPLEMENT ACTIVITIES INDICATED THAT THESE ORGANIZATIONS ARE EXTREMELY TENUOUS IN THEIR MANAGEMENT AND FINANCIAL ADMINISTRATION CAPABILITIES, AS WELL AS LACK ING LEGAL DEFINITION. THEREFORE, IT HAS AGREED THAT THE NAMIBIA COMPONENT OF THE NRM PROJECT WILL NOT IMPLEMENT SUB-GRANTS DIRECTLY WITH CBOS. IT HAS ALSO AGREED THAT THE PP SUPPLEMENT WILL BE MODIFIED TO CLARIFY THE DISCUSSION ON CAPABILITIES OF NGOS/CBOS, AND THE TYPE OF ANALYSIS CARRIED OUT WITH REGARD TO THESE GROUPS TO DATE.

(C) ANNEX X OF THE PROJECT PAPER SUPPLEMENT PRESENTED THE UNIVERSE OF NGOS WHICH MIGHT SUBMIT PROPOSALS FOR FUNDING UNDER THE PROJECT. THE PRESENTATION O THIS ANNEX WAS SOMEWHAT MISLEADING, SUGGESTING THAT THE ORGANIZATIONS HAD ALREADY SUBMITTED PROPOSALS FOR PROJECT FUNDING. REPRESENTATIVE SHORTLIDGE EXPLAINED THAT THIS WAS AN ILLUSTRATIVE LIST OF ACTIVITIES WHICH HAD BEEN PREPARED BY ONE OF THE PROJECT'S CONSULTANTS, AND THAT NO COMMITMENTS WERE IMPLIED. BASED ON THIS PRESENTATIONAL LACK OF CLARITY, IT HAS AGREED THAT THIS ANNEX AND THE PP WILL BE MODIFIED TO CLARIFY THE "POTENTIAL" RATHER THAN "COMMITTED" NATURE OF THE NGO

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PARTICIPANTS. IN ADDI .ON, THE PP DESCRIPTION SECTION WILL BE MODIFIED TO STATE THAT THE PROPOSED ACTIVITIES WITH THE PVOS OPERATING IN CAPRIVI AND BUSHMANLAND WILL BE SUBJECT TO THE SELECTION PROCESS OUTLINED IN THE PP SUPPLEMENT. ANNEX E WILL BE CHANGED TO BE "PROFILES OF NAMIBIAN NGOS WORKING IN THE NATURAL RESOURCES SECTOR".

(D) THE PP SUPPLEMENT PROPOSED CRITERIA FOR SUB-GRANTS UNDER THE PROJECT IN TWO PLACES. THESE CRITERIA WERE CONTRADICTORY IN SOME CASES. IT HAS AGREED THAT THE PP SUPPLEMENT WILL BE CHANGED TO CONTAIN A SINGLE LIST OF CRITERIA WHICH CLARIFY THE PARAMETERS OF ACTIVITIES TO BE FUNDED. IN ADDITION, THE CRITERIA SECTI N WILL AGAIN REITERATE THE PROJECT'S GEOGRAPHIC FOCUS ON CAPRIVI, BUSHMANLAND, AND THE RESEARCH ACTIVITIES IN THE ETOSHA CATCHMENT AREA. THE CRITERIA SHOULD ALSO NOT BE ALL INCLUSIVE AND ALLOW FOR PRIORITIZATION AND SELECTIVITY.

(5) FINANCIAL PLAN
(A) DURING THE REVIEW, THE COMMITTEE EXAMINED THE COST ESTIMATES AND FINANCIAL PLAN FOR THE NAMIBIA COMPONENT OF THE NRM PROJECT. USAID ZIMBABWE REPRESENTATIVES REMARKED THAT NOT ALL COSTS HAD BEEN TAKEN INTO CONSIDERATION, AND REQUESTED THAT ADDITIONAL DETAIL BE PROVIDED. AS AGREED, THE FINANCIAL PLAN SECTION OF

THE PP WILL BE MODIFIED TO INCLUDE THESE DETAILS SUCH AS A BREAKDOWN OF ALL EXPENSES BY YEAR AND THE SPLIT BETWEEN FOREIGN EXCHANGE AND LOCAL COSTS. THE FINANCIAL PLAN SHOULD ALSO BE MODIFIED TO REFLECT THE CHANGES AGREED UPON REGARDING IMPLEMENTATION OF ACTIVITIES IN THE FOCUS AREAS ONLY.

(B) AS AGREED, THE PP SUPPLEMENT WILL BE MODIFIED TO INCLUDE THE FOLLOWING SPECIFIC ITEMS:
- REPATRIATION COSTS FOR ALL LONG-TERM TECHNICAL ASSISTANCE.
- HOME OFFICE MANAGEMENT COSTS FOR THE INTERNATIONAL PVO.
- SALARY AND RELATED COSTS FOR AN INTERNATIONAL OR LOCAL ACCOUNTANT FOR THE INTERNATIONAL PVO.
- SUFFICIENT FUNDING FOR AUDITS. NEW GUIDELINES REQUIRE ANNUAL AUDITS OF GRANTS AND SUB-GRANTS IN MOST CASES. THESE FUNDS SHOULD BE WITHIN EACH SUB-GRANT. THE PROPOSED BUDGET INCLUDED $120,000 FOR AUDITS, BUT INDICATED THAT A.I.D. WILL CONTRACT FOR SUCH AUDITS. THESE FUNDS WILL BE SHIFTED TO THE PVO'S BUDGET.
- DETAILS FROM THE GRANT TO THE ZOOLOGICAL SOCIETY OF SAN DIEGO WILL BE INCLUDED IN THE DETAILED PROJECT BUDGET AS WELL, RATHER THAN AS A SINGLE LINE ITEM.
- FUNDING FOR A USPSC PROJECT MANAGER FOR USAID NAMIBIA WILL BE INCLUDED INSTEAD OF A LOCAL HIRE.
- CONTINGENCY OR INFLATION LINE ITEM OF 10 PERCENT.

- DETAIL ON HCC, MONITORING PLAN, ETC.
- OVERHEAD COSTS FOR THE U.S. PVO.

(C) IT HAS FURTHER NOTED THAT THE PROJECT PAPER SUPPLEMENT DID NOT CONTAIN THE REQUIRED SECTION ON METHODS OF IMPLEMENTATION AND FINANCING. A NARRATIVE SUPPORTING THE "METHODS" CHART WILL BE INCLUDED PRIOR TO PROJECT APPROVAL.

(D) IT HAS AGREED THAT THE FINAL PP SUPPLEMENT WILL CONTAIN A DISCUSSION ON THE HOST COUNTRY COUNTERPART CONTRIBUTION WHICH WILL BE BROKEN DOWN BY FISCAL YEAR AND WILL INCLUDE CONTRIBUTIONS FROM OTHER NON-GOVERNMENTAL SOURCES AND DONORS. IN ADDITION, THE PROJECT PAPER SUPPLEMENT WILL BE MODIFIED TO INDICATE THAT USAID NAMIBIA WILL MONITOR THESE CONTRIBUTIONS ON A QUARTERLY BASIS AS REQUIRED BY NEW A.I.D./W GUIDANCE.
(E) A DISCUSSION OF THE NEW AUDIT REQUIREMENTS WILL BE INCLUDED IN THE FINAL PROJECT PAPER SUPPLEMENT.

(F) GRAY AMENDMENT - A DISCUSSION OF THE IMPLICATIONS OF CONTRACTING OF GRAY AMENDMENT FIRMS WILL BE INCLUDED IN THE FINAL PP SUPPLEMENT.

(G) IMPLEMENTATION PLAN.
(A) USAID ZIMBABWE FELT THAT, FROM ITS EXPERIENCE, THE PROJECTED IMPLEMENTATION PLAN HAS OVERLY OPTIMISTIC, IN TERMS OF THE CONTRACTING SCHEDULES. AS SUGGESTED, IT HAS AGREED THAT THE IMPLEMENTATION SCHEDULE WILL BE MODIFIED PARTICULARLY WITH REGARD TO THE TIME FOR CBD PUBLICATION, RESPONSE TIME FOR APPLICATIONS AND FOR

TECHNICAL EVALUATION A. , NEGOTIATION, AS WELL AS TIME FOR VEHICLE AND PERSONAL SERVICE CONTRACTOR PROCUREMENTS.

(B) IT HAS ALSO AGREED THAT THE IMPLEMENTATION CHARTS WOULD BE MODIFIED TO ELIMINATE ALL ACTIVITIES WHICH FALL OUTSIDE THE THREE GEOGRAPHIC FOCUS AREAS.

(C) THE RELATIVE ROLES OF USAID, THE PROJECT STEERING COMMITTEE AND THE INTERNATIONAL PVO WERE FELT TO BE UNCLEAR IN PLACES. THE INTERNATIONAL PVO'S DIRECT RELATIONSHIP WITH A.I.D. NEEDS TO BE CLEARLY STATED IN THE PAPER. THE STEERING COMMITTEE WILL HAVE A STRONG ADVISORY ROLE, BUT ULTIMATELY A.I.D. MUST BE RESPONSIBLE AND ACCOUNTABLE FOR USES OF A.I.D. FUNDS. IT HAS AGREED THAT THE PROJECT PAPER SUPPLEMENT WILL STATE THAT A.I.D. WILL RETAIN FINAL RIGHT OF APPROVAL TO ENSURE THAT GRANTS AND SUB-GRANTS DO NOT CONTRAVENE A.I.D. POLICY, REGULATIONS OR STATUTORY CONSIDERATIONS.

(7) MANAGEMENT OF VEHICLES.
THE PROPOSED FINANCIAL PLAN AND THE PROCUREMENT PLAN INDICATED THAT USAID NAMIBIA WOULD PROCURE SEVEN PROJECT VEHICLES, BUT THE PP SUPPLEMENT DID NOT PROVIDE INFORMATION ON HOW THE VEHICLES WOULD BE TRANSFERRED, USED, TITLED, MAINTAINED AND INSURED, HOW USE WOULD BE MONITORED, OR WHAT WOULD BE THE FINAL DISPOSITION OF VEHICLES UNDER THE PROJECT. EXPERIENCE UNDER OTHER COMPONENTS OF THE NRM PROJECT INDICATES THAT VEHICLE USE IS A CRITICAL IMPLEMENTATION ISSUE, WITH POTENTIAL AND REAL ACCOUNTABILITY CONSEQUENCES. IT HAS AGREED THAT THE PP SUPPLEMENT WILL BE M DIFIED TO INCLUDE A DETAILED DESCRIPTION OF (A) PLANNED PROCUREMENT RESPONSIBILITIES FOR VEHICLES AND (B) PLANNED SPECIFIC AND ALLOWABLE USES (INCLUDING GEOGRAPHIC) OF VEHICLES AND (C) MONITORING SYSTEMS TO BE INSTITUTED TO ENSURE THAT VEHICLES ARE USED IN ACCORDANCE WITH PROJECT OBJECTIVES. THE REVIEW COMMITTEE ALSO NOTED THAT BASED ON THE RECENT U.S. CONGRESSIONAL INTEREST ON NON-U.S. VEHICLE PROCUREMENT IN MOZAMBIQUE, AND THE LAPSE OF A BLANKET WAIVER PERMITTING THE PROCUREMENT OF RIGHT-HAND DRIVE VEHICLES, USAID NAMIBIA SHOULD EXPLORE THE OPTION OF U.S.A. PROCUREMENT. THE A.I.D. REPRESENTATIVE INDICATED THAT THE MISSION ALREADY PLANNED TO DO THIS AND HAD SO INDICATED TO A.I.D./W.

(8) ANALYTICAL REQUIREMENTS
THE COMMITTEE COMMENDED USAID NAMIBIA ON PRODUCING ANALYSES ON A WIDE RANGE OF PROJECT-RELATED AREAS. HOWEVER, IT HAS AGREED THAT ADDITIONAL SOCIAL SOUNDNESS AND ECONOMIC ANALYTICAL WORK IN THE AREAS NOTED BELOW SHOULD BE CARRIED OUT BEFORE FINAL APPROVAL OF THE PROJECT. THE CONCERN ON ECOTOURISM WILL BE HANDLED THROUGH AN ANALYSIS CONDUCTED PRIOR TO INITIATION OF THE COMMUNITY-BASED INITIATIVES UNDER THE PROJECT.

(A) SOCIAL SOUNDNESS
IT HAS AGREED THAT THE SOCIAL SOUNDNESS ANALYSIS REQUIRED SITE-SPECIFIC DATA REGARDING CULTURAL VALUES OR VIEWPOINTS, SYSTEMS OF INFORMAL CONTROL MECHANISMS WHICH MIGHT FACILITATE OR IMPEDE THE SUCCESSFUL IMPLEMENTATION OF COMMUNITY-BASED ORA INTERVENTIONS IN THE PROJECT'S TARGET AREAS; A DISCUSSION OF TRADITIONAL LEADERSHIP AND/OR POLITICAL ORGANIZATIONS WHICH MIGHT CONTRIBUTE TO THE SUCCESSFUL IMPLEMENTATION OF NEW INTERVENTIONS IN THE PROJECT'S TARGET AREAS; HOUSEHOLD ECONOMIC DATA WHICH WOULD PERMIT THE INFORMED ASSESSMENT OF CURRENT RESOURCE-USE STRATEGIES AS THESE MIGHT AFFECT ALTERNATIVE LAND-USE OR RESOURCE-USE INTERVENTIONS IN THE PROJECT'S TARGET AREA. FINALLY, THE COMMITTEE FELT IT HAS DIFFICULT TO ANSWER BASIC EQUITY QUESTIONS IN THE ABSENCE OF DISCUSSIONS PERTAINING TO SOCIAL, AGE, OR GENDER-BASED STRATIFICATION IN THE PROJECT'S TARGET AREAS. THE SOCIAL SOUNDNESS ANALYSIS WILL BE EXPANDED TO ADDRESS THESE CONCERNS.

(B) ECONOMIC AND FINANCIAL VIABILITY
THE ECONOMIC AND FINANCIAL ANALYSIS GENERATED MUCH DISCUSSION, AND IT HAS AGREED THAT WHILE REGIONAL EXPERIENCE IS USEFUL IN DETERMINING THE LIKELIHOOD OF PROJECT SUCCESS, THE ANALYSIS FOR THE NAMIBIAN COMPONENT WILL INCLUDE MORE DETAILS ON NAMIBIA. IT HAS AGREED THAT THE ECONOMIC ANALYSIS WILL BE REVISED TO INCLUDE EXAMPLES OF INCOME-GENERATING ACTIVITIES CURRENTLY BEING CARRIED OUT IN NAMIBIA THAT ARE SIMILAR TO COMMUNITYBASED ACTIVITIES PLANNED UNDER

THE PROJECT. IT HAS AGREED THAT THE REVISED ECONOMIC ANALYSIS WILL INCLUDE AN ASSESSMENT OF THE ECONOMIC VIABILITY OF THE ENTIRE PROJECT BASED ON COST EFFECTIVENESS OR LEAST COST ANALYSIS. IN ADDITION, IT WAS AGREED THAT THE ECONOMIC ANALYSIS WILL PROPOSE SPECIFIC ECONOMIC CRITERIA TO BE USED IN SELECTING SUB-GRANT ACTIVITIES. THE ANALYSIS WILL INCLUDE A DISCUSSION OF THE PROJECT MANAGEMENT COSTS VERSUS THE FUNDS AVAILABLE FOR COMMUNITY ACTIVITIES, TRAINING AND RESEARCH. EITHER THE IMPLEMENTATION PLAN OR THIS ANALYTICAL SECTION WILL INCLUDE A DISCUSSION OF THE VARIOUS PROJECT MANAGEMENT OPTIONS.

(C) ECOTOURISM ANALYSIS
THE PP SUPPLEMENT PROPOSES ECOTOURISM AND/OR ALTERNATIVE TOURISM AS ONE OF THE COMMUNITY-BASED ACTIVITIES IN THE THREE TARGET AREAS. HOWEVER, THE COMMITTEE NOTED THAT THE PAPER DOES NOT REFLECT THE DIVERSE ASPECTS AND IMPACTS OF ECOTOURISM AND EXPRESSED CONCERN REGARDING THE POSSIBLE DOWNSIDE RISKS OF DEMAND DRIVEN AS OPPOSED TO SUPPLY DRIVEN ECOTOURISM. IT HAS AGREED THAT THE FINAL PP SUPPLEMENT WOULD BE MODIFIED TO INCLUDE A DISCUSSION OF THE POTENTIAL POSITIVE AND NEGATIVE IMPACTS OF ECOTOURISM ACTIVITIES, IN THE CONTEXT OF COMPARATIVE WORLD-WIDE EXPERIENCE. ASSUMING THE ECOTOURISM ANALYSIS CONFIRMS VIABILITY, AN ANALYSIS MORE SPECIFIC TO THE GEOGRAPHIC AREAS ALSO WOULD BE CONDUCTED IN THE FIRST QUARTER OF THE PROJECT TO ASSIST THE NGOS IN DEVELOPING PLANS FOR ECOTOURISM. THE A.I.D. REPRESENTATIVE MENTIONED THAT BECAUSE OF CONCERNS OVER THE NEGATIVE ASPECTS OF DEMAND DRIVEN ECOTOURISM, THE NYAE NYAE FOUNDATION IN BUSHMANLAND HAS PROPOSED A TWO YEAR MORATORIUM ON ECOTOURISM OPERATIONS. ONLY ECOTOURISM INITIATED AND CONTROLLED BY THE COMMUNITY WOULD BE PERMITTED IN THIS PERIOD. DISCUSSIONS ABOUT THE BAN ARE CURRENTLY BEING HELD WITH TOUR OPERATORS AND THE GOVERNMENT.

(3) TRAINING
DISCUSSION OF TRAINING IS FOUND THROUGHOUT THE PP SUPPLEMENT, AND INCLUDES PLANS FOR LONG-TERM AND SHORT-TERM TRAINING ACTIVITIES. IN ACCORDANCE WITH THE PROJECT'S FOCUS, TRAINING ACTIVITIES FINANCED BY THE PROJECT ARE TO BE TARGETED TO PARTICIPANTS FROM NGOS AND CBOS LOCATED AND WORKING IN THE GEOGRAPHIC FOCUS AREAS. REPRESENTATIVES FROM OTHER NGO OR CBO GROUPS MAY BE ALLOWED TO ATTEND THESE TRAINING EVENTS AT THEIR OWN COSTS. IN ADDITION, IT WAS AGREED THAT LONG-TERM ACADEMIC TRAINING WOULD BE LIMITED TO CANDIDATES FROM THE MINISTRY OF WILDLIFE, CULTURE AND TOURISM AND THAT TRAINING OF NGO STAFF WOULD BE RESTRICTED TO SHORT-TERM NON-DEGREE TRAINING. THE FINAL PP SUPPLEMENT WILL BE MODIFIED TO INCORPORATE THESE CHANGES. IF NGOS NEED DEGREE TRAINING, THEY WOULD BE ENCOURAGED TO APPLY FOR TRAINING UNDER USAID NAMIBIA'S MODEST ANNUAL BUY-IN TO THE ATLAS PROJECT.

(10) COMMUNITY-BASED INITIATIVES
(A) THE PROJECT PAPER SUPPLEMENT PROPOSES TO IMPLEMENT ACTIVITIES IN THREE DESIGNATED AREAS. HOWEVER, THE NARRATIVE ON P.12 PROVIDES FOR THE IMPLEMENTATION OF COMMUNITY-BASED NATURAL RESOURCE MANAGEMENT ACTIVITIES IN "THER AREAS AS THEY ARE DEVELOPED". THIS PHRASING IS NOT IN ACCORDANCE WITH THE NEED TO FOCUS PROJECT ACTIVITIES IN SPECIFIC GEOGRAPHIC AREAS. IT HAS AGREED THAT THE PP SUPPLEMENT WILL BE MODIFIED TO DELETE THIS OPEN-ENDED REFERENCE.

(B) THE DESCRIPTIONS OF THE PROPOSED ACTIVITIES IN CAPRIVI AND BUSHMANLAND ARE EXCELLENT IN LEADING THE READER TO A GENERAL UNDERSTANDING OF THE ROLE OF THE PROJECT AND HOW PROJECT RESOURCES WOULD BE USED. IT HAS AGREED THAT THIS SECTION WILL BE STRENGTHENED TO ADD MORE SPECIFIC DETAIL REGARDING PROPOSED ACTIONS FOR EACH INDIVIDUAL COMMUNITY, THE NUMBER OF COMMUNITIES AND ACTUAL GEOGRAPHIC RANGE OF ACTIVITIES. INFORMATION AT THIS LEVEL OF DETAIL IS NECESSARY TO ADEQUATELY ASSESS THE IMPLEMENTATION ISSUES THAT WILL ARISE WITH REGARD TO MONITORING, ADEQUATE COVERAGE OF ACTIVITIES BY PROJECT MANAGEMENT AND PVOS, IMPACT, ETC.

(11) EVALUATION IMPACT OF PROJECT ACTIVITIES.
SINCE A DECISION TO EXPAND PROJECT ACTIVITIES INTO OTHER AREAS OF THE COUNTRY WILL REQUIRE A MAJOR EVALUATION OF PROJECT PROGRESS AND IMPACT, THE FINAL PP SUPPLEMENT NEEDS TO EXAMINE HOW A BASELINE WILL BE ESTABLISHED FOR ASSESSING AND MEASURING PROJECT

IMPACT. THE END OF PROJECT STATUS INDICATORS NEED TO BE QUANTIFIABLE, RATHER THAN ONLY QUALITATIVE. AS AGREED, THE PROJECT INDICATORS WILL BE REVISED TO PROVIDE A BASIS FOR EVALUATION. THE PROJECT WILL MEASURE IMPACT AT THE BENEFICIARY LEVEL IN TERMS OF INCOME, NUTRITION, AND IMPROVED SERVICES WHERE FEASIBLE. AN ILLUSTRATIVE SET OF PROJECT INDICATORS AND A PLAN FOR OBTAINING BASELINE DATA WILL BE INCORPORATED INTO THE PROJECT PAPER AMENDMENT. THESE ARE TO BE MODELED ON THE INDICATORS BEING DEVELOPED FOR THE REGIONAL PROJECT TO ENSURE CROSS-COUNTRY COMPARABILITY. AS AGREED, THE IMPLEMENTATION SCHEDULE WILL BE MODIFIED TO ENSURE THAT ADEQUATE DATA ARE IN PLACE DURING YEAR ONE TO FACILITATE AN INDEPENDENT EVALUATION IN YEAR 5 OF THE PROJECT.

(12) PROJECT MANAGEMENT
USAID ZIMBABWE NOTED THAT THE PP SUPPLEMENT SEEMED TO BE UNCLEAR WHETHER THE PSC RECRUITED TO HANDLE MISSION MANAGEMENT OF THE PROJECT HAS TO BE U.S. OR LOCAL OR HAS TO BE FULL OR HALF TME. REPRESENTATIVE SHORTLIDGE INDICATED THAT THE PROJECT MANAGER WOULD BE RECRUITED INTERNATIONLLY WITH SELECTION OPEN TO U.S. AND LOCAL PESONNEL. IN ADDITION, REPRESENTATIVE SHORTLIGE CLARIFIED THAT THE PROJECT MANAGER WOULD BE FLL TIME. BASED ON THISDISCUSSION, THE PP SUPPLEMENT WILL BE MODIFIEDTO INCLUDE ADEQUATE FUNDING FOR A USPSC, AND TE PSC'S SCOPE OF WORK IN ANNEX WILL BE CHANGED TO INDICATE THE FULL TIME NATURE OF THE POSITION. ALSO, THE SCOPE WILL BE MODIFIED TO REFLECT THE GEOGRAPHIC FOCUS OF THE PROJECT. AS NOTED ABOVE, THE FINAL PP SUPPLEMENT WILL INCLUDE A DISCUSSION OF THE PROJECT MANAGEMENT OPTIONS AND THEIR ASSOCIATED COSTS.

(13) RECURRENT COSTS.
IN THE DISCUSSION OF PROPOSED ACTIVITIES, THE PP SUPPLEMENT INDICATED THAT A.I.D. WILL FINANCE RECURRENT COSTS, E.G. SALARIES, VEHICLE AND OPERATING COSTS ASSOCIATED WITH COMMUNITY LIAISON OFFICERS IN CAPRIVI AND BUSHMANLAND AND A COORDINATOR FOR COMMUNITY-BASED RESOURCE MANAGEMENT FOR A PERIOD OF THREE YEARS. IT HAS AGREED THAT IT HAS MORE APPROPPIATE FOR A.I.D. TO ASSUME THESE COSTS ONLY FOR A LIMITED PERIOD OF TIME AND THAT A.I.D.'S PARTICIPATION IN FINANCING RECURRENT COSTS SHOULD GRADUALLY DECREASE OVER TIME. BASED ON THIS DISCUSSION, THE PP SUPPLEMENT WILL BE MODIFIED TO INDICATE THAT THE BENEFICIARY ORGANIZATIONS WILL GRADUALLY ASSUME THESE COSTS DURING THE LIFE OF THE PROJECT. THIS CHANGE WILL ALSO BE REFLECTED IN THE REVISED BUDGET.

(14) PROJECT AUTHORIZATION.
IT HAS AGREED THAT THE UMBRELLA REGIONAL PROJECT AUTHORIZATION AMENDMENT WILL BE EXECUTED IN HARARE TO ASSURE ONE LOCATION FOR AMENDMENTS TO THE REGIONAL AUTHORIZATION. USAID HARARE WILL WORK WITH USAID

NAMIBIA AND RIA DONALD KEENE TO ENSURE AN APPROPPIATE FINAL AUTHORIZATION. THE LEVEL FOR THE NAMIBIAN COMPONENT REFLECTED IN THE AUTHORIZATION SHALL NOT EXCEED US$12.5 MILLION.

(15) CONDITIONS PRECEDENT AND EARMARKING AND DISBURSING OF FUNDS.
WHILE FUNDS WILL BE OBLIGATED IN THE BILATERAL GRANT AGREEMENT WITH THE GOVERNMENT OF NAMIBIA, NO FUNDS MAY BE EARMARKED FOR COMMUNITY-BASED ACTIVITIES ACTIVITIES IN THE GRANT TO THE INTERNATIONAL PVO IF RELEVANT CPS HAVE NOT BEEN MET. A.I.D.'S ACCOUNTING SYSTEM, MACS, DOES NOT ALLOW FOR EARMARKING/ COMMITTING OF FUNDS IF CPS ARE NOT MET. SEE CONTROLLER GUIDEBOOK, CHAPTER 13.14 WHICH STATES "...CONDITIONS MUST BE MET BEFORE EARMARKING IS EFFECTED." IT HAS AGREED THAT THE PP WILL BE MODIFIED TO NOTE THIS REQUIREMENT AND THE INVITATION FOR APPLICATIONS FOR THE GRANT TO AN INTERNATIONAL PVO WILL ALSO STATE THE RESTRICTION ON FUNDING FOR COMMUNITY-BASED ACTIVITIES. ONCE THE CP IS SATISFIED, THE GRANT TO THE PVO CAN BE AMENDED TO INCLUDE THE FUNDS FOR THESE ACTIVITIES.

5. USAID ZIMBABWE REITERATES ITS ENDORSEMENT FOR THE NAMIBIA COMPONENT OF THE NATURAL RESOURCES MANAGEMENT PROJECT AS MODIFIED BY THIS CABLE. USAID ZIMBABWE AND USAID NAMIBIA ALSO BELIEVE THAT THE REQUIRED MODIFICATIONS CAN BE MADE TO PERMIT OBLIGATION IN FY 92. THE PLANNED DATE FOR OBLIGATION IS AUGUST 31, 1992. BASED ON THE IN-DEPTH REVIEWS HELD TO DATE, AND THE CLEAR AGREEMENTS REACHED AS SET FORTH IN THIS

GUIDANCE CABLE, USAID ZIMBABWE RECOMMENDS THAT THE DIRECTOR, AFR/SA DELEGATE THE AUTHORITY TO APPROVE THE MODIFIED PROJECT PAPER SUPPLEMENT UNDER DCA NO. 551 IN AN AMOUNT NOT TO EXCEED $10.5 MILLION TO THE USAID REPRESENTATIVE IN NAMIBIA WITHOUT FURTHER REFERENCE TO OR CONCURRENCE FROM USAID ZIMBABWE OR REDSO/ESA. THIS DELEGATION SHOULD ALSO INCLUDE AUTHORITY TO NEGOTIATE AND SIGN THE GRANT AGREEMENT WITH THE GRN WITHOUT THE FURTHER CONCURRENCE OF THE REDSO/ESA DIRECTOR, ASSUMING APPROPRIATE RLA AND OTHER TECHNICAL CLEARANCES HAVE BEEN OBTAINED. IN VIEW OF THE IN-DEPTH INVOLVEMENT OF USAID ZIMBABWE IN THE DEVELOPMENT AND MULTIPLE REVIEWS OF THE PROJECT PAPER SUPPLEMENT, AN EXEMPTION FROM REDSO/ESA CONCURRENCE FOR PROJECT APPROVAL AND PROJECT AGREEMENT EXECUTION IS JUSTIFIED.

6. USAID ZIMBABWE WILL SUBMIT A CN FOR NRM TO WASHINGTON BY JULY 24. IT IS PLANNED THAT RLA DONALD KIENE WILL ASSIST BOTH USAID NAMIBIA AND USAID ZIMBABWE TO FINALIZE PROJECT PAPER SUPPLEMENT, AUTHORIZATION AND BILATERAL GRANT AGREEMENT.
LANPHER
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ACTION: AID INFO AMB DCM P/E /3

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RR RUEHWD
DE RUEHSB #9229/01 2091359
ZNR UUUUU ZZH
R 271359Z JUL 92
FM AMEMBASSY HARARE
TO RUEHC/SECSTATE WASHDC 4954
INFO RUEHLG/AMEMBASSY LILONGWE 5930
RUEHOR/AMEMBASSY GABORONE 2990
RUEHLS/AMEMBASSY LUSAKA 0930
RUEHWD/AMEMBASSY WINDHOEK 1839
BT
UNCLAS SECTION 01 OF 03 HARARE 009229

LOC: 090 687
27 JUL 92 1422
CN: 17062
CHRG: AID
DIST: AID

RECEIVED
28 JUL 1992
USAID/WINDHOEK

AIDAC

AID/W FOR AFR/SA JOHN ROBERTS
AFR/DP GLENN CARVIN

E.O. 12356: N/A
SUBJECT: CONGRESSIONAL NOTIFICATION FOR NATURAL RESOURCES MANAGEMENT PROJECT (690-0251)

1. ADVICE OF PROGRAM CHANGE

COUNTRY	: SOUTHERN AFRICA REGIONAL
PROJECT	: REGIONAL NATURAL RESOURCES MANAGEMENT PROJECT
PROJECT NUMBER	: SOUTHERN AFRICA REGIONAL PROJECT NO. 690-0251
FY 1992 CP REFERENCE	: (P. 437)
APPROPRIATE CATEGORY	: DEVELOPMENT FUND FOR AFRICA
LIFE OF PROJECT FUNDING	: $37.030 MILLION (PLANNED)
INTENDED FY 1992 OBLIGATION	: $11.0 MILLION

2. THIS IS TO ADVISE THAT A.I.D. INTENDS TO OBLIGATE $11.0 MILLION IN FY 1992 FOR THE NATURAL RESOURCES MANAGEMENT PROJECT 690-0251. OBLIGATIONS WERE MADE FOR A NEW COMPONENT IN NAMIBIA, AND TO EXPAND THE BOTSWANA COMPONENT OF THIS PROJECT. THE REVISED AUTHORIZED LIFE OF PROJECT WITH THESE AMENDMENTS WILL BE $37.030 MILLION. THE PROJECT ASSISTANCE COMPLETION DATE OF THIS PROJECT WILL BE 1997.

3. PURPOSE:

THE PURPOSE OF THE NATURAL RESOURCES MANAGEMENT

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PROJECT IS TO IMPROVE THE SOCIAL AND ECONOMIC WELL-BEING OF RESIDENTS OF DISTRICT RURAL COMMUNITIES BY IMPLEMENTING SUSTAINABLE COMMUNITY-BASED WILDLIFE CONSERVATION AND UTILIZATION PROGRAMS. THE NEW COMPONENT IN NAMIBIA WILL CONSERVE NAMIBIA'S BIODIVERSITY AND SUSTAINABLY MANAGE ITS NATURAL RESOURCES BY IMPROVING THE SOCIAL AND ECONOMIC WELL BEING OF POOR RURAL COMMUNITIES IN MARGINAL AGRICULTURAL AND BUFFER ZONES ADJACENT TO NATIONAL PARKS AND GAME RESERVES. THE BOTSWANA ACTIVITIES WILL FOCUS ON TRAINING WHICH WILL IMPROVE THE CAPABILITIES OF THE GOVERNMENT OF BOTSWANA TO PLAN AND MANAGE SUSTAINABLE NATURAL RESOURCE ACTIVITIES.

4. BACKGROUND:

THE LAND BASE OF SOUTHERN AFRICA IMPOSES SEVERE LIMITATIONS ON CONVENTIONAL AGRICULTURAL AND ECONOMIC ACTIVITIES, THEREBY ADVERSELY AFFECTING THE REGION'S DEVELOPMENT ASPECTS. MUCH OF THE REGION SUSTAINS A NATURAL VEGETATION OF SEMI-ARID SAVANNAS AND OPEN WOODLANDS OF LIMITED PRODUCTIVITY: DROUGHTS ARE FREQUENT AND OFTEN PROTRACTED, AND SURFACE WATER SUPPLIES ARE LIMITED EXCEPT IN A FEW MAJOR RIVER VALLEYS. SOIL, WATER, AND CLIMATE CONSPIRE TO RENDER THE ABILITY OF ECOSYSTEMS TO SUPPLY HUMAN NEED OF FOOD, FIBER, AND LIVELIHOOD ON A SUSTAINABLE BASIS UNCERTAIN AT BEST. FURTHER ENVIRONMENTAL DEGRADATION IS TAKING PLACE THROUGH OVERGRAZING AND UNSUSTAINABLE AGRICULTURAL PRACTICES. AT THE SAME TIME, SOUTHERN AFRICA SHARES WITH EAST AFRICA, THE MOST DIVERSE AND SPECTACULAR FAUNA OF LARGE MAMMALS REMAINING ON EARTH. THE PROJECT AREA ENCOMPASSES DIVERSE ECOSYSTEMS RANGING FROM THE KALAHARI AND NAMIBIAN DESERTS TO OPEN WOODLAND AND SAVANNA ECOSYSTEMS TO EVERGREEN MOUNTAIN FORESTS IN EASTERN ZIMBABWE. HOWEVER, THIS GREAT RESOURCE HAS REMAINED LARGELY UNTAPPED, WITH WILDLIFE LANDS MAKING A CONTRIBUTION TO GROSS DOMESTIC PRODUCT FAR LESS THAN THEIR PROPORTION OF NATIONAL LAND AREA. COMMUNITIES IN WILDLIFE AND UNIQUE ECOSYSTEM AREAS HAVE NOT BEEN ABLE TO DIRECTLY BENEFIT FROM THE NATURAL RESOURCES SURROUNDING THEM DUE TO LIMITED TECHNICAL, INSTITUTIONAL AND HUMAN RESOURCES.

5. PROJECT DESCRIPTION:

THE NATURAL RESOURCES MANAGEMENT PROJECT HAS INITIATED IN 1989 WITH EMPHASIS ON ZIMBABWE, ZAMBIA AND [redacted] AND LIAISON WITH THE SADCC WILDLIFE UNIT COORDINATED IN MALAWI. DURING 1992 THE PROJECT WILL BE EXPANDED [redacted]

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TO INCLUDE NEW ACTIVITIES RELATED TO TRAINING IN BOTSWANA, AND TO INITIATE A COMPONENT FOR NAMIBIA.

THE NAMIBIA COMPONENT HAS FOUR COMPLEMENTARY, CLOSELY INTERRELATED ELEMENTS THAT ALL SUPPORT COMMUNITY-BASED NATURAL RESOURCE MANAGEMENT: (1) COMMUNITY-BASED INITIATIVES; (2) PLANNING AND APPLIED RESEARCH; (3) ENVIRONMENTAL EDUCATION; AND (4) REGIONAL AND NATIONAL COORDINATION, NETWORKING AND EXCHANGE OF INFORMATION. THE FOUR PROJECT ELEMENTS SUPPORT THE CORE CONCEPT OF SUSTAINABLE RESOURCE MANAGEMENT. THE FIRST ELEMENT WILL PROVIDE GRANTS TO NGOS FOR COMMUNITY-BASED PILOT ACTIVITIES IN CAPRIVI AND BUSHMANLAND. THE SECOND ELEMENT FUNDS PLANNING AND APPLIED RESEARCH TO ASSIST COMMUNITIES IDENTIFY VIABLE ACTIVITIES TO BE SUPPORTED AND ASSESS THEIR ECONOMIC, ENVIRONMENTAL AND BIOLOGICAL IMPACTS TO ENSURE THAT BENEFITS WILL ACCRUE TO THE LOCAL COMMUNITIES. THE RESEARCH COMPONENT WILL ALSO INCLUDE A MAJOR STUDY ON LARGE MAMMAL POPULATIONS IN THE ETOSHA CATCHMENT AREA. THE THIRD COMPONENT WILL FINANCE ENVIRONMENTAL EDUCATION ACTIVITIES THAT DIRECTLY STRENGTHEN THE COMMUNITY-BASED INITIATIVES. THE FOURTH COMPONENT LINKS THE NAMIBIAN EXPERIENCE TO SIMILAR REGIONAL PROGRAMS IN ZIMBABWE, ZAMBIA AND BOTSWANA THROUGH REGIONAL RESEARCH, CONFERENCES, WORKSHOPS AND SEMINARS COORDINATED BY MALAWI.

THE BOTSWANA DEPARTMENT OF WILDLIFE AND NATIONAL PARKS (DWNP) WILL MAKE A MAJOR SHIFT FROM ITS CURRENT ROLE IN PARK PROTECTION AND ANTI-POACHING TO COMMUNITY-BASED WILDLIFE MANAGEMENT BETWEEN 1992 AND 1997. THE WISE MANAGEMENT AND UTILIZATION OF BOTSWANA'S DIVERSE WILDLIFE RESOURCES WILL PROMOTE SUSTAINED ECONOMIC DEVELOPMENT THROUGH CONSUMPTIVE AND NON-CONSUMPTIVE ACTIVITIES.

TO ACHIEVE THIS OBJECTIVE THE BOTSWANA COMPONENT OF THIS PROJECT WILL BE EXPANDED TO HELP THE GOVERNMENT OF BOTSWANA RESPOND TO THIS CHANGE. NEW ACTIVITIES UNDER THIS COMPONENT WILL PROVIDE ASSISTANCE TO INSTITUTIONALIZE PERSONNEL PLANNING AND TRAINING WITHIN DWNP IN ORDER TO IMPROVE THE NUMBER AND CALIBER OF QUALIFIED TECHNICAL STAFF NEEDED TO PLAN AND MANAGE SUSTAINABLE NATURAL RESOURCE ACTIVITIES, AS WELL AS TO ADMINISTER ITS PARKS AND RESERVES. SPECIFICALLY THE EXPANDED BOTSWANA COMPONENT WILL RESULT IN: RECRUITMENT OF INCREASED NUMBERS AND BETTER QUALIFIED CANDIDATES; IMPROVED JOB SKILLS; IMPROVED SUPERVISION AND LEADERSHIP BY DWNP PERSONNEL; IMPROVED TRAINER CAPABILITY; AND MORE EFFECTIVE HUMAN RESOURCE DEVELOPMENT PLANNING [illegible]

2. RELATIONSHIP TO A.I.D. STRATEGY [illegible]

THE A.I.D. ADMINISTRATOR'S 1990 ENVIRONMENTAL [illegible]

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INITIATIVE ENCOURAGES USAID MISSIONS TO PLACE HIGHER PRIORITY ON THE ENVIRONMENT AND NATURAL RESOURCES. THE AFRICA BUREAU ALSO GIVES PRIORITY TO THE ENVIRONMENT, BIOLOGICAL DIVERSITY AND SUSTAINABLE MANAGEMENT OF NATURAL RESOURCES. CONSISTENT WITH THESE PRIORITIES, THE SOUTHERN AFRICA REGIONAL PROGRAM, AS WELL AS A.I.D. COUNTRY STRATEGIES FOR NAMIBIA AND BOTSWANA EMPHASIZE SUSTAINABLE DEVELOPMENT OF THE NATURAL RESOURCES BASE IN WAYS THAT DIRECTLY BENEFIT THE MAJORITY OF THE PEOPLE IN THE REGION.

THE PROJECT IS ALSO CONSISTENT WITH THE STRATEGIC OBJECTIVES OF A.I.D. REGIONAL ASSISTANCE TO THE AGRICULTURE AND NATURAL RESOURCES SECTOR. AS STATED IN THE SARP REGIONAL DEVELOPMENT STRATEGY STATEMENT FOR FY 1991-95, THE PROJECT WILL HELP STRENGTHEN THE POTENTIAL FOR SUSTAINABLE REGIONAL FOOD SECURITY THROUGH INCREASED AGRICULTURAL PRODUCTIVITY AND INCREASED INCOME.

8. HOST COUNTRY AND OTHER DONORS:

THE GOVERNMENTS OF NAMIBIA AND BOTSWANA ARE BOTH COMMITTED TO IMPLEMENTING POLICIES AND PROGRAMS TO FURTHER STIMULATE NATURAL RESOURCE MANAGEMENT TO PROMOTE SUSTAINED ECONOMIC DEVELOPMENT. THE

GOVERNMENTS HAVE PLEDGED THEMSELVES TO UNDERTAKE THE REQUIRED LEGISLATIVE, ADMINISTRATIVE AND FINANCIAL OBLIGATIONS REQUIRED TO FACILITATE IMPLEMENTATION OF NATURAL RESOURCE MANAGEMENT ACTIVITIES AS ENVISIONED UNDER THE PROJECT. OTHER DONORS HAVE ALSO EVIDENCED A COMMITMENT TO COMPLEMENTARY ACTIVITIES IN THE REALM OF NATURAL RESOURCES MANAGEMENT. IN BOTSWANA THE EUROPEAN ECONO
MIC COMMUNITY, THE BRITISH OFFICE OF DEVELOPMENT ASSISTANCE AS WELL AS THE U.S. PEACE CORPS ARE ALL INVOLVED IN INSTITUTIONAL SUPPORT TO PROMOTE IMPROVED WILDLIFE AND PARK MANAGEMENT. IN NAMIBIA THE SWEDISH INTERNATIONAL DEVELOPMENT AGENCY AND THE NORWEGIAN OFFICIAL DONOR AGENCY HAVE INDICATED AN INTEREST IN FUNDING FUTURE ACTIVITIES RELATED TO NATURAL RESOURCES AND INTEGRATED RURAL DEVELOPMENT IN NAMIBIA.

9. BENEFICIARIES:

IN BOTSWANA, COMMUNITIES WILL RECEIVE IMPROVED SERVICES FROM THE INCREASED CAPABILITIES OF GOVERNMENT EXTENSION AGENTS TRAINED UNDER THE NEW ACTIVITIES. IN ADDITION, TRAINING RECIPIENTS WILL ALSO RECEIVE BENEFITS THROUGH ENHANCED KNOWLEDGE AND SKILLS. IN NAMIBIA, THE RESIDENTS OF THE TARGET COMMUNITIES IN CAPRIVI AND BUSHMANLAND WILL BENEFIT FROM INCREASED INCOME GENERATION OPPORTUNITIES.

10. MAJOR OUTPUTS:

THE AMENDED PROJECT WILL INCREASE PLANNED OUTPUTS FOR THE PROJECT AS FOLLOWS: NAMIBIA: 1) EXPANDED GOVERNMENTAL AND NON-GOVERNMENTAL CAPACITY TO DEVELOP AND MANAGE SUSTAINABLE GRASSROOTS NATURAL RESOURCE ACTIVITIES IN POOR RURAL COMMUNITIES, AND 2) INCREASED BENEFITS TO POOR RURAL COMMUNITIES THROUGH EMPLOYMENT OR INCOME-GENERATING ACTIVITIES DERIVED FROM SUSTAINABLE NATURAL RESOURCE MANAGEMENT. BOTSWANA: 1) INSTITUTIONALIZATION OF PERSONNEL PLANNING AND TRAINING IN DEPARTMENT OF WILDLIFE AND NATURAL PARKS, AND 2) ESTABLISHMENT OF AN IMPROVED RECRUITMENT AND TRAINING PROCESS TO IMPROVE THE NUMBER AND CALIBER OF TECHNICAL STAFF TO PLAN AND MANAGE COMMUNITY-BASED SUSTAINABLE NATURAL RESOURCE ACTIVITIES.

11. A.I.D. FINANCED INPUTS: ($000) LOP

TECHNICAL ASSISTANCE	[illegible]
TRAINING	3,000
INSTITUTIONAL SUPPORT	1,450
RESEARCH	2,700
COMMUNITY ACTIVITIES	10,500
ENVIRONMENTAL EDUCATION	1,700
COMMODITIES	600

PROJECT MANAGEMENT	7,220
COORDINATION	1,500
AUDIT/EVALUATION	1,100
CONTINGENCY	3,030
TOTAL	37,030

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ANNEX C

GRN LETTER OF REQUEST

REPUBLIC OF NAMIBIA

NATIONAL PLANNING COMMISSION

Tel.: (061) 286-9111
Fax: (061) 227572

Private Bag 13356
WINDHOEK

Enquiries: C. Schumann

Our Ref.: 12/2/2/U.7 Your Ref.:

17 August 1992

BY HAND

Dr. R.L. Shortlidge, Jr.
Representative
U. S. Agency for International Development
Private Bag 12028
Windhoek

Dear Dr. Shortlidge,

REQUEST FOR NAMIBIA'S INCLUSION IN THE NATURAL RESOURCES MANAGEMENT PROJECT (690-0251.73)

In August 1991, the Ministry of Wildlife, Conservation and Tourism, with a wide cross-section of non-governmental organisations involved in the environmental, wildlife and natural resources sector, began working with USAID/Namibia on the development of a proposal for including Namibia in the SADCC Regional Natural Resources Project financed by USAID/Zimbabwe. This intensive collaborative effort has resulted in the development of a comprehensive project proposal involving an integrated approach to community based management of natural resources which encompasses environmental education, applied research and institutional capacity building of the public and private sector organisations which are supporting these community initiatives. The project will focus on three geographic areas - Caprivi (both East and West), Bushmanland and the Etosha Catchment Area.

The proposed Namibian component of the regional project, known locally as the Living in a Finite Environment Project (LIFE), is five year US $ 10.5 million project. The Government of Namibia requests USAID to proceed with the approval of the Project as presented in the Project Paper Amendment.

During the 1992/93 fiscal year or the project's first year, the Government of Namibia will be committing the equivalent of R 2,563,486 in cash and kind to the implementation of activities supported by the LIFE Project. Over the five years of the Project, the Government expects to make available R 11,065,690,

subject to the provision of funds and resources through its normal legislative approval process. In addition to these resources from the Government, there will be a significant contribution from other sources. The Zoological Society of San Diego will be making available US $ 944,500 from its private contributors. These further resources combined constitute 32 percent of the total value of the Project.

In order for communities to derive direct economic benefits from the sustainable utilization and management of wildlife and other natural resources, the Government of Namibia is pursuing the enactment of appropriate changes in its regulations, procedures and, if necessary, legislation. These changes are expected to be in place before the end of calender 1992 or early 1993. Therefore, the Government anticipates no difficulty in satisfying the proposed Condition Precedent to Disbursement which links the disbursement of funds for the community based initiatives to these changes.

On behalf of the Government of Namibia and the local NGO community, I wish to thank the US Government for this assistance to the environmental and natural resources sectors. We appreciate the collaborative process which has surrounded the development of this project and look forward to continued close cooperation with USAID in its implementation.

Your assistance will be greatly appreciated.

Yours sincerely,

Dr. Z. Ngavirue
Director-General

cc.: The Permanent Secretary
Ministry of Wildlife, Conservation and Tourism

Dr. C. Brown
Environmental Planning Unit
Ministry of Wildlife, Conservation and Tourism

ANNEX D

SOCIAL SOUNDNESS ANALYSIS

LIFE

Supplementary Social Soundness and Institutional Analyses

A Note on Place Names

As of February 1992, Namibia renamed all the regions and districts of Namibia in line with the constitutional principle of non-racialism in the delimitation of boundaries. Previous boundaries were created to separate races and ethnic groups, as can be noted from the previous district names (e.g., Ovamboland, Damaraland, Bushmaniand, etc.). Many of the new boundaries cross previous demarcations separating 'communal' from 'commercial' areas (ethnic homelands and largely white-owned commercial farms). As the LIFE project targets marginal environments, and as these marginal environments generally coincide with communal boundaries, the use of new place names might raise some confusion. Further, the new place names are not yet in common use. To assist readers, we present a guide to the new regional names (and, where relevant, district names) and their old names; where convenient, we use the old names in single quotes. Note that any use of the new regional and district names refers only to the communal locations in these regions/districts.

Table 1
Old and New Regional Names

Old Name	New Name	Comments
Ovamboland	Maruia Mopani Oshikoto Oshana	Now divided into four regions.
Kaokoveld	Kunene	Formed out of old Kaokoland District, as well as parts of former Ovamboland and Damaraland. Reference to Kunene in this text only refers to former Kaokoland.
Damaraland	Kunene Erongo	Divided into two new regions. Discussions of Damaraland in this text will refer to Erongo.
Okavango	Kavango	Region follows old boundary demarcations.
Caprivi	Liambezi	Formerly west and east Caprivi. Comprised of 4 districts, one of which is Mukwe, the subject of the full analyses. Region follows old boundary demarcations.
Bushmaniand	Waterberg	Bushmaniand, because of its small population, has been incorporated as Grootfontein District, one of six districts forming the Waterberg Region.
Hereroland	Waterberg Omaheke	Hereroland West is now part of Waterberg Region, known as Okakarara District, while Hereroland East is now Otjinene and Otjozondjou Districts forming Omaheke Region
Rehoboth	Rehoboth Rural	One of four districts in Hardap Region.
Namaland	Berseba Groeon	Split into two, with the southern section now part of Berseba District in Karas Region and the northern section now part of Groeon District, Hardap Region.

Introduction

The Social Soundness and Institutional Analyses included in the main appendices focusses attention on two locations: Mukwe District in Liambezi Region (formerly 'Caprivi'), and the 'Bushmanland' portion of Grootfontein District, Waterberg Region. The decision to focus on these two locations was based on discussions between USAID and the Ministry of Wildlife, Conservation and Tourism (MWCT). Under its community-based natural resource conservation and utilization schemes, MWCT has decided to initiate activities in Mukwe and Grootfontein Districts. In Mukwe District, it will be working with the Integrated Rural Development and Nature Conservation (IRDNC) non-governmental organization (NGO), while in Grootfontein District it will be working with the Nyae Nyae Farmers Cooperative and the Nyae Nyae Development Foundation, a community-based organization and an NGO, respectively.

During project proposal preparation activities, four issues emerged that eventually required preparation of additional social soundness and institutional analyses materials. First, the NGOs invited to participate in LIFE discussions with MWCT and USAID indicated that they were interested in working in other disadvantaged locations. Second, MWCT was proceeding apace in other disadvantaged locations in Namibia as well as Mukwe and Grootfontein. Third, the current absence of specific project plans by MWCT and relevant NGOs for community-based initiatives potentially funded by LIFE meant that project-level social and institutional analyses would be required for each project during implementation. Fourth, the dearth of published materials on the productive and social sectors in Namibia meant that issues necessary for a contextual understanding of the LIFE project were not available for those who might be involved in the project. For preparation of the Project Proposal, and for LIFE pre-implementation purposes, it was therefore particularly important to raise issues of concern in areas potentially covered by LIFE: the diversity of the communal areas reinforced the need for such information.

This annex is structured as follows: 1) a more detailed discussion of political and economic issues than that provided in the social soundness and institutional analyses annexes; 2) discussions of important gender, health and educational issues; 3) presentations on each communal area; 4) integrated summary of important social soundness and institutional issues for these communal areas. This fourth section includes issues of potential spread effects, threats to project viability, and potential beneficiary assessments.[1]

Politics and the Economy

Politics

Namibia's colonial status as a South African League of Nations protectorate, followed by over four decades of disputed status (with the United Nations on the one hand arguing for independence, and South Africa on the other hand arguing that the United Nations had no role in determining its status),

[1] Because of its small size and small population, the absence of any data isolating the area, and the fact that none of the NGOs are focussing on the area, the former homeland of Tswanaland, bordering Botswana, has not been included in this analysis.

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meant that Namibia was the last country on the continent to gain its independence.[1] During 75 years of South African occupation, Namibia was subject to South African development policies. The result was ethnic division instead of unity, skewed income distribution rather than equity, hierarchical political and administrative structures instead of decentralization and community participation, and violence and war instead of development.

Namibia obtained its independence on 21 March, 1990, almost twenty-five years after the first contact between the People's Liberation Army of Namibia (PLAN), the armed wing of the South West African People's Organisation (SWAPO), and the South African Defence Force (SADF) in Ongulumbashe, in what is now Mopani Region. The twenty-five years had been characterized by:

- a moderate-intensity conflict in northern Namibia and a high-intensity conflict in southern Angola;
- the deaths of an unknown number of people, mostly civilians, in both areas (including almost 1000 dead in one SADF attack at a refugee transit camp in Kassinga, Angola in 1978, and 300 PLAN fighters killed in cross-border clashes with the SADF in 1989);
- the United Nations assuming direct responsibility for Namibia in 1966 and terminating the South African mandate;
- South Africa's steadfast refusal to recognize the United Nation's proclaimed rights over Namibia;
- a confused internal political situation, including an interim government headed by the Democratic Turnhalle Alliance (DTA), in a 1978 election that most other parties, including SWAPO, boycotted; rule by decree by the South African Administrator-General of Namibia from 1983 to 1985; and a weak nominated Transitional Government of National Unity from 1985 to 1989.

The 1989 elections were contested by ten major parties, five of which were alliance parties:

Table 2
Political Parties Contesting the 1989 Elections (Listed by # of Seats in Parliament)

Party Name	Acronym	Seats	Comments
South West Africa People's Organisation	SWAPO	41	
Democratic Turnhalle Alliance	DTA	21	Comprised of 12 parties.
United Democratic Front	UDF	4	Comprised of 6 parties.
Action Christian National	ACN	3	
National Patriotic Front	NPF	1	Comprised of 3 parties.
Federal Convention of Namibia	FCN	1	Comprised of 16 parties.
Namibia National Front	NNF	1	Comprised of 5 parties.
South West Africa People's Organisation - Democrats	Swapo D	0	
Christian Democratic Action for Social Justice	CDA	0	
Namibia National Democratic Party	NNDP	0	

SWAPO won all but one of the seats in the northern district of 'Owambo' and the vast majority in 'Kavango', but also did well throughout in-migration and central regions areas (i.e., Lüderitz, Swakopmund, Windhoek, Karibib, and Maltahöhe). The DTA did well in the less populated areas of the east and south, particularly in commercial farming areas, as well as 'Kaokoveld' and 'East

[1] Neither the Republic of Somaliland nor Eritrea have yet been recognized by the Organisation of African Unity as independent. The referendum to be held in the Western Sahara has been delayed.

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Caprivi'. The UDF gained over 50% of the vote in 'Damaraland'.

In early 1990 the elected Constituent Assembly accepted the constitution, viewed as one of the most progressive in Africa, if not amongst all developing countries. Freedom of the press, freedom of speech and freedom of association are among the main clauses of the constitution, as are affirmative action and non-discrimination in all facets of Namibian life.

Planning

While the drafting of the Constitution took place immediately prior to independence, thereby greatly defining the political 'rules of the game', the definition of the economic direction of an independent Namibia has taken considerably longer. In 1991, the Government prepared a draft Transitional National Development Plan for the 1991/92 - 1993/94 period: the Plan is currently being considered by Cabinet. Unfortunately, the draft Plan did not provide sufficient information from which clear sectoral strategies could be developed. It did, nevertheless, provide some information on sectoral priorities and some idea of a developmental philosophy.

The cornerstone of the approach was a reliance on private sector development, taking care to avoid some of the negative distortions of the sector under *apartheid* (e.g., pay differentials due to race, lack of emphasis on development of the informal sector, etc.). Private sector priorities included mechanisms to support export-oriented manufacturing enterprises (e.g., export processing zones), support for informal sector development, opening up business opportunities in the populous north, and a review (still underway) of Government regulations which hindered private sector development. In addition to private sector development, other stated sectoral priorities included agricultural and rural development, education and training, health, and housing.

Stated development objectives were to achieve an economic growth rate of 3%, create 4600 new jobs per annum in the formal sector and increase informal sector employment (by an unstated amount), reduce income disparities, and alleviate poverty through job creation and the provision of social services. Development strategies consisted of: 1) economic growth through private sector development (including small-scale enterprises); 2) reduce unemployment through economic growth, resettlement schemes and labor-intensive public works programs; 3) reduction of income disparities through fiscal policy measures and a review of discriminatory practices; and 4) emphasizing infrastructural developments and social service provision which reaches disadvantaged communities.

The draft transitional plan, while remaining vague, nevertheless points to the Government's emphasis on improving conditions in communal areas. This permeates all sectoral chapters of the plan. Particular attention is given to rural development, with the following major initiatives underway:

- agricultural and livestock production and associated veterinary and other services;
- small-scale enterprise development;
- related input supply, marketing and credit services;
- promotion of appropriate technology;
- environmental awareness;
- gender awareness;

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- capacity for participatory, community-based planning, implementation, monitoring and evaluation;
- capacity for establishing community-based structures for decision-making and representation;
- literacy, non-formal education and skills training;
- health, education and other social services;
- water supply and sanitation;
- an effective extension service, capable of providing facilitation and appropriate training and information.

A Directorate of Rural Development within the Ministry of Agriculture, Water and Rural Development is charged with coordinating all rural development efforts across ministries and communities. The guiding philosophy of the Directorate is that Government has more of a role in facilitating community-based initiatives than in directing development. While the process has been criticized by some as slow, it has the advantage of being based on the priorities expressed by communities themselves. Further, the approach of the Directorate has not led to an over-dependence on existing community structures, although these are used. Rather, the Directorate is involved in designing and implementing extension approaches which reach community members who are not reached through formal structures (e.g., poverty-striken households, households short of labour, etc.).

Perhaps the most notable shift from pre-independent South West Africa to independent Namibia has been this changing philosophy from top-down administration to bottom-up development. Namibia has numerous examples of infrastructural projects and social service facilities whose distribution was based simply on what the planners wanted, not what Namibians needed. In all sectoral discussions in the development plan, and in programs developed since independence, the Government has been particularly concerned about reducing the inequalities of the past and allowing people to determine their own priorities.

Economy

For the eight-year period from 1983 to 1990, the Namibian economic grew at a *negative* rate in three years, grew at a rate below population growth in an additional four, and only exceeded the population growth rate in one year (1987). Namibians in 1990 were poorer than they were in 1980, with per capita Gross Domestic Product down by 23%, from R1291 in 1980 to R999 in 1990 (current 1980 rands). The World Bank (1991: ix) projected the following GDP per capita growth rates for the period 1991-1996, respectively: 0.1, 0.1, -0.1, 0.8, 1.7 and 1.5.

Numerous reports have highlighted the fact that Namibia reputedly has the worst distribution of income on the continent, and that the situation has grown worse in the depression of the 1980s. In their Draft Program Strategy Concept Paper for the period 1992-1996, USAID comments (1991:1):

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The urban population and commercial farmers are rich by any standard, while most rural blacks live in abject poverty. A rural black earns in a year what an urban black receives in two weeks and what an urban white does in one day.[3] While whites have maintained their economic position during a decade of economic stagnation, blacks have seen their per capita share worsen by 20%.

Table 3 gives basic information on changes in gross domestic product (GDP) from 1983 to 1992:

Table 3
Gross Domestic Product at 1980 Constant Prices (1980-1992) (%)

Sector	1983	1984	1985	1986	1987	1988	1989	1990	1991*	1992*
Commercial Agriculture	-21.4	-9.7	3.3	3.6	30.3	-3.1	13.2	-3.4	5.0	4.1
Communal Agriculture	3.5	2.8	3.3	3.2	3.1	2.5	2.9	3.3	2.7	2.2
Fishing	-8.6	-19.8	39.5	-14.6	14.5	26.2	-37.3	325.1	9.9	4.0
Diamond Mining	-18.7	-8.3	-2.4	11.1	1.9	-5.4	-4.4	-18.3	11.7	17.6
Other Mining	20.8	1.4	-3.9	3.4	-6.0	7.2	-8.1	-2.3	-15.0	-10.0
Manufacturing	2.1	-0.6	-3.5	1.0	1.5	1.3	4.2	5.1	4.0	4.1
Fish Processing	-8.5	-24.7	62.8	-19.6	41.2	15.3	-39.8	97.9	7.0	4.9
Electricity & Water	4.5	3.3	2.5	1.9	0.9	5.1	3.4	5.3	3.9	3.0
Construction	-18.7	-11.4	0.5	-16.4	3.4	2.1	-6.2	-10.1	8.0	3.9
Trade & Accommodation	-8.2	-0.3	-1.1	2.4	3.5	4.0	3.0	1.3	2.5	2.5
Transport & Communication	7.6	9.6	0.3	5.4	2.1	-0.4	10.4	5.0	6.5	5.0
Business Services	2.8	2.3	1.5	2.5	3.4	1.2	1.6	-0.1	2.0	2.0
Social Services	5.0	4.8	1.1	1.1	2.2	2.2	1.4	1.1	2.1	2.0
General Government	5.1	2.6	2.5	2.4	2.6	2.0	2.5	3.5	2.5	2.0
Other Producers	3.5	3.9	2.3	2.7	3.3	3.2	2.7	1.5	3.0	2.9
TOTAL	-3.2	-1.5	0.5	3.0	3.4	1.9	-0.6	2.7	2.0	3.2

* Figures for 1991 and 1992 are projections.
Source: Ministry of Finance, 1991.

Table 3 underlines the poor performance of the Namibian economy over the past decade, and also illustrates the vulnerability of all sectors (except Government, services and 'other producers') to dramatic annual fluctuations. Agriculture, fishing and mining are notable in this regard.

Table 3, while showing consistent growth of the Communal Agriculture sector, masks extremely low levels of productivity and a low technological base. Communal Agriculture contributes an estimated 2.2% to agriculture's share of GDP (and **.002%** to total GDP), despite the fact that the sector includes over 60% of the workforce.

Table 4 indicates the composition of GDP for selected years from 1980 to 1989:

[3] The International Labour Office (1991: 4) notes that "... in 1988 the small white minority (5% of total population) accounted for over 70 per cent of total GDP whereas the non-whites who constitute 95 per cent of the population accounted for less than 30 per cent of GDP. It is doubtful whether such extreme dualism is to be found anywhere else in the world."

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Table 4
Composition of GDP by Economic Activity (1980, 1986-1989) (%)

Sector	1980	1986	1987	1988	1989
Agriculture & Fishing	11.5	7.8	12.3	12.5	11.3
Mining & Quarrying	43.6	36.2	24.3	27.9	29.1
Manufacturing	3.9	4.5	5.0	4.8	4.8
Electricity & Water	1.8	1.8	1.7	2.0	1.8
Construction	3.5	2.4	2.7	2.6	2.6
Trade, Accommodation	11.5	11.2	12.3	11.9	12.3
Transport & Communications	5.3	6.0	6.6	6.1	6.1
Business Services	5.4	6.3	7.0	7.0	7.2
Social Services	1.3	1.9	2.0	1.9	2.0
General Government	9.6	19.0	23.0	20.3	19.8
Other Producers	2.6	2.9	3.1	3.0	3.0
TOTAL	100.0	100.0	100.0	100.0	100.0

Table 4 points to the weak base of the economy, with productive and service sectors relatively unimportant contributors to GDP (particularly manufacturing), and a high dependence on minerals which have seen wide fluctuations in value in recent decades (particularly uranium). Mineral exports contribute over 75% to all exports, having changed little since 1980. And, while Namibia remains heavily dependent on mineral exports, the value of mineral exports is expected to continue to decline until 1992, after which a slight increase is anticipated. Much of the problem relates to declining world prices for copper and uranium, two principle mineral exports, but also to expected decreases in the value of diamonds in the early 1990s.

Government increased its contribution to GDP dramatically during the 1980s, in part due to pay increases and the expansion of posts. While commercial agriculture's contribution to GDP remained relatively steady, the distribution of benefits remained highly skewed towards white farmowners. Trade and accommodation remained a consistent and relatively important contributor to GDP. However, the trade sector remains almost entirely dependent on South African imports, South African multinational retail outlets, and white-owned retail outlets. The accommodation sector is also firmly in the hands of white owners.

Government has projected GDP growth rates of 2.7%, 2.0%, 3.2% and 4.0% for 1990, 1991, 1992, and 1993, respectively. By 1993, therefore, economic growth is expected to exceed the population growth rate.

A 1991 International Labour Office (ILO) investigation of the Namibian economy raises additional concerns about the distribution of benefits, even if improved economic growth does start by the mid-1990s. After noting that whites, who represent 5% of the population, control 70% of GDP, the ILO argues that if such dualism is allowed to continue, the growth of the private sector will not result in real benefits for most of the population. It is worth quoting their report in some detail (ILO, 1991: 6-7):

> Investible resources generated by the growth of the white modern sector have been either ploughed back to the sector itself or has flowed out of the country. Virtually nothing has gone towards raising productive capacity in the other sectors. Given the limited resource mobilisation capacity in the non-white economic sectors, this pattern of investment has led to a widening gap in capital/output ratios between the sectors. There has been capital-deepening in the White Modern Sector alongside constant or declining capital/output ratios in the Non-White sectors ... The per capital GDP figures for the white modern sector are at industrialised country levels ... As such the choice of technology and production systems are biased towards industrialised country standards. This implies high capital-intensity and hence limited demand for labour. Furthermore limited growth of the white labour supply and the tendency towards capital-deepening from reinvestment reinforce this tendency ... [there is] limited employment generation capacity [in] the white modern sector ... Thirdly, the existence of severe labour market segmentation ensures that the 'trickle down' benefits to blacks from the growth of the white modern sector is limited.

The ILO report, as well as other economic analyses undertaken by the World Bank (1991), underline that the dualism of the economy is a serious hindrance not just to economic growth, but also to the distribution of benefits. While the transitional plan notes the importance of the private sector in the development of the Namibian economy, therefore, it also emphasizes that the composition and character of the system needs to change for development to occur.

While no accurate figures exist, it is estimated that up to one-in-three of those seeking work are unable to find work. *Optimistic* projections of the creation of 4,500 formal sector jobs per annum suggest that only one-quarter of new entrants to the labor force will find work, while most will contribute to a growing backlog of job seekers.

The location of available jobs is also extremely distorted, with the rural and peri-urban north at a particular disadvantage. Windhoek, with 10% of the national population, offers 40% of all formal sector jobs while Oshakati/Ondangwa, with over 120,000 adults, offers only 6,000 formal sector jobs.

Implications of Politics, Planning and the Economy on Communal Areas: Three conclusions can be drawn from the above analysis, as it affects communal areas:

- Economic growth will not necessarily lead to economic gains for people in communal areas. This is due to continued low wages and subsequent low remittances from wage earners to families in communal areas, high levels of unemployment, and investment structures distorted toward capital-intensiveness and poor benefit distribution.
- The weak economic base will undermine effective economic and social planning, because of the lack of consistency in prices and output levels within major sectors (particularly mining and agriculture).
- Poor export earnings, slow growth in foreign investment, and an already-high tax burden gives government little room to raise additional revenues. The government has also resisted the temptation to borrow in the short-term for investment in social services which have long-term benefits, thus avoiding a balance of payments crisis, but leaving little discretionary money for social service investments. While donors have been quite supportive, funds remain inadequate to meet the needs of communal areas.

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While programs and policies are being effected which challenge at least some of the macro-economic problems (e.g., fiscal policy measures, support for the informal sector, reviewing tax laws, incentives for export-oriented manufacturing enterprises, labour legislation, widening the human resource base by training unpriveldged groups, etc.), much of the resources needed for communal areas development will have to come from community development initiatives, rather than government funding. Recognizing this, the government has been careful to link any provision of resources with community mobilization (including NGO activities) and community resource allocation (including labor, inputs, maintenance, etc.). This approach is especially important because of the difficulty of planning central government resource allocation.

Gender, Health and Education

Gender

As the LIFE gender analysis indicates, there is little information available on gender issues in Namibia. However, as part of a general overview of social soundness issues, we have reviewed more current, albeit still limited documentation on gender issues, issues which may affect the ability of women to benefit from potential projects under LIFE.

Most national statistics do not disaggregate data by sex, and much of the household-level studies taking place in Namibia do not examine household and community gender issues in much detail.[4] What has become clear since independence is that the government views gender discrimination as a serious development problem, and as a violation of human rights. However, while the constitution protects all Namibians from sexual discrimination, and while the government's stated policy is to eradicate the problem, sexual discimination is well engrained in the economy and society. As Tapscott and Hubbard noted (1991:2): "Whilst the Constitution and the new government have stressed the importance of gender equality, such equality is far from being a concrete reality. What is needed instead is nothing less than a fundamental reorientation of society's attitudes towards gender".

The specific role played by women in communal areas will be dealth with under each communal area, discussed below. Health and education issues will be discussed later in this section. Here we turn to two issues: 1) gender and legal issues[5] ; and 2) gender and employment.

Gender and Legal Issues: In Article 10 the Constitution states that "All persons shall be equal before the law", and also states that "No person may be discriminated against on the grounds of sex, race, colour, ethnic origin, religion, creed or social or economic status". Elsewhere the Constitution, in a section on the principles of state policy, notes the following (ILO, 1991: 6):[6]

[4] In particular, there is a tendency to differentiate between male- and female-headed households. While a useful construct, especially if de facto and de jure female-headed households are differentiated, the approach often ignores important gender relations within male-headed households.

[5] Discussions of inheritance and control over assets under customary law will be dealt with in more detail in the communal area sections of this annex.

[6] Refers to issues which are not legally enforceable, but act to guide Government policy.

- legislation to ensure 'equality of opportunity for women, to enable them to participate fully in all spheres of Namibian society';
- implementation of the principle of 'non-discrimination in the remuneration of men and women';
- legislation to provide 'maternity and related benefits for women'.

Elsewhere the Constitution refers to Namibia's adherence to various ILO conventions, many of which refer to women (including the Equal Remuneration Convention, the Discrimination (Employment and Occupation) Convention, and the Discrimination (Employment and Occupation) Recommendations.

The Labour Code, passed by Parliament but not yet implemented, includes clauses on the equality of women in the workplace. All aspects of employment are included, including training, earnings, and promotion. Maternity leave has been excluded from the Labour Code, and is expected to be handled separately by Government under a different act: paternity leave is also not discussed under the Labour Code.

The Department of Women's Affairs views the repeal of discriminatory legislation as a high priority. The Ministry of Justice has identified thirteen statutes and regulations which distinguish between men and women. Of these thirteen, only one, the Income Tax Act, has been addressed by Parliament. As with other countries in Southern Africa, marriage laws constitute one of the most serious forms of sex discrimination. In Namibia, the rights of women with regard to marriage and inheritance varies across common law and customary law, and across ethnic groups. All common law marriages are in community of property, unless otherwise specified (while no Namibian evidence is available, few common law marriages in Southern Africa are out of community of property). Under community of property, all of the property that both parties had prior to the marriage or acquired during the marriage is under the control of the husband. He has sole decision-making power over the property, and can dispose of it as he sees fit. The wife has no authority to dispose of property, nor to control the disposal of property by her husband. The only exception is that the husband cannot sell private land held by the common law wife prior to the marriage without her signature. Under common law, a wife or a husband would split the property evenly in case of divorce, and in the case of death, the property would go to the surviving spouse.

Under customary law the situation is far more complex, the application of the law less standardised, and there is considerable variation across ethnic group. In some communities, notably amongst Damara, Nama, and San peoples, women often have joint decision-making power with regard to property during marriage, and have the right to inherit all of the property secured during the marriage upon the death of the husband (including grazing land, fixed and moveable assets). In other communities, however, notably in Herero and Ovambo households, the rights of a married woman during marriage and with regard to inheritance are considerably less favorable. In Herero communities, for example, the dead husband's male relatives acquire ownership and control of all property from the marriage upon his death, while the wife receives nothing.

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As in the case of other Southern African countries, common law does differentiate between married women who own a business and those who do not. If a married woman owns her own business, she has certain limited contractual powers in connection with the business. This includes the right to seek credit. Practically speaking, however, banks still require that any woman obtain the written consent of her husband before credit is extended, even if the credit is for a business owned entirely by the wife. Further, a women cannot act as a director of a private company without the written approval of her husband.

While women under the Namibian Constitution are relatively well-off in comparision with most other Southern African countries, it is important to note that none of the constitutional provisions regarding women came into effect automatically. Rather, common and customary law which was in effect at independence is still valid unless declared unconstitutional in a court of law, or repealed/amended by Parliament. Tapscott and Hubbard (1991), in an investigation of over 600 complaints to the Ombudsman's office in the first half of 1991, found that *none* concerned discrimination against women. They also found that no court cases had taken place dealing with unconstitutional discrimination against women (see also ILO, 1991). Part of the problem, they argued, is that class action suits are not legal in Namibia.[3] Even if the courts were to declare certain practices discriminatory, women in communal areas, women working as farmworkers and the wives of farmworkers, and women married under customary law would not necessarily be affected, due to difficulties in enforcement, lack of clear divisions between common and customary law, and a lack of information on legal rights.

Gender and Employment: As noted above, the incoming Labour Code prohibits discriminatory hiring or employment practices based on gender. The aim is to address past discrimination which has led to higher levels of female unemployment and 'job-typing'. The 1988 Manpower [sic] Survey noted that women comprised 33% of all paid employees, although they represented just over 50% of the population. Of the 33% of employed females, almost half (46%) were employment as domestics.

The gender dimensions of unemployment are less certain. Visible unemployment in the Windhoek area is clearly male, with some 3,000 young males searching for 'piece work' on streetcorners throughout the city daily. However, a study of unemployment in Katutura suggests that female unemployment, while less visible, is more severe (30.9% for males, 41% for females) (Pendleton, 1991). Further, based on circumstantial evidence as well as evidence from other Southern African countries, it is likely that women more than men find themselves in low-paying informal sector activities, particularly hawking.[4]

In the rural areas, no formal sector unemployment rates are available. UNIFEM (1990) estimates that most rural *small-scale enterprises* are run by women: no evidence is given to back this up. However, a recent (unpublished) study conducted for the Ministry of Finance and Development

[3] Class action suits are cases where "one individual brings a court case on behalf of an entire category of affected persons" (ILO, 1991: 6).

[4] A recent study of the informal sector in Windhoek has been undertaken by the First National Development Corporation, although the findings have not yet been circulated.

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Planning in Botswana found that 73.3% of all rural small-scale enterprises were operated by women.

As in all high out-migration societies, women tend to predominate in rural areas. This often takes the form of *de facto* and *de jure* female-headed households. Even when males are present, the changing roles of women and men in rural areas has meant that women take on more duties related to production, in addition to their predominant role in reproduction. The 1991 Land Reform Conference noted the disadvantaged position of women in communal areas, and reinforced other reports suggesting that women were facing dramatically increasing demands on their time and resources: despite these changes, legal constraints facing women with regard to control over land and other assets (including credit) have not yet received attention.

For small-scale female entrepreneurs, regional evidence suggests that they face considerable time burdens that negatively affect their business. Further, female entrepreneurs in Botswana tend to be more likely than male entrepreneurs to use earnings from the business to invest in the household or in childcare activities (SIAPAC-Africa, 1991).

Health

Under South African administration, health services were principally curative rather than preventive in orientation, urban rather than rural, and the provision of financial and other resources varied enormously along race lines. Unusually high infant mortality and morbidity rates reflected attitudes of the authorities towards health issues.

At independence, the incoming government was faced with the following health situation:

- the estimated rural infant mortality rate is over 100 per 1000 (no accurate figures are available);
- full immunization coverage of undertwos is approximately 20% (most other countries in the region have exceeded 80%);
- access to clean water at the source reaches only 30% of all rural households;
- access to sanitary means of human waste disposal reaches less than 5% of the rural population in 'Ovamboland', and is estimated to reach only 10% in other rural areas;
- serious malnutrition is reflected in wasting (weight for height below two standard deviations of the reference population) rates of 11.7% on average, ranging up to 20% in 'Hereroland' (1986 data indicate that daily per capita caloric supply as a percent of requirements was the most serious in Mozambique, followed by Namibia and Angola);
- maternal mortality rates are estimated at 552/100,000 in the peri-urban north, perhaps the highest in Southern Africa (with the possible exception of Angola, but not Mozambique);
- one in twenty-five peri-urban women in the north will die from causes related to pregnancy;
- diarrhoeal incidence in underfives is over 33%;
- contraceptive usage is 33% (and as low as 7% in the north);
- Namibia has the lowest percentage of the population with access to health services in Southern Africa, except for war-torn Angola and Mozambique.

Definitions of small-scale enterprises vary across country; in countries with a weak industrial base and small populations, such as Botswana and Namibia, the definition usually encompasses businesses with ten or fewer employees, and usually just the owner-operator. Here we use the term to include those enterprises not in the formal sector.

significant. The donor's investment in LIFE is a manifestation of these benefits.

Economic Criteria for Appraisal and Evaluation

Economic criteria for appraisal and evaluation in LIFE including financial discounted cash flow analysis for enterprises, economic valuation and cost-benefit analysis of target community resource management projects using IRR and NPV and selective use of cost minimization for training and research interventions and non-use values are to be incorporated in decisions about the selection and evaluation of community based activities to be supported. Thus, the economic utilization and non-utilization gains forms an integral part of the LIFE project's implementation, monitoring and evaluation. This will maximize the use of the LIFE project resources.

e. Legislative Framework/FAA Section 611 (a) (2) Determination

Summary

Section 611 (a) (2) of the Foreign Assistance Act of 1961 ("FAA") prohibits obligations in excess of $500,000 if the agreement requires legislative action within the recipient country, unless such legislative action may reasonably be anticipated to be completed in time to permit the orderly accomplishment of the purposes of such agreement.

Based on discussions with relevant officials of the Government of the Republic of Namibia (GRN), the NGO community in Namibia, USAID/Namibia officials and on a review of project documentation, it is the RLA/SA's opinion that the requirements and conditions of FAA Section 611 (1) (2) have been satisfied and, therefore, that section is not a constraint to obligation of project funds. This opinion is set forth in Annex H.

Except under the wildlife use and management component, the orderly accomplishment of the project purpose does not "require" legislative action within Namibia. Even within the wildlife use and management component, it can be reasonably expected based on the discussion, provided in Annex H that the required legislative action will be completed in time to allow for orderly achievement of the purpose of the project. To ensure that the necessary legislation is actually enacted and implemented, a CP has been included in the project authorization and grant agreement requiring such action before funds can be disbursed for community-based initiatives involving the generation of income which because of law may not be retained by the community. In addition, USAID has obtained assurances from the GRN that appropriate legislation will be enacted. This assurance is contained in their formal Request for Assistance (See Annex C).

f. Environmental Determination

Based upon 22 CFR Part 216.2 (c) (2) (i) a Categorical Exclusion is recommended for all training, education and technical assistance. Based upon 22 CFR Part 216.2 (c) (2) (ii) a Categorical Exclusion is recommended for applied research and field evaluation. Based upon 22 CFR part 216.2 (c) (2) (iii) a Categorical Exclusion is recommended for all studies, analyses, workshops and meetings.

Based upon 22 CFR 216.3 (a) (2) (iii) a Negative Determination is recommended for any applied research which may be undertaken over a large geographic area with the qualification that a detailed management plan will be presented, including identification of endangered species. If endangered species are involved, based upon 22 CFR 216.5 a Positive Determination will be recommended and an Environmental Assessment will be required in which mitigative actions are demonstrated which will minimize risks to the endangered species.

Based upon 22 CFR 216.3 (a) (7) (ii) a Deferred Negative Determination is recommended for all subgrants. An environmental review for each subgrant will be carried out by the Ministry of Wildlife, conservation and Tourism (MWCT) in collaboration with the PVO that will be responsible for implementing the Project, addressing the appropriate issues in the evaluation criteria.

ANNEXES:

Annex A	Logical Framework
Annex B	PID and PP Guidance
Annex C	GRN Letter of Request
Annex D	Social Soundness Analysis
Annex E	Gender Analysis
Annex F	Institutional Analysis
Annex G	Economic/Financial Analysis
Annex H	611 (a) 2 Legal Opinion
Annex I	Environmental Assessment
Annex J	Annotated list of NGO's covered by LIFE
Annex K	Zoological Society of San Diego Research Proposal
Annex L	Draft Project Grant Agreement
Annex M	Scope of Work for PSC Project Manager

Annex N	Illustrative Set of Baseline Data and Project Indicators
Annex O	Gray Amendment Certification
Annex P	Budget Tables
Annex Q	Disbursements and Account Procedures
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ANNEXES

ANNEX A

LOGICAL FRAMEWORK

ANNEX A

LOGFRAME FOR THE LIFE PROJECT

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
GOAL Enhance capabilities to meet the basic human needs through sustainable management of natural resources	1) Increased per capita income in targeted rural communities 2) Improve natural resource management 3) Improved health and nutrition	1) Statistics from National Statistics Offices, Ministries of Agriculture, Health, Labor, Industry and Trade, and Wildlife Conservation and Tourism. 2) Statistics from Mission's Monitoring and evaluation system which will use baseline data gained through social-economic surveys. 3) Biophysical data on the utilization and sustainability of natural resources based production systems.	1) Enabling legislation giving secure access to local communities will be enacted. 2) Revenues and other benefits derived from resource base is retained by communities. 3) Communities will adopt viable strategies for sustainable natural resource management.
PURPOSE 1) Increase social and economic well-being in poor rural communities and/or in buffer zones to protected areas, through community-based natural resource management	(EOPS) 1a) Increased household income in targeted communities 1b) Increased household food consumption in targeted communities 1c) Increase benefits to female headed households	1a) Project reports & papers 1b) Project evaluation reports 1c) GON statistics	1. Trained personnel will apply new skills and knowledge.
2) Improve community-based groups capabilities to manage natural resources in a sustainable fashion, through strengthening local, regional, and national institutions which provide services to communities; and	2a) Increased number of community based decision-making bodies related to NRM 2b) Representation and participation by community sub-groups and NRM national and regional committees 2c) Improved administrative/organization structure of NGOs on NRM projects 2d) Improved ability of NGOs to operate independently of external assistance 2e) Increased level of training of CBO and NGO staff	2a) NGO reports, surveys & data collection reports 2b) Project surveys & implementation reviews 2c) nature conservation survey reports	2. Community members are willing and able to participate on committees.

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
3) Develop strategies and methodologies for community management of natural resources;	3a) Additional NRM strategies developed and disseminated to appropriate Government and Non-government agencies and organizations. 3b) Increase in percentage of target community participating in environmental education activities.	3a) NGO seminar & workshop reports 3b) Project reports	3. Natural resources are available or can be introduced that provide sustainable inputs.
OUTPUTS:			
A. Community-based Natural Resource Utilization Management Initiatives		1) Natural Conservation reports	1) GRN is committed to an expanded NGO role in national development.
1) Expanded government and Non-Governmental capabilities to promote natural resource management projects, and to provide technical support to plan, implement and evaluate such projects.	1) community activities planned, implemented, and evaluated through 10 - 15 sub-grants to Namibian NGOs in three regions.	2) Conference/workshop reports	2) Intended beneficiaries receptive to NGO programs.
2) Local NGOs or community-level "grassroots" institutions capable of managing their own sustainable natural resources utilization program established and/or strengthened.	2) sub-grants awarded to NGOs for institutional development.	3) USAID financial and project reports	3) Namibian social and economic structure will permit women to actively participate in all project activities.
3) The establishment of sustainable community-based natural resource management projects in poor rural communities in "buffer zones" surrounding National Parks, state lands or nature preserves.	3) Average income and employment increased for participating population.	4) NGO baseline and periodic progress	
4) Increased benefits to poor rural communities through employment or income-generating activities derived from natural resource management.	4) Increased participation by women in all committees, projects, training and NGO administration are women.	5) Reports from project evaluations, audits and studies.	
5) Increased participation of women in planning and implementing natural resource management activities within project communities.	5) Participants from MWCT, NGOs and communities trained at diploma level.	6) Project, NGOs and Government survey reports.	

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Increased capability of local decision makers to make sound environmental and resource management decisions.			
B. Planning and Applied Research			
1) Improved quality and increased geographic coverage of natural resource management reports.	1) Participants trained at M.Sc. level.	1) Project and training reports	1) GRN can sustain an actively expanding program which requires policy, financial and human resource support.
2) Socio-economic baseline data collected from project communities and analyzed for evaluation activities.	2) Research projects funded.	2) Research reports	2) GRN cooperates with NGOs in community-based activities.
3) Research findings disseminated nationally and regionally among members of project communities, host-government and non-governmental decision-makers, or fellow researchers.	3) Documents disseminated.	3) Conference/workshop reports	
	4) Conferences/workshops held.		
C. Formal & Non-Formal Environmental Education.			
1) Production and dissemination of appropriate Environmental Education materials to community groups by outreach programs.	1. Community based EE materials developed.	1) Curricula development and reports.	1) Namibians will learn about the benefits of good environmental strategy and value its importance.
2) Environmental education centers established. in rural communities, based on needs of community groups.	2. Communities activity engaged in EE activity.	2) Project reports.	2) Environmental Education Centers can reach large numbers of community leaders.
	3. EE an integral aspect of community based natural resource utilization.	3) Training reports.	3) MEC/MWCT willing/able to work together.
	4. Two environmental education centers established.		
	5. Community leaders trained in environmental education.		

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
D. Networking, Communications and Exchange of Information 1) Integration of national- and regional - level natural resources management activities institutionalized through site visitations, written reports and project up-dates, periodic meetings and annual conferences/workshops. 2) Networking with organizations in other countries established. Reports and information disseminated to appropriate agencies.	1) Conferences/workshops held. 2) Reports published 3) Evaluation results widely disseminated	1) Conference reports 2) Survey reports 3) Published documents	1) A cooperative environment exists for active interaction between groups, individuals, Government units, etc. 2) Reports are read and ideas considered in other communities.
Inputs: (See Budget Tables in Annex P)			
GRN/NGO Contribution (See Annex R)		1) Signed cooperative agreements with umbrella management international PVO and Rossing, and sub-grants to local NGOs for community-based activities. 2) USAID's MACS reports and PIRs. 3) NGOs financial and annual reports. 4) Evaluations, audits and studies conducted.	1) Initial and subsequent project obligations are timely. 2) Grants to NGOs are an efficient and effective mechanism to support key development sectors. 3) Levels of assistance provided to NGOs are sufficient to operate and maintain successful projects.

ANNEX B

PID AND PP CABLES

ZCZCSBI *
R RUEHWD RUEHC RUEHOR RUEHLG RUEHLS
R RUEHSP #4944/01 027 **
R UUUUU ZZH
2722922Z JAN 92
FM AMEMBASSY HARARE
TO RUEHWD / AMEMBASSY WINDHOEK 1119
INFO RUEHC / SECSTATE WASHDC 2187
RUEHOR / AMEMBASSY GABORONE 7762
RUEHLG / AMEMBASSY LILONGWE 5241
RUEHLS / AMEMBASSY LUSAKA 7214

CLASS: UNCLASSIFIED
CHRGE: AID:01/27/
APPRV: DIR:MORSE
DRFTD: DRT:CORRECKER
CLEAR: DRUTS/COMP/FIC
AMO/DI
DISTR: DIR-2 AMB DCM

UNCLAS * HARARE 244

EDAC

E.O. 12356: N/A
SUBJECT: SADC REGIONAL NATURAL RESOURCES MANAGEMENT PROJECT (690-0261) - NAMIBIA COMPONENT

REF: (A) WINDHOEK 02263 (B) HARARE 23602

1. USAID/ZIMBABWE HAS REVIEWED THE SUBJECT DRAFT PROJECT PAPER SUPPLEMENT PREPARED BY THE DATEX CONTRACT TEAM AND SUBMITTED BY USAID/NAMIBIA. THIS DOCUMENT INCORPORATES THE NAMIBIA PROGRAM AS A SUBCOMPONENT OF THE REGIONAL NATURAL RESOURCES MANAGEMENT PROJECT, WHICH PRESENTLY INCLUDES SUB-PROJECT COMPONENTS FOR ZIMBABWE, BOTSWANA, ZAMBIA AND MALAWI (REGIONAL CO-ORDINATION). THE MISSION REVIEW GENERALLY ENDORSED THE SUBJECT PROPOSAL AND RECOGNIZED THAT FOUR PROJECT ELEMENTS-(COMMUNITY BASED RESOURCE UTILIZATION, PLANNING AND APPLIED RESEARCH SUPPORT, ENVIRONMENTAL EDUCATION, AND REGIONAL COMMUNICATION AND EXCHANGE INFORMATION) ARE CONSISTENT WITH THE PURPOSE AND OBJECTIVES OF THE REGIONAL NATURAL RESOURCES INITIATIVE. HOWEVER, THE REVIEWERS NOTED THAT THE REF B GUIDANCE CABLE WAS NOT FOLLOWED IN ITS ENTIRETY. IN PARTICULAR, THE DESIGN DOCUMENT DOES NOT ADEQUATELY ADDRESS THE LESSONS LEARNED FROM PROJECT IMPLEMENTATION ACTIVITIES IN THE OTHER COUNTRIES PARTICIPATING IN THE NATURAL RESOURCES MANAGEMENT PROJECT.

2. BECAUSE OF THE ABSENCE OF BUDGET FIGURES, AN IMPLEMENTATION SCHEDULE, A COST BENEFIT ANALYSIS, AND DETAILED SOCIAL SOUNDNESS ANALYSIS, THE MISSION WAS NOT ABLE TO REACH ANY CONCLUSIONS REGARDING THE FEASIBILITY OF THE PROGRAM OR TO ADEQUATELY ASSESS THE LIKELIHOOD OF ACHIEVING PROJECT OBJECTIVES. NEVERTHELESS, THE EXTENSIVE ACTIVITY DESCRIPTIONS RAISED A NUMBER OF CONCERNS WHICH USAID/NAMIBIA COULD ADDRESS IN THE FINAL PROJECT DOCUMENT.

3. PROJECT STRATEGY (SCOPE OF ACTIVITIES)

BASED ON LIMITED USAID/NAMIBIA RESOURCES AVAILABLE FOR PROJECT IMPLEMENTATION AND

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FOR THIS ELEMENT. WE SUGGEST THAT THIS ELEMENT MIGHT ALSO BE SCALED DOWN IN APPROACH BY FUNDING ONE SMALL CENTRE IN CLOSE PROXIMITY TO A TARGET COMMUNITY. BASE-LINE STUDIES CAN THEN BE IMPLEMENTED TO ASSESS THE IMPACT OF SUCH EDUCATION/EXTENSION IN THE AREA VERSUS OTHER SITES.

E. PROJECT ANALYSES

THE SOCIAL SOUNDNESS AND FINANCIAL ANALYSES WOULD APPEAR TO BE CRITICAL FOR JUDGING PROJECT FEASIBILITY. A DETAILED ANALYSIS OF NGOS IN NAMIBIA, SUMMARIZED IN THE ADMINISTRATIVE AND INSTITUTIONAL ANALYSIS, IS NECESSARY TO SUPPORT THE PROPOSED RELIANCE ON THE NGO SECTOR. RECOGNIZING THE COLONIAL HISTORY OF NAMIBIA, THE ANALYSIS SHOULD BE DISAGGREGATED TO CLEARLY IDENTIFY AND DESCRIBE THOSE NGOS THAT ARE BLACK AFRICAN IN LEADERSHIP AND/OR MANAGEMENT. BASED ON EXPERIENCES, THIS MAY BE AN IMPORTANT FACTOR IN ESTABLISHING A DEMAND DRIVEN MODEL FOR COMMUNITY PARTICIPATION RATHER THAN A TOP-DOWN

IMPLEMENTATION, EVEN FOR THE PILOT AREAS, REQUIRES AN ADEQUATE POLICY ENVIRONMENT PRIOR, REPEAT, PRIOR TO INITIATING INVESTMENT. TO DO OTHERWISE, MAY INHIBIT RESULTS AND THE RELEVANCE OF THE PILOT FOR REPLICATION. IN NAMIBIA, IT APPEARS THAT, APART FROM THE CONSTITUTION, THERE IS NO LEGAL FRAMEWORK WHICH WOULD ALLOW THE FINANCIAL BENEFITS OF NATURAL RESOURCE-BASED ACTIVITIES TO BE RETAINED BY RURAL COMMUNITIES. COMMUNITIES DO NOT APPEAR TO HAVE CLEAR TENURIAL RIGHTS TO RESOURCES. REGIONAL AND LOCAL GOVERNMENTAL STRUCTURES WHICH MIGHT, REPEAT, MIGHT FACILITATE NATURAL RESOURCE-BASED ACTIVITIES ARE NOT FIRMLY ESTABLISHED.

CURRENT EXAMPLES OF COMMUNITY-BASED INITIATIVES IN NAMIBIA ARE ISOLATED AND FEW IN NUMBER. THE DOCUMENT DOES NOT EXPLAIN HOW COMMUNITY PARTICIPATION CAN BE DEVELOPED OR SUSTAINED IF THERE ARE NO NGOS CURRENTLY WORKING IN THE AREA. THERE APPEARS TO BE NO FORMAL OR INFORMAL GOVERNMENT OR VILLAGE LEVEL STRUCTURES THROUGH WHICH COMMUNITY BASED DECISION MAKING CAN BE FACILITATED. THE PAPER NEEDS TO ADDRESS THE TYPES OF LEGISLATION/REGULATIONS ~~WHICH NEED TO BE~~ INTRODUCED TO ALLOW THE NGOS AND THE COMMUNITIES TO FUNCTION AS EFFECTIVE NATURAL RESOURCE MANAGERS. CONSIDERATION SHOULD BE GIVEN TO MAKING THE NECESSARY LEGISLATIVE/REGULATORY FRAMEWORK A CONDITION PRECEDENT TO DISBURSEMENT. THE IMPORTANCE OF ~~EXPANDING BEYOND ONE OR TWO~~ INITIAL PROJECT SITES IS EVEN ~~NONE~~ more STRIKING.

MISSION SHOULD TAKE A CRITICAL LOOK AT PROJECT IMPLEMENTATION IN ZAMBIA, BOTSWANA, AND ZIMBABWE ESPECIALLY AT (A) THE LEGAL/POLICY CONTEXTS WHICH HAVE IMPEDED OR FACILITATED COMMUNITY EMPOWERMENT, (B) THE CONFLICTS BETWEEN DIFFERING INSTITUTIONAL AGENDAS AND (C) THE TIME FRAME FOR REAL COMMUNITY EMPOWERMENT INITIATIVES.

(2) PLANNING AND APPLIED RESEARCH SUPPORT

RESEARCH ACTIVITIES SHOULD BE MORE FOCUSSED IN SCOPE AND SUPPORTIVE OF THE OTHER PROJECT COMPONENTS, FOR EXAMPLE, RESEARCH COULD BE LINKED TO THE SPECIFIC PROJECT-FUNDED COMMUNITIES, AND AIMED AT PROVIDING BASELINE DATA AND/OR SPECIAL TOPICAL STUDIES WHICH PROVIDE ANALYTICAL FEEDBACK FOR PROJECT IMPLEMENTATION.

(3) ENVIRONMENTAL EDUCATION/EXTENSION

THE REVIEW TEAM COULD FIND NO DISCUSSION IN THE PAPER OF THE START-UP, CAPITAL, OPERATING OR OTHER RECURRENT COST ISSUES, PARTICULARLY THE PLAN FOR SUSTAINING THE INFRASTRUCTURE INVESTMENT WHEN PROJECT RESOURCES ARE NO LONGER AVAILABLE

MANAGEMENT SUPPORT, AND THE LIMITED IMPLEMENTATION CAPABILITIES OF INDIGENOUS NGO'S AND OTHER SUB-GRANTEES, THE PROJECT NEEDS TO BE MUCH MORE CLEARLY FOCUSSED AND DEFINED. THIS COULD BE PARTIALLY ACHIEVED BY CONCENTRATION OF THE FOUR PROJECT ELEMENTS IN ONLY TWO OR THREE CIRCUMSCRIBED PILOT COMMUNITIES OR GEOGRAPHICAL LOCATIONS, BUILDING THE NECESSARY PERSONNEL AND INSTITUTIONAL CAPACITIES THEREIN TO PROMOTE AND SUSTAIN NATURAL RESOURCES BASED DEVELOPMENT. A CLEAR DEFINITION OF THESE GEOGRAPHIC AREAS WILL FACILITATE COHESIVE MANAGEMENT AND MONITORING PROJECT IMPACTS.

THE REVIEWERS BELIEVE THAT THE ISSUE OF SUSTAINABILITY HAS NOT BEEN ADEQUATELY ADDRESSED FOR ANY OF THE PROPOSED PROJECT ACTIVITIES.

THE REVIEWERS BELIEVE THAT SOME OF THE ACTIVITIES AND ORGANIZATIONS SUGGESTED FOR PROJECT SUPPORT ARE NOT DIRECTLY LINKED WITH, OR IMMEDIATELY RELEVANT TO COMMUNITY-BASED NATURAL RESOURCES MANAGEMENT. THIS IS ESPECIALLY TRUE FOR THE ENVIRONMENTAL EDUCATION ACTIVITIES, WHICH THE REVIEWERS FELT SHOULD BE DEVELOPED AND IMPLEMENTED IN SPECIFIC NRM TARGET-AREA COMMUNITY CONTEXTS ONLY. SUPPORT FOR IMPLEMENTING ORGANIZATIONS NEEDS TO BE DIRECTED AT THOSE ORGANIZATIONS WHICH ARE WORKING DIRECTLY WITH ON-THE-GROUND NATURAL RESOURCES MANAGEMENT ACTIVITIES IN NRM TARGET-AREA COMMUNITY CONTEXTS, RATHER THAN ENVIRONMENTALLY CONCERNED ORGANIZATIONS WITH A MORE GENERAL NATIONWIDE MANDATE.

1) COMMUNITY BASED RESOURCE UTILIZATION

THE DOCUMENT SUGGESTS FUNDING PILOT COMMUNITY BASED ACTIVITIES WHICH CAN BE EXPANDED FOLLOWING THE IMPLEMENTATION OF LEGISLATION AND THE PROMULGATION OF THE NECESSARY LEGISLATIVE FRAMEWORK. HOWEVER, EXPERIENCE ELSEWHERE IN THE REGION DEMONSTRATES THAT SUCCESSFUL PROJECT

APPROACH DIRECTING COMMUNITY ACTIONS.

C. PROJECT BUDGET (SOURCES & USE OF FUNDS AND EXPENDITURES BY ELEMENTS) AND FINANCIAL ANALYSIS

DETAILED BUDGETS MUST BE PREPARED WHEN COMPLETING THE FINAL DOCUMENT - USAID/CONTROLLER IS AVAILABLE TO PROVIDE ASSISTANCE IF NECESSARY. DESIGN TEAM SHOULD ALSO REVIEW CURRENT GUIDANCE ON RECIPIENT AUDITS, AS OPPOSED TO NON-FEDERAL AUDITS. WE STRONGLY RECOMMEND THAT THE DESIGN TEAM NOT PROMOTE THE USE OF THE LOGS'. LOG IS PARTICULARLY INAPPROPRIATE IF MOST OF THE PROJECT COSTS WILL BE INCURRED LOCALLY.

D. PROJECT IMPLEMENTATION

THE DOCUMENT NEEDS A DETAILED IMPLEMENTATION PLAN INDICATING THE TIMING AND SEQUENCING OF ALL ACTIONS. A TIME LINE FOR PROJECT ACTIVITIES AND AN ORGANIZATIONAL CHART WILL BE ESSENTIAL.

E. CONTRACTING AND PROCUREMENT PLANS

THE DESIGN DOCUMENT DID NOT INCLUDE THE PROJECTS CONTRACTING AND PROCUREMENT PLANS. THE EXPERIENCE IN ZIMBABWE, ZAMBIA, AND BOTSWANA WILL PROVIDE LESSONS THAT MAY BE USEFUL TO NAMIBIA.

F. STAFFING LEVELS/TRAINING

THE DESIGN DOCUMENT IDENTIFIED THE NEED FOR LONG TERM ACADEMIC TRAINING OF AN ECONOMIST AS WELL AS OTHERS IN THE CONSERVATION FIELD. HOWEVER, THE DOCUMENT DID NOT IDENTIFY LEVELS OF TRAINING, NUMBER AND SKILLS OF LONG TERM CONTRACTORS NEEDED TO FILL VACANT SLOTS I.E., ECONOMIST, ETC, NOR DID IT INCLUDE CONSIDERATION OF POTENTIAL SITES FOR EDUCATION AND TRAINING-I.E., IN THE SOUTHERN AFRICA REGION OR KENYA, WHICH COULD BE LESS COSTLY AND MORE APPROPRIATE THAN TRAINING IN THE UNITED STATES.

G. LEVEL OF EFFORT

THE DOCUMENT DID NOT FULLY IDENTIFY LEVEL OF EFFORT, I.E., NUMBER OF PERSONS TO BE HIRED, BY CA, PSC OR TRUST. THE DOCUMENT SHOULD INCLUDE AN ORGANIZATIONAL CHART WHICH IDENTIFIES NUMBER AND TYPE OF PERSONNEL TO BE RECRUITED, REPORTING RELATIONSHIPS BETWEEN USAID, TRUST, PSC, IMPLEMENTING USPVO AND NAMIBIAN NGOS', CLO'S AND COMMUNITY ORGANIZATIONS.

USAID/ZIMBABWE RECOMMENDS THAT USAID/NAMIBIA

UNCLAS SECTION 03 OF 03 HARARE 00944

INCORPORATE RESPONSES TO THESE ISSUES AND CONC
WHEN COMPLETING DESIGN EXERCISE. LAMPERE

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ZNR UUUUU ZZH
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FM AMEMBASSY HARARE
TO RUEHC / SECSTATE WASHDC 1155
INFO RUEHWD / AMEMBASSY WINDHOEK 0846
RUEHNR / AMEMBASSY NAIROBI 0024
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UNCLAS SECTION 01 OF * HARARE 09600

CLASS: UNCLASSIFIED
CHRGE: AID:10/04/91
APPRV: DIR:TMORSE
DRFTD: PDIS:CREECE:MG
CLEAR: L.CPDIS
2.CONT
3.GDO
4.ARM
5.AADO
6.PROG
7.RS
DISTR: AID-3 AMB DCM

AIDAC

FOR AFR/SA KIM FINAN

E.O. 12356: N/A
SUBJECT: SARP REGIONAL NATURAL RESOURCES MANAGEMENT PROJECT (690-0251) - NAMIBIA

REF: WINDHOEK 02268

1. USAID/NAMIBIA REPRESENTATIVE RICHARD SHORTLIDGE MET WITH USAID/ZIMBABWE STAFF ON SEPTEMBER 24, 1991, TO REVIEW THE NEW PROJECT DESCRIPTION (NPD) OF THE REGIONAL NATURAL RESOURCES MANAGEMENT PROJECT (NRMP)-NAMIBIA [REF]. THE NPD DETAILED THE KEY PROBLEMS AND ISSUES THAT THE GOVERNMENT OF NAMIBIA MUST SOLVE IN EXPANDING THEIR INVOLVEMENT IN THE ENVIRONMENT AND NATURAL RESOURCES SECTOR. IT EMPHASIZED HUMAN AND NATURAL RESOURCES DEVELOPMENT AS THE MECHANISM TO ASSIST NAMIBIA IN ESTABLISHING A FOUNDATION FOR BROAD BASED SUSTAINABLE ECONOMIC GROWTH.

2. USAID/HARARE ENDORSES THE SUBJECT PROJECT PROPOSAL, WHICH INCORPORATES THE NAMIBIA PROGRAM AS A SUB-PROJECT COMPONENT OF THE REGIONAL NATURAL RESOURCES MANAGEMENT PROJECT, WHICH PRESENTLY INCLUDES SUB-PROJECT COMPONENTS FOR ZIMBABWE, BOTSWANA, ZAMBIA, AND MALAWI (REGIONAL COORDINATION). THE PROPOSED PROJECT IS CONSISTENT WITH THE PURPOSE AND OBJECTIVES OF THE REGIONAL NATURAL RESOURCES INITIATIVE AND SHOULD ENHANCE THE EXPECTED ACCOMPLISHMENTS OF THE REGIONAL PROJECT BY PROVIDING ADDITIONAL COMPARATIVE DATA AND EXPERIENCE TO INFORM THE SADCC MEMBER GOVERNMENTS ON METHODOLOGIES FOR UTILIZING AS WELL AS CONSERVING WILDLIFE AND OTHER NATURAL RESOURCES. FURTHERMORE, THE PROJECT WILL MAKE A SUBSTANTIAL CONTRIBUTION TO AGENCY AND AFRICA BUREAU OBJECTIVES IN ADDRESSING ENVIRONMENTAL AND BIO-DIVERISTY CONCERNS.

3. THE HARARE MISSION REVIEW PROVIDED USAID/NAMIBIA WITH AN OPPORTUNITY TO BECOME MORE FAMILIAR WITH

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SIMILAR PROJECT EFFORTS IN OTHER SADCC MEMBER COUNTRIES, WHICH SHOULD ASSIST THE MISSION IN PROJECT DESIGN AND IMPLEMENTATION. USAID/ZIMBABWE LOOKS FORWARD TO PARTICIPATING IN THE PROJECT DESIGN, THUS ALLOWING USAID/NAMBIA TO BENEFIT FROM THE LESSONS LEARNED IN SIMILAR DESIGN WORK IN BOTSWANA, ZIMBABWE, ZAMBIA, AND MALAWI.

4. THE MISSION REVIEW ALSO PROVIDED AN OPPORTUNITY TO HIGHLIGHT SEVERAL CONCERNS WHICH USAID/NAMIBIA EXPECTS TO ADDRESS DURING INTENSIVE PROJECT DESIGN, NOW SCHEDULED FOR MID JANUARY THROUGH FEBRUARY 1992. USAID/ZIMBABWE WILL BE PARTICIPATING IN PROJECT DEVELOPMENT, THUS MAXIMIZING THE POTENTIAL FOR INCORPORATING LESSONS LEARNED FROM THE DESIGN AND IMPLEMENTATION OF THE SUB-PROJECTS FOR ZIMBABWE, MALAWI, ZAMBIA, AND BOTSWANA APPROVED IN AUGUST 1989. THE KEY CONCERNS ARE BRIEFLY STATED BELOW.

A. PROJECT DESIGN

PURPOSE: THE PROJECT DESIGN SHOULD HIGHLIGHT BIO-DIVERSITY ISSUES, SUCH AS ELEPHANT CONSERVATION, IN ARTICULATING THE PROJECT PURPOSE AND OBJECTIVES. THE DESIGN PROCESS SHOULD INCLUDE FAMILIARIZATION WITH THE RESOURCES AND KNOWLEDGE AVAILABLE IN THE SADCC REGION REGARDING MARGINAL LAND USE TO PROMOTE COMMUNITY PARTICIPATION IN AND BENEFIT FROM WILDLIFE CONSERVATION AND UTILIZATION.

(1) SCOPE: GIVEN THE NUMBER OF PROPOSED ACTIVITIES AND THEIR SCOPE, THE PROJECT DESIGN TEAM WILL EXAMINE THE OPTION OF PHASING IMPLEMENTATION TO ENSURE THAT SUPPORT FOR ACTIVITIES ARE TIMELY.
(2) IMPLEMENTATION: THE USE OF SUB-GRANTS TO NGO'S FOR COMMUNITY BASED ACTIVITIES WILL BE THOROUGHLY REVIEWED DURING PROJECT DESIGN. TAKING INTO ACCOUNT LIMITED MISSION RESOURCES AVAILABLE FOR PROJECT IMPLEMENTATION AND MANAGEMENT SUPPORT, THE DESIGN TEAM WILL AT THE DESIGN STAGE GIVE SPECIAL ATTENTION TO THE IMPLEMENTING CAPABILITIES OF THE NGO'S AND OTHER PROSPECTIVE SUB-GRANTEES. ALSO, THE PROJECT PAPER SUPPLEMENT WILL INCLUDE SPECIFIC CRITERIA FOR ASSESSING AND SELECTING SUB-GRANTS PLANNED UNDER THE PROJECT.

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(3) CONTRACTING AND PROCUREMENT: THE PROJECT DESIGN TEAM WILL REVIEW THE CONTRACTING AND PROCUREMENT PLANS OF THE ORIGINAL PROJECT DESIGN AGAINST IMPLEMENTATION EXPERIENCE IN ZIMBABWE, ZAMBIA AND BOTSWANA TO ENSURE THAT THE LESSONS LEARNED IN THOSE COUNTRIES INFORMS THE PROCUREMENT AND CONTRACTING PLANNING OF THE PROPOSED PROJECT.

(4) POLICY ENVIRONMENT: THE DESIGN TEAM WILL EXAMINE THE POLICY ENVIRONMENT IN NAMIBIA AT THE DESIGN STAGE TO ENSURE THAT POLICIES WOULD NOT INHIBIT IMPLEMENTATION. MOREOVER, THE ANALISIS WILL ALSO EXAMINE HOW PROJECT RESOURCES COULD BE COORDINATED TO PROVIDE SUPPORT FOR ANY PROPOSED POLICY MODIFICATIONS.

(5) SUSTAINABILITY: IN CONSIDERING THE INFRASTRUCTURE REQUIREMENTS FOR THE EDUCATIONAL CENTERS, VARIOUS OPTIONS WILL BE EXPLORED, INCLUDING THE USE OF MOBILE UNITS TO MAXIMISE COVERAGE WHILE MINIMISING COST. IN ANY CASE, THE OPERATING AND OTHER RECURRENT COSTS WILL BE TAKEN INTO ACCOUNT AND A PLAN WILL BE PROPOSED FOR SUSTAINING THE INFRASTRUCTURE INVESTMENT, PERHAPS ON A PHASED BASIS, TO DEMONSTRATE THAT ALL OPERATING AND MAINTENANCE COSTS WILL BE MET WHEN PROJECT RESOURCES ARE NO LONGER AVAILABLE.

(6) REGIONAL COORDINATION: ALL PLANS FOR NETWORKING AND SHARING INFORMATION WITH OTHER SADCC MEMBER COUNTRIES WILL BE COORDINATED WITH THE SADCC COORDINATING UNIT AND PROJECT FUNDED STAFF IN MALAWI.

(7) FUNDING LEVEL: ON THE ISSUE OF THE US DOLLARS 13.0 MILLION, USAID/ZIMBABWE AND USAID/NAMIBIA AGREED THAT THIS SHOULD BE EXAMINED CAREFULLY DURING INTENSIVE PROJECT DESIGN. A NUMBER OF FACTORS WILL BE TAKEN INTO CONSIDERATION. THESE INCLUDE CAREFUL REVIEW OF EACH OF THE AREAS PROPOSED AGAINST INSTITUTIONAL CAPACITY OF THE IMPLEMENTING AGENCIES TO ENSURE THAT THEY CAN BE MANAGED AND ACHIEVED WITHIN THE TIME FRAME OF THE PROJECT.

MISSION AGREES THAT THE ABOVE ISSUES AND CONCERNS RAISED AND OTHERS, INCLUDING COMPLEMENTARITY BETWEEN AREAS OF IMPLEMENTATION FOCUS, E.G., CURRICULUM FOR ENVIRONMENTAL EDUCATION, COMMUNITY MANAGEMENT, AND RESEARCH, WILL BE THOROUGHLY REVIEWED AND ANALYZED DURING THE PROJECT PAPER SUPPLEMENT DESIGN.

E. PROJECT REVIEW AND APPROVAL PROCESS

USAID/ZIMBABWE UNDERSTANDS THAT THE PROJECT PAPER SUPPLEMENT DESIGN PROCESS WILL BEGIN IN OCTOBER 1991. USAID/WINDHOEK WILL LEAD THE DESIGN PROCESS [redacted] WITH PARTICIPATION FROM APPROPRIATE SARP, REDSO/ESA AND AFR/TR STAFF. USAID/WINDHOEK WILL ALSO BE

RESPONSIBLE FOR PROJECT IMPLEMENTATION AND EVALUATION. AS WITH ACTIVITIES IN ZIMBABWE, ZAMBIA AND MALAWI, USAID/ZIMBABWE WILL BE INVOLVED IN CO-ORDINATING AND MONITORING. THE SUPPLEMENT IS TO BE REVIEWED, APPROVED, AND AUTHORIZED BY FEBRUARY 1992 FOR OBLIGATION IN THE SECOND QUARTER OF FY 1992.

THE DETAILED PRELIMINARY WORK ACCOMPLISHED TO DATE IN PROJECT DESIGN AS SET FORTH IN THE NEW PROJECT DESCRIPTION, AND THE EXPECTED PARTICIPATION OF USAID/ZIMBABWE STAFF IN THE INTENSIVE DESIGN PROCESS SHOULD ELIMINATE THE NEED FOR A PROJECT IDENTIFICATION DOCUMENT. THEREFORE, USAID/ZIMBABWE RECOMMENDS THAT A.I.D./WASHINGTON APPROVE THE NPD, PERMITTING THE MISSION TO BEGIN PROJECT DEVELOPMENT FOR THE PROJECT PAPER SUPPLEMENT, OMITTING THE REQUIREMENT FOR A PID.
THE MISSION ALSO RECOMMENDS THAT A.I.D./WASHINGTON GRANT DELEGATION OF AUTHORITY TO USAID/ZIMBABWE TO APPROVE THE PROJECT PAPER SUPPLEMENT AS AN AMENDMENT TO THE EXISTING REGIONAL NATURAL RESOURCES MANAGEMENT PROJECT.

SUBJECT TO FURTHER REVIEW DURING INTENSIVE PROJECT DESIGN, THE MISSION RECOMMENDS THAT FOR PLANNING PURPOSES, A.I.D./WASHINGTON PROGRAM US DOLLARS 3.0 MILLION IN FY 92 FOR THE PROJECT. TO MAINTAIN IMPLEMENTATION MOMENTUM, A FURTHER US DOLLARS 3.0 MILLION WILL BE REQUIRED TO BE MADE AVAILABLE IN EARLY 1993. SNIDER

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INITIAL ENVIRONMENTAL EXAMINATION

I. PROJECT DATA

Project Location: Namibia

Project Title: Amendment to Natural Resource Management Project (NRM) 690-0251, Namibia Component - Living in a Finite Environment (LIFE)

Funding: $US

Life of Project: (FYcs) 92 - 99

IEE Prepared By: Andre de Georges
REDSO/ESA Environmental Officer

Environmental Action: Categorical Exclusion for all training, education, and technical assistance, applied research and field evaluation confined to small areas and carefully monitored, studies, analyses, workshops and meetings.

Negative Determination for applied research which may be undertaken over a large geographic area (Detailed management plan required).

Positive Determination if endangered species are involved in large geographic areas where applied research involved.

Deferred Negative Determination for all subgrants.

Concurrence: _____
Richard Shortlidge, Director
USAID/NAMIBIA

Date:

Clearances:

Tim Riedler, RLA Date:_____

Paul Andre DeGeorges, REDSO/REA Date:_____

B. Belding, USAID/NAMIBIA/PDO Date:_____

II. Goal and Purpose

The goal of the Life Project is to enhance the capabilities of poor, rural communities living on marginal land to meet their basic human needs by broadening Namibia's resource base and managing its natural resources in a sustainable manner.

As part of the Regional Natural Resources Management Project, the general purpose is to improve the social and economic well-being of residents of targeted rural communities by implementing sustainable community-based wildlife conservation and utilization programs.

The specific purposes of the Namibia component are to:

(1) increase social and economic well-being in poor rural communities, and marginal agricultural areas in buffer zones to protected areas, through community-based natural resource management;

(2) improve community-based group's capabilities to manage natural resources in a sustainable fashion, through strengthening local, regional, and national institutions which provide services to communities; and

(3) develop additional, sustainable natural resource management strategies and methodologies for community management of natural resources.

III. Project Problem

The problems that the LIFE project addresses are both ecological and socio-economic. Rapid deforestation is one of the most urgent problems facing Namibia today, particularly in the north. High population growth and to a lesser extent overstocking of livestock are leading to over-exploitation of the forest resources. Trees are felled to clear land for growing crops and to provide fuel, construction materials, and raw materials for the production of household goods and crafts. Rapid population growth in the past 50 years has meant that larger, unsustainable numbers of trees are felled to maintain living standards. The situation has been exacerbated by the fact that during the war, large tracts of forest were cleared by the military occupation forces. Efforts to promote fuel efficient wood stoves and other appropriate energy sources (e.g. possibly making charcoal out of encroaching bush) need to be explored with local communities.

Over grazing by livestock combined with uncontrolled poaching by rural communities is jeopardizing Namibia's unique biologically diverse wildlife resources. Most rural communities see wildlife

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primarily as a human, animal and crop pest whose only value is in
fulfilling daily subsistence needs, but which has no long term economic value for them or their children. In essence, they see these as Open Access rather than Common Property Resources in which the State rather than the community has proprietorship over these resources. Unless appropriate laws and polices can be adopted and in turn community based wildlife management programs can be implemented, resulting in rural economic development from sustainable management, which in turn results in attitudinal changes, these unique biologically diverse resources and their habitat will become degraded.

Lack of water is a third critical problem facing the majority of the population. One needs only to travel to Owambo to see the effects of increasing numbers of people without enough water. While there are several successful initiatives to increase water availability through appropriate, low-cost technology, it must not be forgotten that ground water is being removed more rapidly than
it is being replaced by rain-water penetrating the soil. Namibia requires appropriate water conservation technologies for both household and industrial use.

IV. Project Solution

The Project's basic rationale is that re-empowerment of local communities by restoring their authority over land and other natural resources, is a necessary condition for sustainable natural resource management in Namibia today. Community commonly connotes a resident grouping (Bushmen living in Bushmanland), but it can also refer either to specific resource user groups (basketmakers in Owambo) or to a group as defined by its members. Local communities must have appropriate control over, access to and responsibility for the wise and sustainable use of natural resources. This implies the full participation of local communities in decision-making, planning, implementation, and evaluation of any project or program that directly affects them. Therefore, representative institutions, appropriate to the resource management task and acceptable to the communities involved, must be developed for decision-making, management, and consultation.

The LIFE project has four complementary, interrelated components: (1) Community-based Natural Resource Management; (2) Planning and Applied Research Support; (3) Environmental Education; and (4) Regional Coordination and Exchange of Information.

(1) Community-based Natural Resource Management

The Community-based Natural Resource Management component is designed to strengthen and expand the on-going community-based conservation and development activities of the GRN. This component has three parts:

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a) Pilot activities that will be implemented as part of the GRN's on-going conservation and development program in the Caprivi and Bushmanland based upon socio-ecological and land use planning exercises.

This will include the implementation of community game scout program, the placement of Community Liaison Officers; and the development of benefit-generating, resource use schemes. In the community game scouts program, individuals selected by the community itself will monitor animal populations and poaching.;

b) Sub-grants that will be administered by an entity to be established under the LIFE project. Sub-grants will be made to both field level NGOs and CBOs for community-based resource management projects, such as promotion of fuel-efficient stoves and charcoal makers, agro-forestry initiatives, sustainable exploitation of veld products for income-generation, and water conservation technologies.; and,

c) Institutions, appropriate to the resource management tasks and acceptable to the communities involved, will be established and strengthened in order for local participants to exercise control of local resources and their benefits. Strengthening will take place in areas such as:

- technical wildlife management

- generation, intake and administration of financial and other resources

- allocation of responsibilities and benefits within the community

- promotion of the development of local enterprises

- representation to the higher levels of administration.

In Sesfontein (Damaraland), for example, the community group that is implementing a community game guard system in collaboration with a conservation NGO has expressed the desire to take over the full responsibility for this program. In the initial stages, a vehicle and operating expenses (e.g.: petrol, rations for the guards) will be required. During a transition period, the group would continue to receive technical advice from the NGO. If established, there is the potential for this group to assume greater management responsibility over a wide array of resources, whether natural, human or financial.

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d) Both long and short-term training of disadvantaged Namibians in a number of fields, including but not limited to general administration, management, communication, environmental education and eco-tourism, as well as in specific technical skill areas such as basic bricklaying, stone masonry and first aid.

While the pilot activities will begin in two regions and later expand to other suitable regions of the country, the activities financed by LIFE sub-grants will have no geographical limitations, but will give priority to agriculturally marginal areas. Most activities under this component are adaptive or experimental and maximum use will be made of local NGOs for implementation.

2. Planning and Applied Research Support

This will take an Adaptive Management Approach. The basic principle of the adaptive management theme is that there is monitoring and feedback between research and management, and that management approaches should be used as experimental tests of our understanding of the ecological systems and what is required for their sustainability.

Examples of planning and applied research activities that focus on community-based sustainable management of natural resources are:

- Fire ecology in the northern Kalahari woodlands. (Fire is used extensively by the communities in NE Owambo, Kavango, Caprivi and Bushmanland and may alter the environment to a less productive level endangering sustainability of current management practices.)

- Community development and eco-tourism along the lower Kuiseb River Valley in the Namib-Naukluft Park. (This feasibility study would investigate the economic, institutional and environmental potential of eco-tourism in the area.)

- Environmental profile of the westward-flowing ephemeral linear oases of northwestern Namibia. (Water has been identified as the most important factor affecting the future of the Topnaar Community. Nevertheless, the Kuiseb and other western rivers support numerous dams and are being considered as sites for further dams and aquifer exploitation. These data would support the sustainable use of natural resources by the communities inhabiting the lower reaches of these rivers that have not yet been studied in an integrated fashion.)

- Gender, households and environmental change amongst the Topnaar Community in the Kuiseb River Valley. (This research would support and document the various developments related to sustainable community-based natural resource management in the Kuiseb River.)

Within the context of community-based resource management projects, the biological sciences will be used for monitoring the impact of project activities on the resources, including: changes in populations and their structures of key species; rates of deforestation; and gains/losses of species diversity, among other indicators. Applied social science will play an important role in providing the necessary analysis of the dynamics (motivational, technical, and administrative) involved and suggesting management options that are accessible and feasible to both central planners and local communities.

(b) Strengthening the Planning Unit of MWCT in Analysis and Application of Results to Policy and Legislation

Under this component of the LIFE project, a Namibian economist will be recruited and long-term academic training provided in natural resource economics. Replacement personnel for this economist will be provided while s/he is receiving training (expected to be about two years), and for up to one year upon return of the economist.

The LIFE project would assume funding of a Coordinator for community-based resource management starting the second year.

(c) Scholarships for Namibians Working in Natural Resource Management and Environmental Education

Both GRN and NGOs cite the lack of trained personnel as a major constraint facing the development of effective natural resource management programs. While there is a need for providing short-term training to field practitioners as described above, there is also a need for long-term academic and technical training in the social and natural sciences, environmental education and interpretation, and in administration which will be supported by the Life Project.

3. Environmental Education

The LIFE project recognizes the importance of EE initiatives in the MWCT and community programs and provides for such education cirectly and indirectly in each project component. The EE component of LIFE will support the on-going efforts of the MWCT amd the NGO community throught a grant to the Rossing Foundation and subgrants to other NGOs as part of their community

based intiatives. Areas to be emphasized include:

- the expansion, improvement and coordination of EE

programs in Namibia particularly at the local level but also at the national and regional levels through a network of local and regional community activities;

- o appropriate and targeted environmental education to rural communities through non-formal education carried out by the EE centers;

- o outreach programs to assist with the devel^O^Pment and dissemination of appropriate EE materials and by workshops for community leaders, teachers and other key people at the community level;

- o a national EE association to coordinate and facilitate EE initiatives; and,

- o the refurbishment and equipping of EE centers, particularly the one at Etosha.

4. Regional Communications and Exchange of Information

In that the components of the LIFE project are similar to those of the country programs in Botswana, Zimbabwe and Zambia, there exists a valuable opportunity for comparison. Each participating SADCC country can benefit from the others' experiences, successes and mistakes by sharing information and lessons learned.

While each national program has its own focus and stage of development, there are numerous opportunities for information exchanges. Each participating country, for example, is either addressing or planning a community scout program. The sharing of information on two on-going Namibian programs implemented by the Integrated Rural Development and Nature Conservation and Save the Rhino Trust, will offer other approaches to regional projects for study and comparison. At the same time, information on the established program in Zambia and Zimbabwe can allow Namibia to assess possible expansion of national programs. Cross-border census and monitoring of wildlife populations would also be facilitated. In addition, specific research on topics common to regional projects can be shared. Topics might include: post resettlement resource management activities; community dynamics; empowerment of women; or decentralization of authority. Regional or bilateral cooperative activities could include the development of environmental educational materials, and environmental interpretation for park visitors.

Both Botswana and Namibia have a common focus on the sustainable utilization of veld products, and reestablishment of indigenous veld

plots. Namibia can benefit from the experience of Botswana's utilization and reestablishment of veld products as project activities. Involuntary resettlement of human populations and the effect on resource activities is common to Zimbabwe, Botswana, and Namibia. The sharing of research on this topic among participating SADCC members will help create a broader knowledge

base and understanding of a shared situation. Namibia's scientific research and results of specific activities such as the de-horning of rhino are significant on a regional basis. Results from the Namibian and Zimbabwean de-horning experiment will assist other SADCC members in deciding whether to utilize this approach.

The office of the SADCC Coordinator for Wildlife in Malawi will serve as the center for regional communications and exchange of information, including documentation and data bases.

V. Environmental Action Recommended

Based upon 22 CFR Part 216.2 (c) (2) (i) a **Categorical Exclusion** is is recommended for all training, education, and technical assistance. Based upon 22 CFR Part 216.2 (c) (2) (ii) a **Categorical Exclusion** is recommended for applied research and field evaluation confined to small areas and carefully monitored. Based upon 22 CFR Part 216.2 (c) (2) (iii) a **Categorical Exclusion** is recommended for all studies, analyses, workshops and meetings.

Based upon 22 CFR 216.3 (a) (2) (iii) a Negative Determination is recommended for any applied research which may be undertaken over a large geographic area with the qualification that a detailed management plan will be presented, including identification of endangered species. If endangered species are involved, based upon 22 CFR 216.5 a Positive Determination will be recommended and an Environmental Assessment will be required in which mitigative actions are demonstrated which will minimize risks to the endangered species.

Based upon 22 CFR 216.3 (a) (7) (ii) a Deferred Negative Determination is recommended for all subgrants. An environmental review for each subgrant will be carried out by the Ministry of Wildlife, Conservation and Tourism (MWCT) in collaboration with the International PVO that will be responsible for implementing the Project, addressing the appropriate issues in the evaluation criteria.

EVALUATION CRITERIA FOR
LIFE PROJECT SUB-GRANTS

1. COMMUNITY-BASED NATURAL RESOURCE MANAGEMENT:

*Community Commitment. Demonstrate community or

individual commitment. Active involvement of local communities and sensitivity to cultures and taboos. Demonstrate that community will not be cut off from access to resources that it depends upon for survival (e.g. trees, medicinal plants, sacred grounds, plants for handicrafts, plants and animals used for food).

*Private Sector Link. Where possible link in private sector (e.g. safari and tourist operators, ranchers, etc.) to traditional people.

*Pollution Control. Address appropriate sewage, water and solid waste technologies in camping areas.

*Tourist Carrying Capacity. Determination of carrying capacity of area for tourists and tourist vehicles or innovative ways of having tourist visitation that is not ecologically damaging (e.g. foot safaris, camel trekking, blinds, hot air ballooning)

*Economic Sustainability including cost/benefit analyses, socially and politically relevant issues. Demonstrate as diverse a portfolio as possible of resource utilization for economic gain to avoid the fragility of tourism alone as an economic resource (e.g. tourism mixed with some consumptive use of resources).

*Small Business Training. Where appropriate training of local communities in small business development as part of the plan to develop rural enterprises.

*Revenue Sharing. Revenue sharing schemes for local communities. This should assure equity of distribution considering needs of individual families, the community and local government.

*Development Through Conservation. Community development evolving from natural resource based revenue generation (sustainable exploitation of natural resources through their management) rather than development as a trade off for leaving the natural resources alone: Linked to sustainability.

2. SUSTAINABLE NATURAL RESOURCES MANAGEMENT:

*MWTC Collaboration. Where appropriate work with MWTC to establish a Wildlife Management Unit. This may incorporate an ecological unit with a number of communities and will imply cooperation by members within a unit to control wildlife and livestock populations so as to not overgraze an area.

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*Establish Management Plan based upon a thorough wildlife and vegetation census with close community involvement including:

-Estimation of game populations, hunting quotas and sustainable offtake in order to maintain trophy quality.

-Estimation of sustainable offtake for game meat and hides.

-Demonstration that appropriate marketing, where necessary has been has been addressed.

-Development of a wildlife monitoring program in collaboration with MWTC.

*Community Based Anti-Poaching Squads. Where appropriate, involvement of local communities in anti-poaching activities. Development of programs to turn the knowledge of captured poachers into constructive forces (e.g. employ them in park management, cropping, as trackers and skinners or as part of anti-poaching squad)

*Private Sector Linkage. Equitable entry by local communities and government into contract with the private sector (e.g. hunting concerns, game cropping businesses) to exploit the wildlife resource.

*Economic Viability. A cost/benefit analysis should be undertaken. The hope here is to develop natural systems so that they are economically more valuable in a managed but natural state than taken completely out of production and converted to agricultural lands, or over-grazed and fenced as rangelands that are not conducive to wildlife.

SUPPLEMENTARY INITIAL ENVIRONMENTAL EXAMINATION (IEE)

Project Location	:	Namibia
Project Title	:	Amendment to natural Resource Management Project (NRM) 690-0251 Namibia Component - Living in a Finite Environment (LIFE)
Funding	:	$
Life of Project	:	(FYcs) 92 - 99
IEE prepared by	:	P.A. Brahambhatt, Environmental Officer USAID/Botswana
Date	:	

Environmental Action Recommended:

Negative Dertemination _____

A negative determination is recommended for the community-based project components. An Environmental Impact Assessment will be conducted prior to community-based activitities related to specific wildlife use and resource management. Examination of environmental and socio-ecological survey must be conducted with the local communities to determine appropriate land use plans.

A negative determination is also recommneded for the construction of an enviromental education facilities at Waterberg Park, and modification of facilities at Etosha National Park (Mtoni) and Desert Ecological Research Centre at Gobabeb. The proposed construction activities will have limited minimal environmental impact normally associated with such construction activities. The allocation of the site for new construction have been based on carefully considered land use planning, impacts on water; the design will consider state-of-out in the field of renewable energy technologies and harmony with the environment.

The A.I.D. engineer will review construction specifications and drawings for all construction related activities under this project.

Categorical Exclusion: A categorical exlusioin is recommended for the technical assistance, training, environmental education and institutional strengthening components of project in accordance with the criteria set forth in 22 CFR, part 216, section 216.2 (c) (i), (iii), 2 (i), (ii) and (iii).

Approved : _____

Date : _____

Disapproved : _____

Date : _____

Bureau Environmental Officer Concurrence.

Approved : _____

Date : _____

Disapproved : _____

Date : _____

Name : _____

Clear: RLA: Tim Riedler _____

SUPPLEMENTARY INITIAL ENVIRONMENTAL EXAMINATION (IEE)

LIFE PROJECT

I. Background

The project follows the A.I.D. established policy objectives for Environmental and Natural Resources Program in the developing countries.

Namibia's Living in Finite Environment (LIFE) Project is a supplementary to the Southern Africa Regional Natural Resource Management (NRM) Project (690-251).

An IEE was carried out for the NRM project, which included country specific programs for Botswana, Zambia, Malawi and Zimbabwe. IEE recommended a positive determination for the project component which will have an effect on the endangered, threatened and/or critical habitat of wildlife; negative determination for community based project component (construction/and categorical exclusion for education, training and technology transfer component.

II. Project Description

Namibia's LIFE project's goal is to enhance GON's capabilities to meet basic human needs through sustainable management of natural resource.

The project purpose is to is to demonstrate the technical and economical viability of community-based natural resource management for increasing household and community income; to improve community-based groups' capabilities to manage natural resources in a sustainable manner, through strengthening local, regional and national institutions engaged in providing services to the communities; and develop additional, sustainable natural resource management strategies that meet basic needs of rural communities and can contribute to policy implementation. The target population will be rural poor and communities residing adjacent to the National Park areas. To accomplish project purpose the LIFE project will focus and implement (i) community-based conservation pilot activities involving the residents in Caprivi and Bushmanland following socio-ecological planning and implementation of legislation; (ii) grants for resource specific initiatives promoting sound management; (iii) strengthening of community organizations responsible for resource management and distribution of benefits; (iv) environmental extension for local decision making; and short-term training for facilitator of community-based management programs, including community liaison officers, natural conservation officers from the Ministry of Wildlife, Conservation and Tourism (MWCT), and policy makers through regional environmental education centers; (v) grant to

activities that provide information necessary for ecologically, technically and socially sound activities, monitor impacts to project and sub-project interventions, consolidate the lessons learned into the national policy and (vi) long-term technical assistance to MWCT, long-term and short-term environmentally related training.

The project will be implemented through US PVO selected competitively. The US PVO will establish a project management and support office called the Technical Resource Unit for support and training (TRUST). The project oversight will be provided by a Project Steering Committee (PSC) composed of participants from Government of Namibia, TRUST, USAID and NGO community. Sub-grants to the community-based organizations (CBO) for a specific activity will require Environmental Impact Assessment.

The project environmental education component specific construction is proposed under this project activity; (a) A new environmental education center at Waterbeg Park (b) Modifications/renovations of existing facilities at Etosha National Park at Mtoni and (c) Desert Ecological education/training Center at Gobabeb.

III. Environmental Concerns

LIFE Project does not use single species approach to national resource management; However, the project activity will broadly enhance bio-diversity conservation by rationalizing land-use practices so that the survival of all plants, animals and habitants are enhanced. The successful implementation of the project activity will have positive and beneficial effect on the environment; the bio-diversity conservation undertaking of any communal-based resource-management activity will be reviewed in the terms of both positive and negative impacts. Any community-based pilot activities for the management and exploitation of natural resources will be required to undertake an environmental impact assessment.

IV. The LIFE project proposes to undertake environmental impact assessment feasibility of community-based activities, in conjunction with socio-ecological survey. TRUST in collaboration with PSC will draft detailed Scope of Work for environmental impact for any assessment community-based activities, to be undertaken by a short-term consultant having a background in wildlife resources with appropriate academic degree.

MEMORANDUM

TO: Barbara Belding
HNRD Officer

DATE: March 17, 1992

FROM: Pushkar Brahmbatt
Engineer, USAID Botswana

SUBJECT: Supplement PP for Regional Natural Resource Management Project (NRM - 690-0251) - Namibia Component: L.I.F.E.' Engineering analysis for construction component and supplement IEE.

I. As outlined in the proposed workplan for PP team, I am attaching draft supplement IEE for the subject activity and two alternative cost estimates for the construction of Environmental Education Center at Waterberg Park and renovation/modifications to the existing building at Etosha Park, Mtoni.

II. Engineering analysis for the construction.

Originally it was proposed to construct:

(1) An Environmental Education Center at Waterberg Park.

(2) Renovation/modifications to the existing buildings atEtosha Park, Mtoni.

(3) Desert ecological center, at Gobabeb. The latest discussion between USAID/Namibia and SARP-AID/Zimbabwe decided that the construction should be targeted at a single location, specifically in the vicinity of the project focus communities.

The PP design team also commented on the size and grandeur of the proposed architectural design of the facilities.

Based on the PP design team's comments and observations, I recommend that the following issues be discussed with the officials of MWCT.

(A) <u>Renovations/modifications of the facilities at Etosha Park, Mtoni</u>

The proposed modifications and renovations include the construction of three (3) staff houses for permanent staff, quarters for visiting trainers(adults), student accommodation, renovation and addition of storage area. The preliminary cost estimates (submitted by GON) for these works are Rand 1.5 million excluding professional fees for architecture and engineering services. 50% of these costs represent costs of support facilities for the permanent staff.

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The costs can be considerably scaled down if the facilities are designed keeping in mind functional, economic and passive solar design aspects.

I propose following:

a) a 3 bedroom house with area 90 - 100 sq.mt. for the Director of the Center.

b) two (2) bedroom houses for support staff, area for one house 70 to 75 sq.mt.

c) Convert the existing Hall area with mosquito screening (upper wall section fixed with BRC mesh) and or windows. This area can be used to accommodate pupils with double decker banking facilities.

d) Labor accommodation should be scaled down with minimum space requirement.

e) Reduce the cost of site works and parking from R50,000 to R30,000; site work can be undertaken by resident labor.

f) Remove air conditioning for staff housing provide ceiling fans.

g) Services to be reduced from R60,000 to R40,000.

The above modifications/revisions will reduce the estimated costs from R1.5 million (US$ 536,00) to R 894,000 (US$ 320,000) (see attachment B-1)

B. <u>Construction of a new Environmental Education Center at Waterberg park.</u>

I have attached two alternative cost estimates for the proposed construction. Alternative I, (attach B-2) includes all the facilities as proposed by GON's architect, but economizing space. Alternative II (attachment B-3) proposes minimum facilities needed without comprising project purpose in the delivery of environmental education. (It should be noted that GON's architect of estimated costs for these facilities are Rand 2.978 million or US$ 1.064 million).

C. <u>Construction of Desert Ecological Center at gobabeb</u>

All proposed construction under project brief "Gobabeb 2000" are beyond this project activity and such as I have not reviewed any construction development. FYI Phase I costs of construction are estimated at 1.2 million Rand,

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Phase II, 2 million Rand and III, 710,000 Rand. Most of the proposed activities is basically improving renovating and enlarging existing facilities; the proposed construction development for this center had been planned since August, 1990 and not specifically developed for the proposed LIFE project. end FYI.

Proposed course of action for PP analysis

A. On the final decision by the design PP team and accord with the GON, I will draft final Engineering analysis on the construction portion of the Project; this will briefly include the description of facilities, purpose of the facilities linkages with the project objectives, design criteria, construction climate in Namibia, standards and specifications, contracting procedures, AID monitoring, implementation schedule, cost estimates and payment procedures.

B. The draft IEE attached herewith will have to be revised based on the construction activities and final strategy/implementation methods through NGO, CBO's etc.

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ANNEX J

ANNOTATED LIST OF NGOs INVOLVED IN NATURAL RESOURCES MANAGEMENT

PROFILE
DESERT ECOLOGICAL RESEARCH UNIT

Type: Private non-governmental educational research institution located in Gobabeb along the Kuiseb River.

Basic Purpose: Scientific investigation of desert ecological systems including plants, animals, insects, geology and weather.

Structure: Independent organization, although physical facilities are provided by the Ministry of Wildlife, Conservation and Tourism.

Accounting: Books maintained by staff and audited by outside auditors.

ADDITIONAL INFORMATION:

DERU plans to expand and diversify its range of environmental, conservation, resource management activities. The present research facility would be expanded to accommodate larger numbers of post graduate scholars, with emphasis on more Namibian scholars, and visiting scientists conducting research. The combined Environmental Education and Namib Visitors' Center to be jointly operated by the local community and DERU. This center would introduce and familiarize day visitors with the ecology of the desert and give them greater understanding of the relationship of man to his environment. A special feature of this center will be the use of technology appropriate for desert conditions. The center would also continue its work with the Ministry of Education and Culture in curriculum development and teacher education.

PROFILE

INTEGRATED RURAL DEVELOPMENT AND NATURE CONSERVATION

Type: Non-Government Organization.

Basic Purpose: To involve local communities in natural resource management and to integrate nature conservation into rural development.

Structure: 10 full-time staff, 50 community game guards (32 in the NW Region and 18 in East Caprivi), all but four of whom are Namibians. Directors: Garth Owen-Smith and Margaret Jacobson.

Current Activities: Three projects in the NW Region: 1. the Community (Auxiliary) Game Guard System, run in conjunction with the various communities and their leaders as well as with MWCT field staff; 2. the Purros Project in conjunction with Skeleton Coast Safaris, which will be expanded into NW Kaokoland; and 3. the Wereldsend Environmental Center, initiated jointly with MWCT and Rossing Uranium Ltd. In the E. Caprivi: a community game guard project and a community development program which includes facilitating a community-run camp site and a dugout canoe trail run by local men for tourists. There is also a pilot project aimed at training Himba and Herero men as professional tourist guides.

Accounting: Swakopmund

ADDITIONAL INFORMATION:

following educational rights stated in the Constitution (MEC, 1990: 2):

1. Every person shall have the right to Education regulated by appropriate legislation sanctioned by Parliament.
2. Primary Education shall be free and compulsory and that State shall provide all the reasonable facilities to render effective their right for every resident within the territory of the Republic of Namibia.
3. No child shall be allowed to leave school until he has completed six years of Primary education or until he has reached the age of sixteen (16) whichever be the sooner.

In the government publication Change With Continuity: Education Reform Directive (Creative Associates, 1992), the government set forth the following *quantitative* objectives for the year 2001: 80% of primary 1 entrants will complete the primary cycle; cycle time will be decreased by 20%; cycle cost will decrease by 15%; and 60% or more of students throughout Namibia will be in Fundamental Quality Level standard schools. At the 1991 Etosha Conference (GRN, 1991), the following sectors were to be given priority: curriculum development, teacher training, leadership and management and administration, support services, finance, community involvement, assessment, medium of instruction, adult and over-age learners, and facilities. Based on these priorities, the government intends to draft a National Education Bill for consideration by the Cabinet and Parliament.

In 1991 the government published Education and Culture in Namibia: The Way Forward to 1996, Broad Policy Directives for Education Reform and Renewal in Namibia. The document outlined educational reform efforts to date directed towards curriculum development, research and testing, resource allocation, staff development, and decentralization. It also noted that (1991: 6) "... the systems we inherited are apparently rotten and corrupt from the bone to the marrow", and stated that efforts must be redoubled to create a climate of transparency and accountability. Progress reported by 1991 included (MEC, 1991: 6):

- establishment of a unified system of educational administration
- establishment or strengthening of six Regional Education Offices
- basic routines of management, budgeting and financial control are evolving
- policy formulation in the areas of education and training
- basic critical learning and teaching needs are being addressed
- EMIS (Educational Management Information System) (is) being developed
- community consultation
- a Comprehensive Junior Secondary Curriculum was designed, implemented & evaluated.

Additional emphasis is being given to community involvement in the educational system, something completely lacking in the past (UNICEF, 1991). Other over-time, less easily measured objectives included the development of a learner-centered approach involving less rote teaching, more student participation, and more group work.

Implications of Gender Issues, Health and Education on Communal Areas: Five conclusions can be drawn from the above analysis, as it affects communal areas:

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- The disadvantaged position of women, while varying across ethnic group, nevertheless presents barriers to their full participation in projects from which economic benefit could be derived. Issues of particular concern are inheritance rights, access to finance for entrepreneurs, and demands on time.

- The health status of those in communal areas is extremely poor. Illness has a direct impact on productivity, while high levels of childhood sickness places particular burdens on the time of mothers.

- The educational status of males and females in communal areas is extremely low. Illiteracy, at 60% -, is a barrier to small-scale enterprise start-up and growth. It also inhibits the empowerment of disadvantaged groups in rural communities.

- Community participation is a cornerstone of government policy across all sectors, including rural development, health and education. This adds support to MWCT community-based natural resource utilization efforts.

- Past mistrust of government officers which affected MWCT also affected the health and education ministries. Recent experience suggests that both MOHSS and MEC have been able to overcome this stigma and make positive contributions at the community level. This also adds support to MWCT community-based initiatives.

Communal Areas

Introduction

In this section we turn to a discussion of each communal area (excluding 'Bushmanland' and 'West Caprivi'). The discussion revoles around three issues of interest to the LIFE project: basic indicators for each location, access to resources (including gender distribution), and replication and spread effect concerns. It should be noted that 'access to resources' refers to access amongst those in the particular communal area, and does not refer to the distribution of resources between areas.[10] Reference to replication and spread effects only includes a general discussion of community-based natural resource utilization and conservation measures, as no project-specific information is available.

Mopani, Marula, Oshikoto, Oshana (Ovamboland)

Basic Indicators: Mopani, Marula, Oshikoto and Oshana Regions are located in northern Namibia, bordered by Kunene Region ('Kaokoland') on the west, Angola on the north, Okavango Region ('Kavango') on the east, and Etosha National Park on the south. The four regions cover an area of 56,000 square kilometres (sq. kms.). Oshana Region is comprised of the floodplain area, termed the Cuvelai floodplain. The Cuvelai River, which originates in Angola, feeds water into the floodplain after heavy rains, filling 'oshanas', or shallow pans. Oshana is the most heavily populated region of the four, while the four regions together are the most heavily populated in Namibia, and comprise approximately 37% of the national population. Population density is 10 per square kilometer in Mopani, Marula and Oshikoto Regions, and up to 100 per square kilometer in peri-urban areas of Oshana Region. Oshana Region is the most highly-urbanized area in the north, with over 300,000

[10] Under *apartheid* and the 'African reserves' system in place in Namibia, resource allocation was largely determined along racial lines. As with the homelands in South Africa, the maldistribution of resources was in part designed to support the migrant system, with deliberate underinvestment in labor-exporting areas of the country.

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people living in and between the peri-urban areas of Oshakati and Ondangwa. This rapid urbanization was in part caused by the war and the centralization of the economy in peri-urban areas (due to the presence of a large military force), but has continued after independence. Nearly 80% of the returnees have settled in the four regions (Tapscott, 1990).

Rainfall ranges from 350mm in the southwest to 550mm in the northeast (ranging between 450mm and 550mm in densely-populated Oshana Region), making the area marginal for arable agriculture yet able to support millet production (mahangu), as well as sorghum and maize: crops are subject to frequent failures due to considerable inter-seasonal variations in rainfall. It is estimated that three-quarters of all households must purchase cereal crops to meet basic consumption needs each year. Farmers in the area have serious problem with pest damage, lack the necessary implements for production, lack sufficient fertilizers, and suffer from livestock damage to crops due to the absence of fencing (NEPRU, 1991a). 3.4% of the total surface area of the four districts is suitable for dryland arable cultivation. Plot sizes usually range between two and five hectares per household (Adams, Werner and Vale, 1990).

The area holds an estimated 350,000 cattle, an equal number of goats, and approximately 120,000 donkeys.

Access to Resources: There is no organized market for arable crops or livestock, no adequate disease control system for livestock, virtually no agricultural processing industries, no organized agronomic research program, and a serious lack of extension services. The 'red line' cordon fence does not allow the passage of livestock raised north of the line (which runs to the south of the area, as well as Okavango Region), cutting northern livestock producers off from export markets.

NEPRU conducted a number of communal areas field studies in the preparation of background papers for the 1991 Land Reform Conference.[11] They asked households questions about ownership of livestock. In Oshana Region, 52% of all households interviewed did not own any cattle, and 35% did not have any goats. In Mopani, Marula, and Oshikoto Regions, 47% did not own any cattle, and 24% did not own any goats. No information was available on the distribution of livestock across types of households. Tapscott (1990) noted that, while 52% of all interviewed households in the four regions reported that they did not own any cattle, the figure was 83% for the peri-urban areas of Oshakati and Ondangwa.

Pensions formed an enormous part of income for most households, and were particularly important for the most marginal households. In recent years there has been an enclosure movement in eastern Mopani and western Oshikoto Regions. The fencing is undertaken by larger farmers, and often encloses an area larger than that allocated by the headman. The fencing has interfered with traditional migration routes of Oshana Region stock owners who take advantage of low density grazing areas in

[11] Unfortunately, it appears that the sampling strategy used in their study introduced the possibility of serious (unmeasured) systematic error. Further, the instrument used for data collection was apparently not administered in a reliable fashion. Findings, therefore, should be interpreted with caution. Other more reliable and valid data are not currently available on communal areas.

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the south during the rains. This has resulted in even higher year-round concentrations of livestock in already overgrazed areas of Oshana Region.

There is little formal sector employment in the four regions, with approximately 6,000 jobs in an area containing over 300,000 adults. Of the returnees, only one in ten managed to find employment in the north (Tapscott, 1990). The economy of the area is largely based on retail outlets which were previously driven by the presence of a large military force and subsequently United Nations forces. With independence and the removal of these forces, a number of business persons have had to cut back their number of employees.

Inadequate employment opportunities in the north and the resultant high out-migration of young males to formal sector employment in the central and western parts of Namibia, as well as to commercial farms, has led to a high percentage of *de facto* and *de jure* female-headed households (accurate estimates are unavailable, but the figure is estimated at over 50%) and to high dependency ratios. Women are the main food producers, and have become increasingly responsible for previously 'male' activities such as land clearing, ploughing, fencing and livestock production (see Hay, Pell and Tanner, 1990). Most households are seriously short of labor, especially during ploughing/planting and harvesting. Remittances from absent household members are reported to be highly irregular, with timing and amounts fluctuating considerably. Little is reportedly used to support on-farm production, with a secular decline in agricultural production over the past few decades.

Upon the dealth of her husband, a woman will have to make further payment to the headman to continue to use the land. If she cannot raise the amount required, or if the headman or the husband's family has a grievance and does not want the widow to obtain the land, she has no right to retain it. In the heavily population Oshana Region, there is evidence that land is reaching commercial market value and is therefore often out of the reach of widows (Tapscott, 1990).

Replication and Spread Effects: The density of the population of the four regions, particularly Oshana, the consequent land pressure, and growing economic differentiation due to the war and 'Administration of Ovambos' development policies, has meant that natural resources in the area have been drastically overexploited. Wildlife has been largely eliminated from the four regions, and its reintroduction into the area would conflict with the enclosure movement as well as the opening of the north to international livestock markets (i.e., the removal of red line restrictions).

The area does, however, hold some potential for local tourism, while the floodplain area offers considerable birding opportunities for international tourists. As with pilot projects in Kunene Region ('Damaraland'), local entrepreneurs could set up small-scale tourist operations in areas of historical significance.[13] Northwestern Mopani Region also contains the Ruacana falls, which could be converted into a local tourist attraction; the falls would not present an opportunity for small-scale

[13] With independence, the museum has taken a greater interest in searching for such sites, and in promoting their significance.

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tourist operations, but could have spin-off benefits for local curio entrepreneurs. The only other options open to the project would be agriculturally-based on-farm production and off-farm small scale enterprises.

Unfortunately, the lack of an investigation into the tourist potential of the area means that a further discussion of replication possibilities is not possible. Similarly, the spread effects of any project are hard to predict. The regions display high levels of economic differentiation, and women's access to the means of production is limited. This might suggest that the distribution of benefits under any intervention would also take on these characteristics, and be highly concentrated, unless measures are taken to prevent this. This would also hold true for agricultural projects.

Okavango ('Kavango')

Basic Indicators: Okavango Region is located in northern Namibia, bordered by Oshikoto and Marula Regions ('Ovamboland') on the west, Angola on the north, Liambezi Region ('Caprivi') on the east, and Waterberg Region ('Bushmanland' and the commercial farming area of 'Grootfontein') on the south. The region covers approximately 46,000 sq. kms. The 1991 census findings indicate that the region has a population of 137,000, approximately 75-85% of which is located within ten kilometers of the Kavango River, which forms the border with Angola. Households are large, averaging 11.6 people (NEPRU, 1991b).

Rainfall in Okavango region is high by Namibian standards, ranging from 550mm in the south west to 600mm in the north-northeast. The population of Okavango Region is almost entirely rural, with the exception of the small regional headquarters of Rundu. Arable agriculture is based on millet production (mahangu), while most households also grow legumes, sorghum and maize in smaller quantities. Soils near the river are considered to be relatively fertile, although they are sandy. Favorable rainfall and good soils means that, in most years, the region is self-sufficient in mahangu. Because of the proximity of most Okavango households to the river, diets are supplemented by fishing.

Livestock figures are estimated at 80,000 cattle, 23,000 goats, and very few donkeys (Adams, Werner and Vale, 1990; they point out that the figures are likely to be unreliable). Because of the absence of surface water throughout much of Okavango Region, livestock are concentrated along the Kavango River.

Unlike Marula, Oshana, Mopani and Oshikoto Regions, Okavango Region still contains small numbers of wildlife. Many households supplement their intake of cereals and fish with hunting and gathering activities.

Access to Resources: Economic stratification in Okavango Region appears not to be as severe as it is in Marula, Oshana, Mopani and Oshikoto Regions. While the war did affect the area, it did so to a lesser extent than in regions further west. Consequently, social dislocation was less severe. Because subsistence production generally met the needs of those living in Okavango Region, labor out-

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migration was less than in other northern regions. In the NEPRU (1991) study, only 9% of the households interviewed reported receiving remittances from members living outside of the Region. These remittances, however, go generally to investment in agriculture rather than into consumption (Hay, Pell and Tanner, 1990). Over time, this has led to improved agricultural intensiveness through the purchase of capital items for production.

While data are scanty, it appears that the distribution of resources across Okavango households is quite good. Hay, Pell and Tanner (1990: 34) note, however, that three types of households are particularly at risk:

> a labour scarce rural family whose male head has consumed rather than invested contract wages and has partially withdrawn his labour from the farm; unemployed individuals or family units separated from the extended family; landless (primarily 'Bushman') families whose main source of cash income is poorly paid labour for Kavango farmers.

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ANNEX D

SOCIAL SOUNDNESS ANALYSIS

BUSHMANLAND

One of the project target areas is Bushmanland in northeastern Namibia. Bushmanland is part of a larger region defined under the Delimitation Commission as Otjozondjupa Region. It is made up of two parts, Eastern Bushmanland, or Nyae Nyae, and Western Bushmanland. The distinction is drawn because of the very different histories and natural environments of the two areas and because they contain two different types of populations.

Bushmanland falls within the Kalahari Desert, an undulating semi-arid tree-shrub savanna ecosystem which has relatively low to moderate rainfall. Bushmanland is a sand-covered region which contains a number of pans where water collects during the wet season and which serve to attract game. The area contains over a hundred and fifty edible wild plant species, two of which make up an important part of the subsistence of some of the residents, mongongo (Ricinondendron rautanenii) and morama (Tylosema esculenta). Gathering of wild plants is done by hand or with the aid of a digging stick, and hunting is done in the Nyae Nyae region with bows and arrows, spears, and clubs.

The Nyae Nyae region covers an area of 6,300 square kilometers and contains a total of approximately two thousand people in 35 widely dispersed communities and an administrative center, Tjum!kui. Western Bushmanland covers some 11,700 square kilometers and contains 2,500 people in 13 communities.

The majority of the people in the Nyae Nyae region are Ju/'hoansi San. Known formerly as Ju/Wa Bushmen, the Ju/'hoansi have been the subject of intense scientific investigations for four decades. They have a history of mobile hunting and gathering in a region covering over 70,000 square kilometers in northeastern Namibia and northwest Botswana. Much of their former foraging territory was taken away as a result of the work of the Odendaal Commission and the establishment of game reserves.

Most of the Ju/'hoansi were attracted into a settlement at Tjum!kui established by the South West African Administration in 1960. Because of problems such as social conflict, poverty, and dependency, many of the Ju/'hoansi elected to return to their former territories (n!ores) in Nyae Nyae beginning in the early 1980s. The Ju/'hoansi groups that elected to go back to their n!ores were assisted in this process by a non-government organization, the Nyae Nyae Development Foundation of Namibia (NNDFN) (see the Administrative and Institutional Analysis).

What began originally as a kind of decentralization movement on the part of the Ju/'hoansi in Nyae Nyae soon became a kind of

rural development program in which groups of people related through kinship and friendship ties began to establish communities based on a mixed economy of foraging, food production, cash from sales of crafts and wage labor, and, in some cases, pension payments from the government. The NNDFN assisted the Ju/'hoansi through provision of funds for water development, livestock purchase, tools and seeds provision, and training. Decision-making was done by the Ju/'hoansi themselves, and community labor was mobilized in the process of implementing development activities. This process was enhanced in the mid-1980s with the establishment of a local people's organization, the Nyae Nyae Farmers Cooperative (see the Institutional and Administrative Analysis).

Development activities in Western Bushmanland are administered by a non-government organization, the Evangelical Lutheran Church in Namibia (ELCIN). Their basic objective is to assist a number of different San groups in resettlement after having been affected by the 15-year long war of liberation. There are three major San groups who have begun the process of resettlement in Western Bushmanland; these are Vasekela, the majority of whom are from Angola, Hai//'om, from northern Namibia, and !Xo!kung, who are from northern Namibia and southern Angola. ELCIN's aim is to facilitate self-sufficiency through promotion of agricultural production, skill-enhancement, and provision of necessary social and physical infrastructure. The development program is coordinated closely with the government of Namibia, mainly through the Ministry of Lands, Resettlement, and Rehabilitation.

SOCIO-CULTURAL CONTEXT AND RESOURCE MANAGEMENT ISSUES

The Ju/'hoansi of Nyae Nyae have had generations of clearly defined genealogical ties to resource areas or territories. Traditionally, leadership has been tied to stewardship of the resources of each n!ore by a core group of siblings. Usually there is one oldest man or woman from this core group known as the n!ore kxao or n!ore owner (master) who has guardianship but not authority over the resources of the n!ore.

N!ores are roughly circular areas of land with undefined borders, each of which provides wild food and animal resources, along with a water source or sources sufficient to sustain a traditional hunting-gathering group of 30-50 people. Leadership in these areas is tied to generally agreed genealogical connections through parents, spouses, and/or special kin "name relationships" to the particular n!ores they inhabit. Over two hundred named n!ores have been identified in the Nyae Nyae region, 35 of which are occupied currently. The balance of the territories are used occasionally for foraging purposes, and permission is requested of those people to whom they belong.

There are two key concepts of land tenure and resource use in the Ju/'hoan n!ore system: (1) n!ore rights and (2) the right of the kxa/ho (the larger land area of Nyae Nyae under which n!ores are subsumed). Some n!oresi (plural) are residential

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while others are used only for hunting and gathering. Each residential n!ore has one or more "eating places" (<u>'m/hosi</u>), which may or may not be shared with contiguous n!ores. Each residential n!ore also has an associated "hunting place" (<u>!age/ho</u>) or direction of usual hunting (sometimes more than one), and these may or may not, be shared with nearby residential n!ores. The sharing of resource areas associated with n!ores is organized along lines of kinship, historical association, and specific local resource availability. The n!ore system and its understandings provide a flexible, yet generally agreed, method for adapting socially and numerically to make good use of unpredictable wild resources.

The kxa/ho (literally, "sand surface") is all of the land traditionally inhabited by the Ju/'hoansi and all of its water, bushfoods, game, grazing, wood, minerals, and other natural resources. In other words, the kxa/ho includes all the individual n!oresi. To express the meaning of kxa/ho, the Ju/'hoansi say "our land and all the things !Xu (God) has placed in it". The right of the kxa/ho is a communal land right acquired by individuals by descent.

The right of the kxa/ho is usually exercised in the following ways:

- the right to drink the waters of the land, particularly in times of drought;
- the right to travel freely through the land, and to drink water, hunt, and gather while on the journey;
- the right to shoot and follow wounded game anywhere in the land; and
- the right to gather key bushfoods anywhere; these include mangetti - mongongo - nuts (<u>Ricinodendron rautanenii</u>) and morama beans (<u>Tylosema esculenta</u>).

Today, anyone who speaks Ju/'hoan and refers to him- or herself as Ju/'hoan is assumed to possess the right of the kxa/ho. According to the Nyae Nyae Farmers Cooperative statutes, the constitutional document recently drawn up by the local grassroots organization, the n!ore right and the right of the kxa/ho "have kept the peace among us and served us well." There is not a single known instance of death as the result of a dispute over territory in Nyae Nyae in over 100 years.

In the past two decades, pressures on the resources in Nyae Nyae have increased. Herero pastoralists have brought their cattle to Nyae Nyae, something which the Ju/'hoansi and government authorities have managed to stop, at least for the time being. Plans were also made in the 1980s to turn Nyae Nyae into a game reserve, something which would have meant that those Ju/'hoansi with cattle herds would have had to leave the area. The Ju/'hoansi have also expressed concern about the number of tourists and safari hunters who enter the area.

The Ju/'hoansi are facing challenges in managing their resources in the independent state of Namibia. One issue which they must contend with is the nature of their sociopolitical

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system. The Ju/'hoansi traditionally did not have hierarchical leadership and authority structures. Leadership in many ways was ad hoc, with an emphasis on facilitative rather than top-down control. Their social system was characterized by concensus-based decision-making and the presence of pervasive power-sharing mechanisms. Sharing of resources was a key means of ensuring equity. Social levelling mechanisms were brought to bear on individuals who were stingy or reluctant to allow others a say. Gender egalitarianism and complementarity of economic roles were also important features of the Ju/'hoansi social system. Lengthy discussions and consultations were the means used for resolving problems.

In confronting the modern need to develop a wider social form than the extended-family living group in which these social characteristics were embedded, Ju/'hoansi face a number of socio-cultural problems. These include an ideological and practical difficulty with the concept of representativeness in government and a need to consult everyone before decisions are made. In their small, face-to-face groupings they had worked always on the principle that if each person's opinion was not physically heard, there would eventually be trouble.

When the Nyae Nyae Farmers Cooperative, a grassroots movement of Ju/'hoansi, began in 1986 its general meetings at first consisted of hundreds of people, and the meetings went on for days and days. By 1992 this problem has been alleviated somewhat, partly through embracing the notion of government by committee. As the cooperative gained experience, the members were able to make decisions more quickly than they had previously. Nevertheless, one of the fears that the Ju/'hoansi have is of the possibility of leaders becoming self-aggrandizing and unwilling to listen to the concerns of the public, something which potentially could become an issue during the course of project implementation.

The forms of headmanship or chieftainship seen in agropastoral populations such as the Ovambo or the Kavango are not seen in the political systems of Ju/'hoansi or other recently hunting-gathering groups. Instead of hereditary headmen with status and wealth exceeding those of others as in stratified societies, San groups have leaders who lead instead by virtue of a combination of the genealogical ties to resource areas and personal qualities which may arise unexpectedly in individuals and are not necessarily passed on to heirs. In the case of the Ju/'hoansi, both these traditional sources of authority are being extended creatively in the development of new leadership patterns.

Changes are also coming about in traditional Ju/'hoansi resource management rules. At the National Conference on Land Tenure and the Land Question held in Namibia in June-July, 1991, the Nyae Nyae Farmers Cooperative suggested extensions of the n!ore concept to meet new circumstances in land tenure. Based on their own experiences, combined with what they have learned from their contacts with scientists, planners, government officials, and non-government organizations, the NNFC came up

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with the following recommendations concerning resource use and tenure on communal lands in Namibia:

1. Farmers should not be allowed to overgraze their own land and then move on to other peoples' land and ruin it.
2. Namibia is now free and open but permission must be asked from local residents by anyone wanting to resettle.
3. It is not good for the land to have too many cattle; better to take good care of a few cattle, offtake the rest, and use the proceeds to establish water points and support the health of the land.
4. The land we have is today reduced and we must protect it as best we can. Those who live on land and know it well are its best protectors.
5. In the case of Nyae Nyae, taking care of land means that some must be set aside for wild animal breeding and some for wild plant collecting.
6. If we protect our land, it will support many more of our people, for example those who were taken to the Gobabis farms as slaves and those who went to South Africa with the SADF.

The Ju/'hoansi's presentations made at the Land Conference were recognized by the then Namibian Minister of Lands, Resettlement, and Rehabilitation in verbal and press statements to the effect that the n!ore system would become the basis for land allocation in Nyae Nyae. Since that time, efforts of the NNFC have concentrated on making sure this recognition is legally formalized and that Ju/'hoansi are able to obtain secure status of land tenure under Namibian law.

A major goal of the Ju/'hoansi has been to establish broadly-based rural communities and a mixed-subsistence economic pattern to counter the recent shrinkage of their land base and natural resources. The changes this effort have meant have been far from easy. Ju/'hoansi have struggled with lions that kill their cattle, elephants that trample their gardens and pull out water pumps, and hostile SWA Administration officials who believed them incapable of development. They have also struggled within themselves, adapting the cultural rules and values that underwrote the old foraging way of life to the very different ones of agriculture and wage employment.

In the contemporary context, the Ju/'hoansi are in a position where they need to plan in a more concerted way for the use of their land and natural resources. They also are becoming increasingly involved in on-going activities of the various government ministries in Bushmanland (e.g. in wildlife management, agriculture, and local government). This process has been a positive one for the Ju/'hoansi in the sense they have learned more about the factors which potentially could influence their future and they are taking steps to deal with them. In order to do this more effectively, they will need some technical assistance and additional resources for carrying out applied

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research and community-based resource utilization programs. They will also need support for additional training (e.g. of community game scouts).

In the case of Western Bushmanland, the situation is somewhat different. The San communities who were brought into the region in the late 1970s and 1980s initially as military recruits and their families have a very different relationship to the land. They do not have traditional rights to terrories there; rather, some of the households were allocated five hectare agricultural plots by the Ministry of Lands, Resettlement and Rehabilitation. Unlike the Ju/'hoansi, they do not have the right to hunt using traditional weapons. Security of tenure is also a question since some of the San from Angola could potentially be returned to their former homes once elections are held and political agreements reached.

The majority of the San in Western Bushmanland are supported either through food-for-work programs or direct food relief. In the first half of 1992, 560 people participated in food-for-work activities. Some of the San plant crops, but the yields in the most recent agricultural season were almost non-existent. A few people earn income through working for ELCIN, government agencies, or private entrepreneurs. Agricultural officers are working with people in extending farming skills and knowledge. Unlike Nyae Nyae, the communities in Western Bushmanland have very few cattle or other stock. ELCIN has provided some oxen and donkeys for communal plowing purposes and for breeding in a government farm. Individual farmers have not received livestock for purposes of building up their own herds in Western Bushmanland.

At the Regional Conference on Development Programs for Africa's San populations held in Winhoek, Namibia in June, 1992, it was agreed by San representatives from both Nyae Nyae and Western Bushmanland that Bushmanland would be treated as a single entity for planning and development purposes. It was also noted that decisions would be made democratically through representational bodies, the Nyae Nyae Farmers Cooperative in the east and a yet-to-be-named people's organization in the west.

Currently, the political structure of Western Bushmanland is such that there are Village Development Committees or community
councils in each of the 13 communities. In July, 1992, an election was held and a council formed which consists of several individuals including a chairperson, a secretary, and two members. This council will liaise with with the village committees and with ELCIN, government ministries, and the Environmental Planning Committee created in early 1992 (for information on the Environmental Planning Committee and its role in resource management and planning in Bushmanland, see the Institutional and Administrative Analysis).

The differences between Nyae Nyae and Western Bushmanland argue for a new, <u>integrated approach</u> to land use planning and

natural resource management. Representatives from the communities and from the non-government organizations working in the two regions have met a number of times to discuss issues of mutual interest, and they are working closely together in the Environmental Planning Committee. At the Environmental Planning Conference held in Klein Dobe in northern Bushmanland on July 20-22, 1992, it was noted that communication between the people of Eastern and and Western Bushmanland was critical if a sound approach to land use and natural resource planning was to be developed.

SOCIOECONOMIC IMPACTS AND PLANNING ISSUES

Many socioeconomic ramifications of this kind of planning must be considered, among them the enfranchisement of women in this process, the effects on people of all age groups within households and within larger entities such as villages, and consideration of the status of those people who have jobs or resources versus those who do not. Efforts will have to be made to ensure that women take part in the deliberations on environmental planning and that they have access to income and employment opportunities. While women may not be chosen s community game guards, they will have a major role to play in any project activities relating to crafts or plant gathering or production. Women and the elderly are also crucial in any discussions of land rights and resource management.

Community-based resource utilization and other LIFE project activities fit in well with the goals and objectives of people in Bushmanland. At the same time, it must be stressed that the wildlife-related developments must be seen as part of an larger overall rural development effort. Land use planning must take into consideration not only natural resources but also the domestic resources which are an important part of people's existence in Bushmanland. Livestock and agriculture will continue to play a role in the economic systems of local communities, and the planning process must include these activities.

A big part of the impetus for the resource planning efforts in Bushmanland has been the realization that resources were under threat of exploitation by outside forces unless the people themselves began to direct resource control. As early as 1988 the then Chairman of the NNFC, Tsamkxao ≠Oma, submitted to the acting Commissioner in Tjum!kui a plan outlining local control of tourism for the area. Involving expert game guides for tourists and trophy hunters, informational pamphlets and signboards regarding environmental rules for campers to observe, and eventually game guards to prevent poaching and promote awareness of valuable species among the local population, this plan profited from information then beginning to filter in from the Purros project of the Himba people and the work of Integrated Rural Development and Nature Conservation. It was also given a boost during an NNFC visit to the Himba area in 1989, when mutual natural resources, land rights, and political representation issues were discussed. One topic addressed at this meeting was

the impact of the money generated by tourism and safari hunting on the population.

The Ju/'hoansi and other San in Bushmanland have expressed their concern that the increased amount of revenues flowing in to the region could potentially bring about social stratification, with a few wealthy individuals having access to resources while a large number of poor people continue to live as they are at present. In order to avoid this situation, they feel that it is necessary that they have control over the activities of tourists, safari companies, and other people entering the region. Under current legislation in Namibia, the people of Bushmanland do not have security of tenure, nor do they receive the benefits from safari hunting and tourism conducted in their area. One of the positive impacts of the land use planning and natural resource management project implementation process could be the establishment of new forms of land tenure and the passage of legislation which will enable people to derive revenues from trophy hunting and tourism.

San peoples regard their handicrafts and their beautiful singing and dancing traditions, as well as their profound environmental knowledge, as cultural goods from whose promotion they should benefit. They know that for too long the profits and benefits from these things have passed out of their hands in the form of exploitative pricing, unremunerative display for photographers, unpaid participation in media, and other misguided romanticizing of their way of life. Today the NNFC is promoting reliable markets for crafts of high standard, new crafts using indigenous materials which are known to have market appeal, outlets for Kalahari bush products which may be marketed in a dignified and remunerative way, and community-based informational tourism emphasizing people-to-people contact and high information exchange. The hope is that these efforts will enable a larger number of people to earn income and be treated with respect.

Environmental and socioeconomic planning will be a large area of both non-government organization and community-based organization concern in Bushmanland over the next several years. It is the hope of the people in Bushmanland that they will be substantially in control of all programs now jointly managed. Curriculum development for the first four years of education in the various San languages and for adult literacy will involve community input into decision-making about enviromental knowledge, now wholly in oral form, to be transformed into written and graphic forms for local and wider educational efforts. Continued meetings among the various participants in the project will facilitate information flow and allow people to raise concerns and point out issues that implementers must be aware of. Thus far, the consultation process concerning project goals has been adequate. The challenge will be to ensure that the consultative and concensus-building process continues.

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ANNEX E

GENDER ANALYSIS

GENDER ANALYSIS FOR LIFE PROJECT

A. Introduction

Traditionally and culturally, women in Namibia, as in other countries in Southern Africa, have experienced discrimination in social, economic and political areas. They have not been primary participants in, nor recipients of, national or local development efforts. The position of the vast majority in women in Namibia is especially disadvantaged. In most cases women are still subordinated to the men of the communities; they rarely participate in household and community decisions and as a consequence do not articulate their problems and needs readily.

The purpose of the gender analysis is to discuss the constraints women have experienced at the household level and in community efforts and to raise the level of awareness of how and why women have not been active participants in the past. Gender analysis should assess the roles and responsibilities of both men and women and analyze the inter-relatedness of these roles. It is the strengthening of specific roles and their inter-relatedness that development projects should strive to improve. Proposed activities under the LIFE Project should not improve the status of one gender (either male or female) at the expense of the other, but activities should be designed to strengthen families through community-based efforts. Project activities should take precautions not to add to the burden of women by increasing time and labor requirements but rather consider women's constraints and needs in designing community-based projects. While recognizing and respecting traditional roles of women, project activities should attempt to encourage women to become partners in the development process.

Women's participation in development is complicated by their multiple roles in domestic tasks, household production and at times, off-farm income generation. Women have the major responsibility in raising children, caring for the sick and maintaining households; they are responsible for securing, processing and preparing food for family members. An increasing number of women are also engaging in employment opportunities that generate income to assist in meeting basic household needs. These factors impede women from participation in activities that do not relate directly to household management.

Women's participation in the use and conservation of natural resources in Namibia is not well documented. However, reports are available which indicate the increasing amount of time it takes women to reach sources of firewood and water. Because of time and energy constraints women use resources (fire-wood, veld products, etc., that are close by until the supply is diminished. As the population increases, forests are cut to make more land available for cultivation. Because women's first priority is to sustain life at the household level, it is with women that improvements for managing scarce natural resources can be made.

The family, as the smallest social entity in a nation, describes and prescribes the values of that nation. Because it is women's responsibility to socialize children in familial and culture values, basic values of conserving natural resources can be passed on to the next generation at the family level.

While some statistical data exists about the role of women in Namibia, the information does not paint an adequate picture of national social-economic indicators needed to formulate a comprehensive report on gender constraints and opportunities. A lack of data is most evident in the proposed target areas of the LIFE project. However, a recent publication by UNICEF (1991) has compiled much of the known social-economic data relating to women and children in Namibia. In addition to information which was gleaned from existing studies, the report was supplemented with findings from a survey completed by UNICEF in 1990 in five selected areas in the country. Information from this report was useful in writing this section.

B. Female Headed Households

Most evidence suggest female-headed households are common in Namibia as in other countries with strong historical patterns of labor migration. It has been reported that 20-57% of "non-white" populations in urban areas of southern and central Namibia are headed by women. Higher levels within this range are found particularly among "squatter" settlements. Another study found that 36% of the households in Katutura and 40-49% of those in Ovambo are headed by women.

Female headed households are particularly vulnerable in development activities. Time and labour constraints limit their participation in additional activities whether at the decision-making level or at the implementation level. Female household heads also experience difficulties in accessing services (especially marketing and agricultural services) because of an expressed or implied policy to have a male speak for the household. Women, even though they are the head of their household and have no man to speak for them, would rather do without needed goods or services than break the traditional taboo of confronting a man in public.

C. Health and Nutrition Indicators

Health and nutrition indicators are important sources of information in the determination of family well being. Women have the major responsibility for both their own health and the health and nutrition of their families. Health problems pose limitations on women's time, labor and energy which restricts their participation in additional productive household and community activities. Outlined below are principle health and nutrition indicators which further illustrates the constraints women face on a day to day basis.

In Namibia, available health/nutrition indicators for the rural areas are appalling and rank among the poorer countries in Southern Africa. Infant mortality rates range from 150/1,000 live births in the Ovambo region to around 10/1,000 in the rest of the country. Child mortality rates (deaths of children below 5 years) are 210/1,000 in rural Ovambo, 100/1,000 in the peri-urban areas and 64/1,000 in Katutura.

Other indicators of child health and nutrition are wasting (low weight for height) and stunting (low height for age). Rates of wasting were found to be 11.7% on the average and as high as 20% in the Herero region. Rates for stunting were found to be 40% on the average and 51-52% in the Kaoko and Caprivi regions. Daily per capita calorie intake is only 82% of the requirements. Statistics revealed that there was a linear inverse association between incidence of child stunting and family income levels and a strong positive relation between higher levels of parental education and better child nutritional status.

Other available health indicators show that the health services have until now failed to control diseases, such as tuberculosis and measles, which are being controlled in other countries in the world. The lack of primary health care services (and in particular family planning clinics) increases the burden on rural women who not only receive little support in maintaining the health of their families, but also have little possibility for control over their own reproductive cycles. Limited access to safe water and domestic cooking fuel also contribute to arduous and time consuming labour burdens on women and girls.

Maternal health is a major concern. According to the Household Health and Nutrition Survey conducted by UNICEF in 1990, the reported maternal mortality rate is 371/100,000 - a relatively high rate for Southern Africa. Mortality rates appeared to reach as high as 552/100,000 in the peri-urban areas of Ovambo. Rates of miscarriage in pregnancy were between 10-15% in most northern areas.

D. Education Indicators

Independent Namibia inherited an educational system which was highly fragmented and where allocation of resources was segregated on the basis of race and ethnicity. Large disparities exist in indicators such as percentages of qualified teachers by region, in pupil:teacher and pupil:classroom ratios. The poor quality of educational services, especially for the rural and the poor, have resulted in high rates of failure, repeaters and dropouts. Estimates of illiteracy vary from 65% to 70% with the majority thought to be female. Studies indicate that educational levels among rural women were lower compared to those in urban or peri-urban areas. It was also found that female headed households in rural areas were more likely never to have attended school than male heads of households.

Curriculum in the schools tend to favor academic subjects and is seemed largely irrelevant to the needs of the economy for skilled personnel. Because of an irrelevant curriculum, many students drop out. The biggest drop, at about 40%, occurs at the very start of primary school. Overall, within four years, more than half of those who started school drop out. Drop out rates are particular high for the populous northern regions. Reasons for dropping out relate to demands placed on children to contribute to domestic and agricultural tasks. Boys are needed to care of livestock, and to seek paid employment; girls, especially in female-headed households are needed to assist with domestic tasks, especially child care. Teenage pregnancies are common, and because of a large percentage of repeaters, many girls are teenagers while still in primary school.

Children who get little or no education become adults who neither value education nor promote educational opportunities for their children. Uneducated women are especially disadvantaged in finding alternatives to improving their life-style through employment or small business income-generating activities. With high levels of illiteracy, the number of drop-outs and children with limited access to basic formal education, the demand for non-formal education to develop practical skills, self-confidence, and literacy abilities is very high.

E. Economic Factors

Although Namibia has a relatively high national per capita income (US$ 1044 in 1988 as reported by United Nations), the figure is deceiving for women in the work force. Only 24% of women were active in the economic sector compared to 83% of the males in 1990. Extreme income differentiation between racial/ethnic groups, further serves to distort standard measurements of national production. Namibian society has inherited inequalities manifested in severely skewed income distribution. The top 5% of the population are estimated to account for 71% of the gross domestic product (GDP) while the poorest 55% control just 3%.

Rural employment for women is almost non-existent. Therefore women have to rely on harvesting veld products or engage in subsistence farming to provide the household with an adequate food supply. Although women do the majority of the agricultural labor, access to services for sustaining, much less developing agricultural production has been restricted for women. Because women have never been officially recognized as significant agricultural producers, services have been limited and inappropriate. There is a lack of credit facilities, agricultural and veterinary extension, marketing and input supplies which are major constraints for women in improving crop and livestock production.

Despite their role in rural production, women also have no ownership rights over basic household resources. Under

"traditional" law, women in many areas have no inherent right to land and may theoretical use access to it in the death of a husband, although use rights are sometimes secure in practice. The same situation frequently applies to the ownership of cattle, often the sole source of wealth among rural households.

A further complication, especially in the northern rural areas, is the repatriation of men who are coming back to Namibia after being away for some years. Many are bring back new families to their old communities thus creating widespread hardships for women both in personal relationships and in use rights of land and other resources.

As more women are finding it necessary to find income producing work, it is important to assess the extent of control which women exercise over the income derived from their productive activities. While an increase in access to resources and the means of production is a pre-condition for the improvement of the situation of women, it is not in itself sufficient to guarantee change in their economic situation. This is determined in a large extent by the decision-making role afforded to women, whether they are heads of households or not, and particularly in the rural areas. Where decision making by women is limited, so too will be the adoption by women of improved services. Therefore the real impact of benefits will be reduced as will the women's role in participatory development.

F. Labor/Migration Factors

As a consequence of the demands for migrant labor, men rather than women leave the rural areas to seek employment in the mining and urban centers. The impact of the migrant labour system has been to intensify the burden of agricultural labor for women as men are less available to undertake their traditional tasks. Women are required, therefore, to assume physically demanding and time-consuming plowing activities or secure income to pay for hire charges. Changes in the gender division of labour have implications for both the health of women and for their ability to adequately undertake domestic tasks, particularly in circumstances where routine household activities - collecting water and firewood, food processing and preparation - are already time-consuming and burdensome.

G. Project Implications

The above information not only presents a broad picture of human and social underdevelopment in a relatively well developed African economy, it also illustrate the interrelatedness of different spheres of the social and political economy in Namibia. It is also explicit that women need to play a vital role in future development plans. If women's constraints and needs are not addressed, they will continue be users of vital resources and services rather than managers of Namibia's scarce resources. Therefore, it is critical for the success of the LIFE project and

for the benefit of the nation's future that women become an equal partner in the development process.

To enhance women's involvement, it is particularly important to examine women's multiple roles in production and their contribution of essential domestic tasks related to the viability of the household as a production unit. Secondly, it is important to identify the key factors which constrain or enhance women's productive and domestic roles. These efforts have a critical influence at the household level, but are also central to the ability of women to interlink household production and participation in the wider economy.

Several models exist that can assist project managers with the task of gender analysis. Included on the following page is one such tool entitled, The Process of Gender Analysis: Ten Steps. Using this or a similar procedure will assist in the design of community-based projects that will ensure the integration of women as participatory members in the activities of the LIFE Project. It is important that women not be relegated only to their traditional roles such as basket weavers, farm laborers, firewood collectors, silent observers, food preparers, etc. Creative ways can be found to integrate women into all managerial aspects of the project at the community level. Women should serve on the community committees; be involved in designing research projects; assist in proposing community natural resource projects; identify and attend appropriate training courses; and assist in the decisions on how community resources can be used to better life in the area. Different methods may need to be used to encourage women's participation such as women-only meetings, women-dominate projects, verbal exchange of information, female leadership during meetings, convenient meeting times and places, etc. The additional effort it may take to develop women's trust and encourage their active participation will be compensated through a sensible natural resource management system that women will support and sustain.

As mentioned above, reliable household information of national coverage does not exist. A national survey that would include information on basic household and economic household conditions, availability of human and natural resources, health services indicators, and social services provided is desperately needed. Such a study would provide detailed information related to gender issues in Namibia. Although this activity would not be strictly in the purview of the LIFE Project, it is necessary that the LIFE Project develop appropriate data bases (dissagregated by gender) in the target project areas. Comparisons of the data with national averages would be important to the project.

The Process of Gender Analysis: Ten Steps

Step 1: Clarify gender roles and their implications for project strategies. The starting point should be to clarify the project strategy. For example, what does the project propose to do to improve agriculture? What activities will be affected by project interventions? What is the existing division of labor in these activities? How do these activities fit in with the total pattern of household productive and domestic activities? What innovations are being proposed? What are their behavioral implications for different household members?

Step 2: Analyze eligibility to receive project inputs. Start by examining what inputs the project intends to provide, and identify which household member should receive them, in light of the existing division of labor. For example, if livestock is women's responsibility an grain is men's, inputs for livestock should go to women and inputs for grain to men. If women are responsible for an activity stated for project intervention, can they qualify to receive inputs in their own name? What are the prerequisites for eligibility, and how many households in the target group can meet those criteria?

Step 3: Define prerequisites for participation in project activities. In the light of the division of labor, which household member should participate in activities such as soil conservation, water user groups, training, and extension? Even if there is no formal discrimination against women, how will the Does the proportion of women in the pool of eligible participants match the division of labor?

Step 4: Examine outreach capabilities of institutions and delivery systems. If analysis of the division of labor shows that an activity stated for project intervention is women's responsibility among smallholders, to what extent to existing institutions and delivery systems have direct contact with female smallholders, or with any women (e.g., the well-to-do).

Step 5: Assess the appropriateness of proposed technical packages. Are the technical packages applicable to all households or only to those with certain types of resources, such as irrigated land, several head of cattle, or a labor surplus? How many households in the target group have the right kind of land? How many, given the sex-typing of tasks and male migration, can meet the additional labor requirements? How many can raise the necessary cash? What implications do gender differences have for the spread of technical innovations to poor households?

Step 6: Examine the distribution of benefits and its effect on incentives. Given the gender division of labor and the control of income from different crops by men and women, what interest would women have in intensifying production? Do the direct returns to women outweigh the additional effort? If the project affects marketing, are women likely to lose an independent source of income?

Step 7: Consider the reliability of feedback mechanisms. If women play a major role in project-related activities such as farming vegetables, how will the project find out whether the proposed technical innovations are acceptable to them? What provisions are made for local women and men's participation in monitoring and reporting systems distinguish male and female participants?

Step 8: Anticipate likely changes in the roles and status of women. How will the project affect women's access to and control over land, labor, capital, and expertise? Will women's workload increase or decrease? What will happen to their independent income, to their control of crops and the income from their sale, and to their voice in household decision-making on expenditures and other issues?

Step 9: Link changes in the roles and status of women with the expected project impact. How will changes in women's access and control of land and productive resources affect food availability? How will changes in women's ability to earn an independent income affect household cash flow? How will it affect their ability to provide for their families? How will women's workload affect such things as child care and family nutrition?

Step 10: Identify needed adaptations. Using the previous steps as a guide, specify what changes are needed in institutions, delivery systems, technical packages, and feedback mechanisms to overcome the barriers to women's access to project inputs and their ability and incentive to participate.

ANNEX F

INSTITUTIONAL ANALYSIS

LIFE

Institutional Analysis

Elize see p. 4

Introduction

The institutional analysis is designed to provide the following:

- historical information on the development of major actors which are expected to be involved in the project
- contextual information discussing the operating environment facing these actors
- an assessment of the capacity of these actors to implement the project
- an area-specific discussion of institutional considerations
- a review of the major project goals as concerns institutional issues

Institutional Setting: Historical Background to NGOs in Namibia

In most countries non-governmental organizations (NGOs) have played a significant role both in mobilizing rural communities and in providing a platform for development activity. In Namibia this practice has been constrained by the fact that relatively few community-based organisations currently exist and NGO activity has thus far been limited. However, Within the major urban centers, and within Windhoek in particular, community-based NGOs are relatively well established, but there are few such organizations in the populous rural areas of the north.

A number of factors were responsible for retarding the development of community-based activities and for constraining the growth of NGOs in the northern regions. The South African occupation forces, in particular, actively discouraged the establishment of independent community-based NGOs (both foreign and local) in the belief that they could be mobilized towards resistance by forces sympathetic to SWAPO. In their attempts to implement a programme to win the 'hearts and minds' of the local population, the SADF attempted to establish its own community-based structures. These organizations, which were frequently connected to traditional authority structures and included a number of independent churches, derived little popular support and their leaders were generally viewed as collaborators.

The influence of traditional authority structures (even those which did not collaborate with the colonial administration) is likely to have mitigated against the establishment of community-based NGOs. For many chiefs and headmen, autonomous and democratically elected community organizations posed a threat to their power and influence over local communities. Rural churches, despite the importance of their role in mobilizing rural communities, were not known for their democratic or participatory base. Finally, the dictates of the war of independence implied that SWAPO, the dominant political force in most of the north, was for much of the past two decades, both military and hierarchical in orientation.

The technical and wildlife oriented NGOs did not face these problems to the same extent, in part due to the legitimacy of these organizations in the eyes of preservation conscious South African authorities, and also due to the selection of an 'agenda' (wildlife and preservation) that was viewed as non-threatening by the authorities. Even the community mobilization activities of the Save the Rhino Trust, while initially viewed with some suspicion, fell within the range of legitimate activities

as far as the authorities were concerned.[1]

While this split into community development versus conservation NGO "types" was important during the colonial period, and while this split also tended to operate across color lines (with the former generally organized and led by black Namibians and the latter by white Namibians), the split is rapidly becoming less important. One reason is that, with the success of the Save the Rhino Trust, the lines between community development and conservation have become increasingly blurred. The outreach approach of the Desert Ecological Research Unit is another example of the blurring of what previously were sharp divisions. Further, the unstated but clear policy approach of the incoming SWAPO Government, whereby people are encouraged to actively participate in their own development, helped close the gap.

In terms of how the LIFE project might differentially impact these organizations, it is evident that the community development oriented NGOs have better access to rural communities nationwide. For example, the Namibia Development Trust is currently working in various locations throughout Namibia (in the west, south and north). While conservation oriented NGOs are improving their community outreach capabilities, this outreach often tends to concentrate in specific locations (e.g., DERU with the Topnaar community in the Kuiseb River valley, the Namibia Animal Rehabilitation, Research and Education Centre in Windhoek), and tends to rely more on people coming to the NGO for information and advice. It is evident that the LIFE project will require conservation NGOs to significantly increase their community outreach activities, and require them to assume responsibilities in geographical locations they are not currently familiar with. Fortunately, many of the individuals currently involved in MWCT community mobilization activities are from these conservation NGOs, providing a solid base for continued interactions.

Institutional Setting: Background to Social Relations and Community Mobilization

The national policy of *apartheid* and the war had fairly dramatic impacts on social differentiation. The social soundness analysis pointed out that race was the single best determinant of income, with white per capita income an average of forty-five times that of blacks in general, and 145 times that of rural blacks in the north. The war itself led to increased social differentiation in the north because of high SWATF salaries and the creation of artificial demand due to the presence of SADF soldiers.

Not only was participatory action constrained by the lack of community-based organizations and the war, but existing community structures were characteristically marked by considerable gender inequity. As a consequence of decades of migratory labour, women in the rural north predominated both in numbers and in terms of their contribution to economic production and social reproduction. Despite their growing responsibilities, the dominant social and political forces in the northern regions tended to be patriarchal in nature, and issues of gender were either subverted to the interests of males, or were subordinated to the broader needs of the struggle for independence.

[1] ...etoria and a positive attitude towards rhino preservation in the game parks of South Africa, while rhino reservation also had a solid international foundation. Further, the region of Damaraland, where the project was ...ed, is not in the operational zone during the war for independence.

National Institutional Setting: Background to the Transformation of Government Structures

The mobilization of rural communities has been further constrained by the fact that the Government itself has experienced difficulties in its attempts to transform the structures of the former colonial administration into those of an independent state. In its efforts to forge a more ethnically integrated society the Government has disbanded the second tier ethnic administrations that existed in the 'ethnic homelands'. In the process, the white officials who ran these administrations have either been transferred or, in most instances, have resigned from the service. The local officials who remain, through no fault of their own, have tended to be junior staff with little or no training or administrative acumen. At the same time, the new officials appointed (many of whom are repatriated exiles) frequently have no experience and little knowledge of the areas to which they have been sent. As a consequence, there is administrative confusion in most of the regional offices at a time when popular demands for Government action are extremely high. There is now a lead time before qualified repatriated exiles and others sympathetic to the new order, are able to orientate themselves to the existing administrative environment and adapt their diverse training to conform to the new needs of the public sector.

Non-Governmental Organisations

In view of these constraints, a case can be made that there is a considerable need for the strengthening of community-based activity through the work of NGOs. The involvement of NGOs is viewed by Government and activists alike as necessary both to support the Government in the promotion of development in the regions (in the mobilization of communities and, in certain instances, in the provision of services) and to empower local communities and strengthen popular participation in decision-making processes at both local and national levels.

NGOs can be divided into international organizations (such as World University Service, World Teach, Oxfam, etc.) indigenous national organizations (Namibia Development Trust, Council of Churches of Namibia, etc.), and local organizations (i.e., community-based organizations). While the objectives and modes of operation of these different categories are likely to differ, they are all generally oriented towards community mobilization.

is this one intern'l

A recent review of NGOs in Namibia listed 123 international, national or local organizations resident in Namibia. These ranged from issue-specific NGOs (e.g., Namibian Children's Care Kindergarten, Namibian Association of the Deaf), to 'trade' associations (e.g., Namibian National Chamber of Commerce and Industry, Namibian Eagle Traditional Healers Association), to development organizations (e.g., National Job Creation Service, Namibian Development Trust).

During the course of the preparation of the LIFE Project Proposal NGOs of direct relevance to the project were identified; it is understood that the list may expand or contract during project implementation. The criteria established by the LIFE project team was that the NGOs met one or both of the following: 1) the NGO worked directly with communities to effect community development; 2) the NGO worked in the area of natural resources. The following nine NGOs were identified as potentially relevant for LIFE:

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- Nyae Nyae Development Foundation
- Namibia Nature Foundation
- Desert Ecological Research Unit
- Namibia Animal Rehabilitation, Research and Education Centre
- Save the Rhino Trust
- Namibia Development Trust
- Namibia Sport and Recreation Club
- Rossing Foundation
- Newveld Ventures Investment and Development Company

Elize

Shouldn't IRDNC be on here? Eastern

The Nyae Nyae Development Foundation (NNDF) works in Nyae Nyae (Bushmanland), with the principal purpose to support the Nyae Nyae Farmers Cooperative (see discussion in the Social Soundness Analysis). As such, it represents an excellent example of a positive working relationship between an NGO and a community-based organization.

The Namibia Nature Foundation (NNF), while relatively new, has become instrumental in securing outside funds for distribution to various natural resource projects. Government uses NNF as a clearinghouse for NGO proposals in the area of wildlife.

The Desert Ecological Research Unit (DERU) is an established institution which in the past has focussed on facilitating research. It intends to improve its currently limited outreach program in the near future.

The Namibia Animal Rehabilitation, Research and Education Centre (NARREC) concentrates its attention on the rehabilitation of injured animals, as well as environmental research and the education of young Namibians about environmental issues. The organisation appears not to have any outreach capabilities at this point, beyond those visiting the Centre and the immediate community.

The Save the Rhino Trust (STRT) has combined the protection of endangered species with community development and income generation. Working in the Erongo and Kunene Regions (formerly Damaraland and Kaokoland), the Trust has been quite successful in linking conservation initiatives with community benefits.

The Namibia Development Trust (NDT) is an organization concentrating its attention on the empowerment of local communities. While it does not work directly in the area of natural resources, it is perhaps the best organized NGO concentrating on community development.

The Namibia Sport and Recreation Club (NSRC) targets young Namibians with conservation and environmental awareness campaigns. Students are involved, for example, in community clean-up campaigns.

The Rossing Foundation focuses on job creation and income generation through skills training and community initiatives. The Foundation is well-established and has thirteen education centers in various parts of Namibia.

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Newveld Ventures Investment and Development Company is a not-for-profit agency involved in the promotion of community development through the establishment of marketing channels. Newveld is perhaps the only NGO concerned primarily with marketing, and therefore offers the LIFE project an excellent opportunity to exploit the building of marketing channels for wildlife and other resource products.

There are two umbrella organizations for NGOs in Namibia: the Namibian Association of NGOs (NANGOS) and the Namibia NGO Forum (NANGOF). The presence of two umbrella organizations reflects the divisive politics of the colonial period. While there are some ideological differences (with NANGOS reflecting a more conservative membership), both umbrella organizations reflect community development and conservation objectives fully in keeping with the LIFE project.

Further, as in the case of the two Namibian umbrella women's organizations, pressing unity under circumstances of fundamentally divergent approaches is counterproductive, and may undermine the effectiveness of each grouping; the existence of two organizations, therefore, should not been seen as an overwhelming problem for LIFE.

NGO Legal Status

Because Namibia is only two years old, Government policies in a number of areas remain unclear. As of April 1992, no Transitional Development Plan is in place, and the existing draft plan is quite vague; the revised draft is expected by mid-1992 (June or July).

The absence of such a plan and the lack of clear policy statements in most sectors restricts our ability to make definitive statements on how Government views NGOs. However, based on public statements and Government interactions with NGOs, it appears that Government believes that NGOs play a very central role in the development of the country. Government has displayed a willingness to support NGO activities where possible, and believes that NGOs can assist in community mobilisation and service delivery particularly in circumstances where Government is deficient on the ground.

(1)

A background document prepared for USAID on legal issues and NGOs unfortunately does not shed much light on important legal issues. The report suggests that NGOs in Namibia can meet some requirements put forth regarding not-for-profit organizations (termed Section 21 Companies), but cannot usually meet others (e.g., limitations on costs other than direct activity costs). One can infer from the report that, with regard to most *technical* legal concerns, NGOs in Namibia face no legal problems because they are properly registered, have access to funding, have the necessary management structures, carry out activities consistent with the objects of the NGO, have audited accounts, and that accounting systems are in place. It appears that problems arise with less technical issues (e.g., that administrative costs should comprise less than 25% of the total operating budget) because of the small size of NGOs in Namibia and the small size of the nation's population.

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Again, unfortunately, the report does not tell us what implications this has for functioning NGOs. Many, whether NGOs spend more than 25% of their operating budget on administration or not, they continue to function.

Based on the limited evidence available, and given Government's expressed interests in working with NGOs, it appears that challenges to the legal status of the NGOs are not, at present, serious concerns. The strength of these NGOs, regardless of clarity regarding their legal status, is underlined by the fact that many of them operated in a very hostile environment during South African occupation. What is needed is clarification from Government regarding the legal status of NGOs sufficient to meet USAID requirements, rather than a concern about the effects of currently vague legal issues on the operations of NGOs.

Legal problems are of greater importance when considering community-based organizations. Unfortunately, definitions of community-based organizations cover registered entities as well as social/economic groupings with no legal status. Under these circumstances, it remains unclear how non-registered entities could utilize public resources for private gain (e.g., hunting). The Project Paper Design concerns, therefore remain valid.[1]

MWCT has, however, indicated that enabling legislation is currently being prepared to clarify the situation of community-based organizations. The draft legislation is expected to be prepared by the end of April, 1992, and be heard by Parliament in early 1993.

Ministry of Wildlife, Conservation and Tourism

An organizational chart for MWCT is included in Annex A (NOTE: secure organagram from USAID). The Ministry has undergone considerable changes since independence, principally designed to shift the character of the Ministry away from strict preservation policies to conservation and utilization.

The historical relationship between MWCT and people in communal areas has been hostile. MWCT perceived itself as a law enforcement agency designed to protect natural resources from exploitation by people in communal areas, principally near national parks. Attention was focussed on the creation of a national park system where wildlife and other resources were preserved for 'utilization' principally by foreign tourists. Attention was also focussed on supporting game production on white farms for harvesting and professional hunting activities.

[1] On page 35, the Project Paper Design documents notes that "There are no legally-sanctioned structures or methods by which wildlife-generated benefits accrue at the community level. A central premise of the project is that the redistribution of such benefits will contribute to a sense of acceptance and stewardship for wildlife among populations which are often adverse[illegible] affected by their presence, or which have been denied legal access to these wild resources." They continue: "Clear tenurial rights of communities to wildlife resources on communal lands are not established, which would appear to be an important pre-condition for asserting community-based management [illegible] resources.

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The fundamental shifts in approach by the MWCT at a policy level has led to splits in the Ministry, as it has in most other ministries (e.g., Ministry of Education and Culture, Ministry of Agriculture, Water and Rural Development). As the designers of the new approach, higher officials in the Ministry display a commitment to community-based conservation initiatives and utilization of natural resources. Ministry officials have responded in three ways. 1) Examples of the success of such initiatives in the past (e.g., Save the Rhino Trust), coupled with exposure to such techniques by a limited number of individuals who had overseas ties beyond South Africa, resulted in a secular trend in the pre-independence MWCT towards supporting such initiatives. While the number of officials at MWCT who follow this approach is unknown, it is believed that the movement is quite strong and is gaining support over time. 2) A second group continues to maintain that the principal purpose of the Ministry is to preserve wildlife. This is quite understandable, as the Ministry operated with a very clear vision prior to independence (a vision which was also built on the non-consultative character of the colonial society) that communal residents were unable to effectively manage wildlife resources, and that wildlife was a resource to be utilized for the benefit of the state treasury and foreign tourists. This does not necessarily prevent the implementation of community-based conservation and utilization initiatives in communal areas, as evidenced by activities to date in the Caprivi and ~~Nyae Nyae~~ Bushman land. Those resisting the idea of community-based initiatives may focus attention on continued areas of preservation (e.g., northern Skeleton Coast). It does, however, undermine the degree to which all departments in the Ministry are behind such initiatives. It also suggests that internal budgetary allocations will be the subject of fairly intense disputes. 3) A third, 'pragmatic' group exists which separates its own philosophy on natural resources from the need to function in the current MWCT policy environment. In practice, this means that they support current initiatives, and will work towards the attainment of community-based conservation and utilization goals. They do not, however, represent driving forces behind such initiatives.

The MWCT is also the first Ministry to have formulated a draft personnel/affirmative action hiring + training plan to bring the min. into line with current Namib realities. Get name + status of doc. from Chris Brown

Other Government Institutions

[INFORMATION FROM CHRIS TAPSCOTT ON REGIONAL AUTHORITIES]

The LIFE project is reliant not only on the effective functioning of MWCT and the NGO community, but also on district and regional authorities, as well as traditional authorities. The social soundness analysis covered issues related to traditional authorities, and underlined that authority structures in most areas of the country, including Mukwe, are in a considerable state of flux[1]. This will require a careful approach which is cognizant of the political structure of communities, and the intensity of political and resource allocation conflicts.

Administrative boundaries for districts and regions were established in February 1992; elections are expected to be held in November 1992. The Ministry of Local Government and Housing is currently identifying more precisely what the structures for the regions and districts will be. A major issue

[1] It appears, however, that traditional structures in Nyae Nyae are apparently being reestablished and legitimised quite rapidly. Recent complaints over a Hambukushu headman claiming authority over all residents of Mukwe, reported on the NBC on 13 April, 1992, underline the problems in Mukwe.

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which has still not been decided is the degree to which these district and regional authorities will secure authority over decision-making. Decentralization presents two principal options. One is the devolution of authority, whereby regional authorities would have considerable control over the allocation of resources, based in large part on recommendations from the districts. The second is deconcentration, where line ministries deconcentrate power to regional officers, but where overall control is centralized in the Ministry of Local Government and Housing.

In Botswana, the five-year-old decentralization program is characterized more by deconcentration than devolution. Coupled with extreme financial dependence on central Government (with councils required to submit annual requests for funds), the decentralization program in Botswana has resulted in the strengthening of the Ministry of Local Government, Lands and Housing, and not in general the councils.

In Namibia, legislation concerning the establishment of regions and districts suggests that the new structures will likely represent a substantial decentralization of policy making to the regional level. Each region will be governed by a Regional Council headed by a chief executive. The degree to which powers will be devolved to the Regional Council versus deconcentrated to regional representatives of central government ministries remains unclear, but will be important for the LIFE project. Devolution should facilitate the type of area-based approach envisaged for LIFE, while deconcentration will support principally a sectoral strategy. An issue not yet tackled is an expected heavy financial dependence on central Government, similar to Botswana. While the Botswana case whereby councils must apply for annual subventions is extreme and therefore not likely in Namibia, no clear policy currently exists on decentralization in Namibia.

MWCT and NGOs

MWCT clearly has a good working relationship with the 'technical and wildlife-oriented' NGOs. MWCT, for example, is supportive of efforts by the Namibia Nature Foundation to act as a clearinghouse for external funding for conservation programs in Namibia.

MWCT experience with the community development NGOs, however, appears to be extremely limited. While the emergent philosophy of the MWCT suggests that a positive relationship could develop over time (while still considering the fluid internal situation of MWCT), the organizations have little direct working experience together. However, MWCT/IRDNC relationship should be discussed here

In this respect, the LIFE project would require participants to develop effective working relationships, and would place greater reliance on the ability of community development-oriented personnel at MWCT to build these new structures.

(INFORMATION FROM CHRIS THOSCOTT ON MWCT-NGOs)

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Coordination

The colonial period was marked by the extensive fragmentation of Government authorities structures, and an almost complete lack of coordination across institutions within and between ethnic administrations. Eleven racially and ethnically based administrations existed, termed 'second tier' authorities, with consequent poor service delivery, duplication of services and wasting of resources, and serious diseconomies of scale. The system effectively reinforced already enormous gaps in expenditures and benefit distribution across racial and ethnic groups.

The second tier system was dismantled at independence, with the functions of these administrations subsumed under central Government ministries. The dramatic changes in administration since independence have, not unexpectedly, led to lack of clarity regarding the responsibilities of the various ministries and duplication of effort, with subsequent conflict over who has what authority.

These conflicts have been heightened by the absence of a transitional development plan and an agency charged with coordinating Government policy and programs. The National Planning Commission, created to coordinate activities across sectors and ministries, is inexperienced, short-staffed and only two years old. As a result, it has experienced considerable difficulties in coordinating interministerial and intersectoral activities.

The expected publication of a transitional development plan in mid-1992, despite a delay of almost one year, nevertheless represents an important step forward in the rational planning of Government resources. While *ad hoc* interventions by Government and donors will continue to occur, it will no longer represent the *modis operandi* of Government's operations.

Inter-Ministerial Coordination

Inter-ministerial coordination remains an important stated goal for Government. At the policy level, there are a number of inter-ministerial committees involving Permanent Secretary level or higher. [INFORMATION FROM CHRIS TAPSCOTT ON INTERMINISTERIAL AUTHORITIES]

Inter-ministerial coordination is hampered by four factors:

- the continued need for ministries to consolidate power internally;
- the need for ministries to establish their relative power;
- lack of clearly defined lines of responsibility and authority across ministries;
- shortages of human resources in general and skilled human resources in particular.

Referring specifically to the MWCT - MCE relationship, this is an issue of principal concern for the LIFE project. Given the difficulties the project is likely to have spending the expected sums of money on community-based initiatives alone, and given the spread effects of educational interventions, it is assumed that LIFE will place considerable emphasis on the environmental education component. Paxton's paper for the LIFE PP suggests that there may be some duplication

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a effort between MEC and MWCT concerning the development of an environmental education curriculum. However, she goes on to suggest that the current MEC environmental education coordinator is working on curricula in a variety of fields, and would therefore not devote sufficient time to the task. Paxton also argues for the establishment of an environmental educationalist post for MWCT. To avoid duplication, the MWCT environmental educationalist would focus on working directly with communities in the community-based MWCT-supported projects, while the MEC environmental educationalist would focus on the development of materials for the formal and non-formal education systems.

Establishment of an env. educ. ~~coordinator~~ ~~made~~ association with the LIFE assistance could help to produce an env ed. master plan for Namibia & then facilitate delineation & sharing between MEC/MWCT

Unfortunately, neither of these posts currently exist, so there is no way of assessing the level of cooperation or duplication. Past experience would suggest that there is minimal interaction between MWCT and MEC, and would therefore warrant clear indications from the two ministries on how they would propose to coordinate environmental education efforts under LIFE.

[CHRIS: ANYTHING TO ADD?]

Past MWCT attempts to support inter-ministerial involvement in natural resource activities have met with some success. For the Mukwe and Nyae Nyae studies, for instance, a number of other ministries were involved in study planning and implementation, including the Ministry of Agriculture, Water and Rural Development (MAWARD). Unfortunately, while cooperation during the initial stages of the study was high, the lack of immediate results undermined the continued interest of other ministries over time. In Nyae Nyae, cooperation has become more formalized, with MAWARD sitting on a committee that will oversee project implementation activities proposed by communities and facilitated by MWCT.

MWCT Clout

Prior to independence MWCT clout related only to its role as a wildlife protection agency, and how it could contribute to growth in the tourism sector. After independence, the emergent shift to conservation and utilization meant that MWCT was gaining responsibility over issues of rural development and the environment, which required a stronger power base. The Cabinet made MWCT responsible for initiating or coordinating all activities related to the environment. These increased responsibilities have not, as yet, coincided with increased clout in relation to other ministries.

It appears that MWCT efforts to improve its position continue to relate generally to the importance of tourism as an income generator. Support for community-based natural resource initiatives does not have the same potential feedback unless certain conditions are met:

- the approach is viewed by Government, in particular the Directorate of Rural Development in MAWARD, as a model for community-based development projects (despite some of the non-replicable characteristics of the proposed projects);
- district and regional Governments for project areas must be convinced that the MWCT approach is relevant for their areas, and applicable to other development projects (again, despite varied conditions);
- environmental issues attain more prominence than they have in the past in Namibia

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there is strong evidence that this is the case). Mention Green Plan here?

Discussions with the Directorate of Rural Development in MAWARD suggest that the approach advocated by MWCT in Mukwe and Nyae Nyae closely parallel strategies being developed in MAWARD. While the current restructuring of district and regional governments precludes an evaluation of current attitudes towards the approach being advocated by MWCT, it could be expected that their attitude would be favorable for two reasons: 1) it parallells the Government's stated approach to development; and 2) the area-based nature of the projects would tend to strengthen the role of decentralized institutions in the process.

Conclusions and Recommendations

The concluding section revolves around two questions:

1) Can implementing authorities meet the obligations they are likely to face under the LIFE project?

2) Are there institutional barriers that inhibit achievement of goals, and institutional strengths to support goal attainment?

Two principal factors inhibit the ability of implementing authorities to undertake their obligations under LIFE: lack of capacity and the lack of a clear legal framework through which project benefits can be distributed to participating communities.

Lack of capacity was one of the concerns raised in the Project Paper Design, and the suggestion that a US-based PVO be contracted to administer the program is intended to overcome the problem in the short-term through direct assistance, and in the long-term through training. Given the findings of the Institutional Analysis, it is **recommended** that USAID proceed along the lines suggested and secure the services of a US PVO, or a US private consulting firm.

Lack of a clear legal framework for communities to benefit in cash and in kind from the exploitation of natural resources remains a problem. MWCT notes that enabling legislation is currently being prepared, and will be heard by Parliament in early 1993. It is **recommended** that the USAID legal advisor determine the extent to which the LIFE project can proceed in the absence of specific legislation.

Seven institutional barriers exist to inhibit the achievement of LIFE goals. First, the NGOs interviewed for the LIFE PP are not involved in Mukwe, with the exception of offering technical input into recent MWCT mobilization activities. The community development NGOs, in particular NDT, have however displayed an ability to work in varied geographical locations throughout Namibia. Further, Newveld is working in Okavango Region (formerly Kavango) and there is no institutional barrier to it expanding its marketing support services to Mukwe. This does not appear to be a problem for Nyae Nyae, due to the existence of the Nyae Nyae Development Foundation and the Nyae Nyae Farmers Cooperative. It is **recommended** that LIFE pay particular attention to the issue of the institutional strength of NGOs for Mukwe District, and that NGOs clearly spell-out how they

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would expect to overcome the problem of lack of area experience. It is also recommended that LIFE proceed with caution in Mukwe. The NRMP regional goal of demonstrating "through practical examples, the economic, social, technical and ecological feasibility and replicability of community-based wildlife utilizations programs for marginal lands", is therefore more feasible in the short-run institutionally in Nyae Nyae than in Mukwe.

Second, uncertain leadership structures in Mukwe undermine project implementation, and could also threaten the distribution of benefits. It is **recommended** that USAID further explore this issue, and conduct an on-the-ground assessment of the likely effects of these factors on LIFE.

Third, the absence of clear policy statements and a national plan affects a number of LIFE issues: the legal status of NGOs and especially CBOs; the structure, competency and decision-making power of regional authorities; and which ministry is exclusively or primarily responsible for environmental education. Because the Transitional Development Plan is not due to be released until the middle of 1992 (and the draft plan is extremely vague), it is **recommended** that the contractor who administers LIFE prepare a document for USAID discussing in detail these issues. Alternatively, it is **recommended** that a short-term contract be tendered for a review of policy and planning issues as they affect LIFE after the release of the Plan.

Fourth, while there are divisions within MWCT, these do not appear to be LIFE-threatening, even if Mr. Jones and Mr. Brown were to drop from the picture. It is evident, however, that USAID needs to ensure that community-based conservation and utilization initiatives maintain some momentum. It is **recommended** that USAID secure from the Permanent Secretary at MWCT a letter explaining the ministry's stand on community-based conservation and utilization of natural resources. It is further **recommended** that the issue of 'institutionalization' of the attitude towards rural communities in MWCT be the subject of monitoring by the contractor.

Fifth, the regional NRMP Regional Overview document notes with regard to institutional and community development that: "To varying degrees, the programs in each country strive to strengthen local level institutions, through training and technical assistance, in terms of their capability and capacity to manage the resource base and to establish policies and procedures for the distribution of revenues." Given the weakness of the organizations involved in LIFE (e.g., the NGOs and MWCT) and the newness of the approach in Namibia, it is **recommended** that the bidders set out an institutional capacity building plan of action in their proposals. This will also support the project goal of strengthening "the capacity of participating governmental and nongovernmental organizations to protect, maintain and utilize wildlife and other nature resources".

Sixth, the institutional aspects of the regional NRMP goal of improving "the social and economic well-being of the target area's communal lands residents through conservation and utilization programs" cannot be fully assessed until specific projects are identified. It nevertheless appears that participating NGOs are interested in working on community-based initiatives and, subject to provisos mentioned above about lack of experience in Mukwe, should be able to meet the institutional

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requirements. ... NGOs could support project elements such as 'community based resource utilization' community development NGOs such as NDT, and 'planning and applied research' (technical and wildlife oriented NGOs such as DERU ... encouraging to note that, based on past activities, NDT in particular is cognizant of the complexity of rural communities, and through its activities undertakes to empower those who rarely have a voice in such communities. There is no NGO, however, that can support the current demand for applied sociological research (although there is capacity for applied ecological research). It is **recommended** that issue be explored further once specific interventions are specified.

As the area is a park, MWCT already has considerable experience in the area. MWCT can support the project objective of 'communication with community members to increase information and skills for decision-making and empowerment'.

Seventh, concerning 'conservation education and training', the main thrust is environmental education through MEC and also MWCT. While lines of responsibility are yet to be defined, it appears that MWCT will be taking the lead in the development of materials for environmental education. This has the potential of undermining the development and testing of national curriculum materials, if MEC decides that environmental education is an issue for MWCT, and only of minor importance to MEC. It is important for MEC to be involved in the process from the beginning. It is therefore **recommended** that USAID request MEC to make a clear statement on how it views its role in environmental education, and that MEC and MWCT indicate how they intend to divide their responsibilities.

— Can something be mentioned about development of national tourism strategy (which MIN, Time line, etc) + how LIFE/MWCT possible ecotourism activities could fit in? Not much — just + a line or 2 + needs to be reflected in soc. soundness analysis.

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ANNEX F

INSTITUTIONAL AND ADMINISTRATIVE ANALYSIS

The LIFE Project in Bushmanland will be implemented by a non-government organization, the Nyae Nyae Development Foundation of Namibia along with a community-based organization, the Nyae Nyae Farmers Cooperative. Program activities will be overseen by the Environmental Planning Committee of Bushmanland. An institutional and administrative analysis of these organizations is presented below.

THE NYAE NYAE DEVELOPMENT FOUNDATION OF NAMIBIA

The Nyae Nyae Development Foundation (NNDFN) is a non-profit organization based in Windhoek, Namibia, and dedicated to supporting the self-development of the Ju/'hoan and other San (Bushman) peoples in northeastern Namibia. Founded in 1981, the NNDFN is a multi-purpose non-government organization that is involved in a variety of activities, ranging from agriculture to health and from education to income generation. The NNDFN began originally as a small-scale "cattle fund" designed to provide Ju/'hoansi groups with livestock as a means of promoting a more diversified subsistence system. The Foundation facilitated the movement of people out of a government-sponsored settlement at Tjum!kui and back to their original territories (n!oresi). In their new settlements, the Foundation assisted the Ju/'hoansi groups through provision of water supplies, cattle, seeds, and tools.

As a participatory development organization, the NNDFN has pledged to support only those initiatives that have the full agreement of the communities involved and which are based on the principle of self-help. To that end it works under the direction of a local grassroots organization, the Nyae Nyae Farmers' Cooperative. The activities of the NNDFN between the time of its founding in 1981 and Namibian independence in March, 1990 concentrated on economic development, water provision, and promotion of land rights of the Ju/'hoansi. Its activities also included provision of organizational and communication skills and support for the formation of local institutions. Winding up its first ten years of activity in 1991, NNDFN helped the Ju/'hoansi make substantial gains in securing their land rights at the National Conference on Land Reform.

The Foundation is governed and administered by a board of trustees.~ Day to day operations of the Foundation are manageed by a Management Committee consisting of a program manager, an officer manager, the Manager of the Nyae Nyae Farmers Cooperative, and two additional members who may be appointed, depending on the nature of the subject under discussion. The staff of the NNDFN consists of 17 Namibians and 7 expatriates who reside at a camp at the Baraka Training Centre in Nyae Nyae, east of Tjum!kui, with the exception of the office manager/accountant and the educational coordinator who reside in Windhoek. NNDFN's lawyers are Lorentz and Bone of Windhoek, and its auditors are A. Neuhaus and Co., Windhoek. Its bank is First National Bank,

main branch, Windhoek. Funding of the NNDFN/NNFC has been provided by SIDA, Christian Aid, The EEc, Osfam U.K., and the Ford Foundation.

Aid provided by the NNDFN to communities in the Nyae Nyae area takes several forms. First, infrastructure needed to develop the mixed local economy (small-scale stock-keeping and gardening in addition to hunting and gathering) are supplied to groups of people willing to provide the labor of their installation. This physical infrastructure includes boreholes and hand or wind or solar pumps to which roads are built by community labor. It also consists of cattle kraals and cattle crushes whose poles are cut by community labor. The irrigated gardens are done by individual families in the various communities, but there is a training garden at Baraka in which people learn horticultural and water management principles. The Foundation and the Cooperative have a number of vehicles which make possible the convening of Farmers' Cooperative meetings from all 35 of the established communities at a central point, while a large truck is used for a cooperative shop and for handicraft purchasing, as well as for obtaining necessary supplies (e.g. diesel, spare parts, fencing wire) from Grootfontein or Windhoek.

In the past two years, the NNDFN has carried out a program of related educational and training projects to facilitate the takeover of the entire project at the end of the second ten years (1991-2001) by the Bushman people themselves. These educational projects are (1) teacher training, (2) village schools, (3) adult literacy, and (4) vocational training. The Foundation has also sponsored exchange visits with other Namibian groups (e.g. Himba and Herero in what was Kaokoland and Damaraland) living on communal lands to share mutual concerns. Plans have been made to expand its role beyond the local focus to act as a kind of example or training ground for land use planning and development projects in other areas of Namibia.

THE NYAE NYAE FARMERS COOPERATIVE

The Nyae Nyae Farmers Cooperative (NNFC), a community-based organization (CBO) located in what was once Eastern Bushmanland (now called Nyae Nyae), was founded in 1986. The NNFC (the Cooperative) is a development organization that is participatory in nature. It can be viewed as a kind of people's movement which concentrates on consultation, dissemination of information, and discussion of policy issues (e.g. land use planning, subsistence, and training). At present, the Cooperative is made up of representatives of 35 Ju/'hoansi communities which are distributed over a 6,300 square kilometer area in northeastern Namibia.

The NNFC was founded and developed in tandem with a support organization, the Nyae Nyae Development Foundation (NNDFN). As it operates currently, the Cooperative takes the lead in guiding the directions and activities undertaken by the NNDFN (the Foundation). Where once the Foundation operated in an initiatory capacity, it now functions to support initiatives developed by the broadly-based Cooperative.

At present the Foundation's role with regard to the Cooperative is based on education and training for leadership, facilitation of communications, development of organizational skills, provision of options for discussion, and strategic technical and financial assistance. Bank accounts are separate and when funding proposals are submitted, it is clearly understood which of the funds will be administered by the Cooperative and which by the Foundation. All economic development activities are geared toward financial independence of the Cooperative in the future.

THE ORGANIZATIONAL AND ADMINISTRATIVE STRUCTURE OF THE NNFC

The NNFC has a management team that consists of a Chairperson, a President, a Manager, and an Assistant Manager. The management team works in conjunction with a cooperative made up of two representatives from each of 35 communities. These representatives are elected by the people in the villages. Technically, all adults in the villages (tju/hosi) are members of the cooperative. There is also an executive body made up of five District Leaders (RADAs) who are selected by the cooperative to represent sections of the region. The members of the management team (the leadership) work cooperatively. In actuality, this a consensus process in which everyone takes part. Meetings are held at least four times a year according to the statutes of the NNFC.

The organizational and administrative structure of the NNFC can be depicted diagrammatically as follows:

ADMIN	COOP
Chairperson, President	Cooperative Manager
District Representatives	Assistant Manager
N!ore Representatives	Programs
Villages	Program Facilitators

The day to day running of the cooperative is the responsibility of the Cooperative Manager, who is chosen by the executive committee. The duties of the manager are to supervise the four program sections of the cooperative (technical services, production services, social services, and income generation). His/her duties include accounting, payroll, purchasing, general administration, and public relations.

The four program sections of the cooperative are structured in the following way:

(1) Technical services - installation, maintenance, and repair of village water supply systems, physical structures, the workshop, and supplies.
(2) Production services - supervision and technical support for the livestock and agriculture activities in the villages; the proposed community game guard system.
(3) Income generation - mobile cooperative shop, craft

purchases and sales, and eventually tourism operations and a butchery in Tjum!kui.
(4) Social Services - educational, training, health, and legal services .

Currently provided by the Foundation, these serv'ices eventually will be taken over by government (e.g. the Ministry of Education and Culture, the Ministry of Health, Ministry of Home Affairs) or they will be the responsibility of the NNFC itself.

Presently, the NNFC has a dozen programs that have been set up and are in various stages of operation. These programs are (1) solar water pumps, (2) mechanical workshop, (3) gardens and drip irrigation, (4) livestock management and poultry, (5) brick making, construction, and thatching, (6) mobile cooperative shop, handicraft purchasing and sales, (7) knitting and sewing, (8) bee keeping, (9) wildlife management, land use planning and resource conservation, (10) liaison between East and West Bushmanland, (11) Baraka management and maintenance, and (12) administration and management of the cooperative. These programs are overseen by the Coop Manager who, in turn, is responsible to the management team of the NNFC and to all the members of the cooperative. Over 50 Ju/'hoansi have been employed in these programs.

From an administrative standpoint, the NNFC has had a number of years of experience running its own development programs and handling financial matters in partnership with the Foundation. The members of the cooperative have the ability to make their own decisions on matters relating to land and resource allocation. They also have met with government officials and politicians and have been able to work out complex problems. The NNFC has the flexibility to deal with issues that come up and to respond to them in innovative ways. Overall, it is evident that the NNFC is an effective body both from the standpoint of internal communication and program implementation and external representation.

In many ways, the emergence of the NNFC as a representational body for the Ju/'hoansi communities in Eastern Bushmanland can be seen as a major change for a population that traditionally has had a non-hierarchical, consensus-based sociopolitical system. The establishment of new forms of governance is not without its problems, however. There is the possibility that the leaders could potentially become isolated from the rest of the members of the cooperative, and a kind of social stratification could emerge. The present system of consultation and information exchange militates against this kind of situation occurring, but efforts will have to be made in the future to ensure that the leadership of the NNFC continues to reflect the wishes of its constituents.

THE ENVIRONMENTAL PLANNING COMMITTEE

Implementation of the community-based resource utilization and other activities under the LIFE Project will be the responsibility of the NNDFN and the NNFC. They will be coordinated through an Environmental Planning Committee (EPC) which was established in Bushmanland in early 1992. Membership of this committee includes representatives from several Namibian government ministries (Ministry of Wildlife, Conservation, and Tourism, Ministry of Agriculture, Fisheries, Water, and Rural Development, and Ministry of Local Government and Housing), the Nyae Nyae Farmers Cooperative, the Nyae Nyae Development Foundation, the Evangelical Lutheran Church in Namibia (ELCIN: a non-government organization working in Western Bushmanland), and a yet-to-be-named community-based people's organization from Western Bushmanland. Thesecretary of the EPC is the community liaison officer who will be funded under the LIFE Project.

The EPC, which has had three meetings since March, 1992 and has held a major conference on land use planning at Klein Dobe in northern Bushmanland in July, 1992, has several functions. Its major purpose is to coordinate land use planning and natural resource management in Bushmanland. The committee also acts as a forum for discussion of environmental issues, and it makes recommendations where appropriate to the various government ministries. In addition, it serves as a steering committee for the joint land and resource use planning process involving all of the stakeholders in the region. Some of the topics which the committee has addressed that will be of relevance to the LIFE project include hunting rights of people in Bushmanland, provision of revenues from trophy hunting to local people, control of tourism, problem animal control, the grazing situation for livestock and wildlife, and the future land tenure status of Eastern and Western Bushmanland. The EPC is an organization that will be in place over the long term and thus the planning system is sustainable.

THE IMPLEMENTING PARTNERS IN BUSHMANLAND: SOME CONCLUSIONS

The Foundation as an NGO is made up of an ever-increasing local Namibian staff. It provides support to the community-based cooperative by bringing in national and international perspectives on politics and development, by amassing information and ideas on income generation, women's development, health education, and functional literacy, and by providing on-the-job training in the skills and professions needed to run the various programs. The NNDFN helps to implement development and educational programs chosen by the communities as appropriate for their future, and and it assists the NNFC by functioning as a challenging forum where issues of change and development can be discussed, implementation plans established, and potential impacts assessed. It has been suggested that this sort of

NGO-CBO relationship is a good example of what may be done in other Namibian communities which had been marginalized from the mainstream by the colonial government.

Thus the relationship of these two organizations has evolved, over the past six years, from one fostering the growth of the other, into a partnership. The Foundation intends that this new relationship evolve still further as time goes on, with the Cooperative eventually able to regard the NGO as its employee. A plan is in place whereby the staffing, operations, and assets of the Foundation will become the responsibility of the Cooperative in the future. The training and education programmes, as well as affirmative action hiring, are geared in that direction. Attention has been paid, for example, to gender equity in the make-up of the NNFC, although numerically the participation of women is still not equal to that of men. The NNDFN and NNFC both have been involved in resource management issues, and they are gaining experience in working with other agencies, including government ministries, through their participation in the Bushmanland Environmental Planning Committee.

The administrative and institutional analysis of the potential implementing partners of the LIFE Project in Bushmanland reveals that both the non-government organization and the community-based organization are fully capable of implementing the full range of project activities. The two organizations have a proven track record of carrying out development work. Their staffs are qualified to undertake the tasks required under the project. In order to ensure that they are able to conduct some of the specialized research and community liaison activities, there will be a need to include a full-time ecological researcher and a liaison officer. Oversight of project activities will be in the hands of the EPC, which provides the NNDFN and the NNFC with a linkage not only to other agencies operating in the region, but to the Namibian government and the private sector as well.

ANNEX G

ECONOMIC/FINANCIAL ANALYSES

PART A

Financial and Economic Analysis

Introduction

The LIFE Project can be looked at as an investment in sustainability. It has a rural development component and a conservation component and these are combined with the aim of assisting development without jeopardising the welfare of future generations.

The fundamental approach is one of adaptive, "bottom up" or "grassroots" decision making. The project consists of an array of subgrants the exact nature of which will only emerge as implementation takes place. Planning, screening of development opportunities in conjunction with CBOs and, ultimately, decision making by the communities, will determine precisely what economic activities are stimulated by the project. In addition these will differ from one target area or community to another depending on the specific conditions pertaining there.

Financial analysis determines the value, in market prices of the financial investments and returns of the project owners or actors. Economic analysis deals with the degree to which a decision affects the welfare of society. Every human decision implies valuation of the options and expression of human preferences, and is therefore an economic decision. Economic value in natural resource management can best be explained by the concept of Total Economic Value (TEV). Pearce and Turner (1990) describe TEV as consisting of use values and non-use values.

Use values consist of both direct values derived from utilisation, such as net benefits of hunting, tourism, fishing, timber harvesting, etc., and indirect values deriving from ecological function, such as erosion protection, waste assimilation, etc. Non-use values derive from human preference for preservation of the resource. Value, here, is perceived in the option to use in the future or the mere existence of a resource. The desire of a USA citizen to keep elephants alive in Africa, although he will never see one, is an example of existence value.

Sound economic decision making should take all values into account. In the context of the poverty of a developing country, however, tangible use values, i.e. those which contribute directly to human welfare via man's store of wealth, money, must have a high priority.

The LIFE Project is a national initiative and the economic desirability of the investment is the primary criterion we are interested in. Financial profitability is of relevance in so far

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as the project activities need to be financially attractive to participatory households, CBOs and private sector partners.

The USAID and GRN have agreed to a political policy framework for the LIFE project, through which the donor's money will be channelled. The most economically appropriate use of this money, within this framework is the subject of this analysis.

In this chapter the project assumptions are described and evaluated from the economic point of view. The economic appropriateness of the project objectives and the specific project interventions are then examined in the light of this. Use is made of experience and findings in other SADCC countries, especially Botswana to demonstrate the likely financial and economic desirability of several natural resource uses which may form part of the LIFE project. Recommendations are then made regarding economic criteria suitable for economic appraisal and evaluation in LIFE.

The Project Assumptions - The Problem Statement

The economy of Namibia has a markedly dual nature. There is a small, capital intensive, growth orientated modern sector, with per capita GDP at levels of industrial countries. The vast majority of Namibians exist outside this within an undeveloped sector with poor resource mobilisation capacity and which has received little in the way of active or "trickle down" redistribution from the modern sector. The undeveloped sector population is centered in the communal areas which are mostly in the north.

Any economic growth tends to be concentrated in the modern sector, while the undeveloped sector remains unaffected and marginalised. Here, basic needs are scarce, subsistence production is the norm, surplus creation is negligible, there is a high dependence on natural resources for survival and human fertility rates are high. At the extreme end of the income distribution spectrum are the most marginalised groups of people who occupy the least favourable agricultural land. It is these groups which are the target for LIFE.

Conservation of natural resource has, in the past followed the classic colonial "eurocentric" model. This meant that control over management and use was centralised within the modern sector and communal area communities were denied the rights to this control. Berry (1990) shows this in a description of wildlife utilisation on Namibia in 1989. Among permits for hunting or culling of some 27,000 game animals, only 21 of these were issued to chiefs and headmen for the traditional right to hunt on unfenced communal land.

The conditions described above result in resentment against authority and a tendency for illegal resource use. The ownership and responsibility for the resources becomes alienated from their use. Since central authority finds it difficult to effectively

control poaching from within resentful local communities, the result is one of almost unregulated access and excessive exploitation.

Fundamental to LIFE is the assumption that empowering local communities to take control of their resources for their own use and benefit will reverse the negative trends, described above, and result in sustainable development for these communities.

The Most Appropriate Economic Response

a) Targeting Most Disadvantaged Rural Communities

How best can the income distribution and resource use problems described above be ameliorated? The dual structure of the economy means that benefits of any growth will not trickle down to the households in the communal areas. In addition, the potential for, active redistribution of resources to these areas by government is severely constrained by the need to continue promoting growth in the modern sector.

The communal areas, therefore, need surplus creation and capital formation from within. A big step towards this can be achieved if ownership of primary local assets, the natural resources, be restored to the communities. It also requires that communities be mobilised and assisted with materials and training. This is precisely what LIFE will do.

b) Targeting Womens' Welfare

Lower human population growth in the communal areas would result in higher per capita shares in wealth created, lower dependency ratios and less pressure on finite, scarce resources. It is generally accepted that womens' fertility is negatively correlated with womens' education levels. A noteworthy quantitative study by Fairlamb and Nieuwoudt (1991) among rural Zulu women in South Africa, found a reduction in fertility to be positively correlated with the levels of womens' income, formal employment and education. The LIFE project will pay specific attention to enhancing womens' incomes and education, thereby, possibly, contributing to a reduction in population growth.

c) Giving Communities Power to Optimise Resource Use

The solution to the problem of excessive exploitation of renewable resources is in limitation of harvesting effort to the level where net economic returns are greatest. This is illustrated in the classic, theoretical, open access, fisheries exploitation model, which is described by Clark (1990) and which has been found to have much empirical validity.

In the Clark model, resource users have no control or management costs so that their costs are related solely to narvest effort. The number of users (and exploitation) tends to increase until the resource numbers are reduced to a level where the harvest

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costs equal harvest revenues. An equilibrium develops at this point. Resource yield is low and no economic surpluses are generated. This is the common result of unlimited, open access, subsistence hunting and fishing. In cases where the resources are vulnerable to excessive use and/or the profits of use are high (e.g. in the case of rhino), extinction of the resource may occur.

Excessive use through open access is avoided either by restricting access (e.g. with harvest quota) or by reducing harvest profitability (e.g. with taxes). The resource population and sustainable production tends to increase until a maximum biological sustainable yield (MSY) level is reached. In the vicinity of the MSY level there is a level of harvest which provides maximum net economic return (this is commonly at even lower harvest, and higher population, levels).

Optimal and sustainable use of resources in Namibia's communal areas will require effective regulation of access. The only way that this can ensured is if the responsibility for control and management of the resource is returned to the potential users of the resource. In other words communities need territorial use rights so that they can invest in resource protection and manage the level of resource use. The LIFE project is aimed at empowering target communities in exactly this way.

The Validity of the LIFE Project Objectives

The project objectives, described in detail elsewhere in this report, revolve around the goal of improving the social and economic well-being of residents of targeted rural communities by implementing sustainable community-based wildlife and resource conservation and utilisation programmes.

A more specific objective is that poor communities in marginal agricultural areas and buffer zones to protected areas will be targeted. Attention will also be paid specifically to the welfare of women. Other specific objectives are to strengthen management capacities in local regional and national institutions which provide services to communities and to develop sustainable natural resource management methodologies and strategies for communities.

These objectives fit very well with the most appropriate economic response argued for above.

The Appropriateness of the LIFE Interventions

The project objectives appear to be economically appropriate, but will the specific project interventions planned, achieve them most efficiently? To do this the allocation of subgrants must address the weak links within a complex set of interactions.

LIFE will provide for community liaison officers and vehicles and

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equipment for community-based natural resource management initiatives. This will specifically affect the two target communities in Mukwe District, western Liambezi Region (West Caprivi) and eastern Grootfontein District, Waterberg Region (eastern Bushmanland). This addresses the very serious need for CBO formation and enhanced management capacity within CBOs.

LIFE will provide subgrants aimed at strengthening specific community resource management activities, which are either under way or proposed. The grants will be applied to training, research, planning and assistance with capital and operating expenditures. The subgrants will be designed to fill gaps and eliminate weaknesses in the development process.

Subgrants will be provided with the objective of promoting the development of CBOs and strengthening the capacity of CBOs and Namibian NGOs to manage natural resource use. These will assist by addressing specific weaknesses. Likely interventions will include provision of capital items, operating expenses, services, technical assistance and training for planning, evaluation, management, accounting and administration. Generally, these subgrants will assist CBOs and NGOs to perform the vital "honest broker's" role of increasing the bargaining power of community households.

Namibia has inherited a severe backlog of both short and long term training needs among disadvantaged groups. These will be addressed directly by the LIFE training component. Although by SADCC standards the MWCT has a relatively strong research, planning and management capability, there are manpower shortages, particularly in fields relating to community-based resource management. Similarly, Namibian NGOs require assistance with manpower training.

As part of its planning and applied research support component, LIFE will fund academic training in resource economics, and provide short term scholarships in a variety of appropriate fields for disadvantaged Namibians. Initially, any shortages of social, economic and physical planning data for community-based natural resource management will be provided for in LIFE through short term technical assistance.

Environmental education is fundamental to sustainable development in Namibia. Both the short and long term successes of community-based natural resource management depend on it. MWCT has a sound environmental education policy. LIFE, through its environmental education component, will support the implementation of this by MWCT and NGOs. The need for education centers, staff housing facilities, staff salaries and program expansion will be supported.

LIFE falls within the SADCC Natural Resources Management Project, which also embraces initiatives in Zimbabwe, Botswana, Zambia and Malawi. Valuable experience has been gained in Zimbabwe, Zambia and Botswana regarding community-based resource management. The LIFE regional communications and exchange of information

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component will make it possible for the Namibian project to benefit from this. In addition, regional cooperation in the marketing of some natural resource products could provide Namibia with more market leverage and consequent economic gain.

Potential Financial and Economic Benefits

a) The Applicability of Regional Experience

Given the adaptive nature of the LIFE project there is, by its very nature, a lack of quantifiable data on costs and benefits. Measuring and assessing the economic, social and overall developmental impacts of the different approaches are, therefore, an integral part of the strategy embodied by the project.

To a certain extent, data from the other already established components of the regional Natural Resource Management Project (and projects similar to these) can be used to provide an indication of financial and economic benefits which could be expected from LIFE interventions. Results of research and evaluation on/of pilot, community-based, resource management projects in Botswana, Zimbabwe and Zambia can provide a valuable indication.

b) Experience in Zimbabwe

Experience in two pilot projects in the Zambezi valley of Zimbabwe, the Nyaminyami Wildlife Management Trust, in Nyaminyami District, and the Dande project in Guruve District have been evaluated after one year of operation by Jansen (1990). Both areas contain populations of high value ("key") wildlife species and, generally, fairly high wildlife densities. They are almost entirely dependent for their income on the lease of safari hunting rights to safari hunting companies. A small amount of medium scale cropping of impala for the local meat market supplements this.

High profitability of safari hunting (resulting primarily from the high value of elephant hunting) in these areas makes these projects potentially successful financially. Local participation was poor, however, and, in particular, distribution of benefits to local wards and households tended to be held up at the district council level.

c) Experience in Zambia

Barbier (1992) assessed two years of operations in the Luangwa Integrated Resource Development (LIRDP) Project, based in the Lupande Game Management Area, Luangwa Valley, Eastern Province, Zambia. Here, again, the area in question contains fairly high densities of game and several high value ("key") wildlife species.

This project has involved some significant donor expenditures on infrastructure and operations, including investment in village level poaching control. Income (at less than one fifth of

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expenditures) has been overwhelmingly dominated by contract rents from the lease of safari hunting rights to safari hunting outfitters, although there was limited income from medium scale game cropping for local meat sales and national park entry fees.

The LIRDP project has achieved significant reductions in commercial poaching (essentially capital gains), decentralisation of decision making and distribution of 40% of project revenues to local leaders to disburse within the community. These benefits have tended to be used within community projects (such as to build schools) rather than disbursed further to ward and household level.

d) Experience in Botswana

In Botswana, evaluation of community-based natural resource management has, been more or less limited to two, small, pilot initiatives (Kedia and Western Ngwaketse) based in San settlements in Central and Southern Districts. These are in areas of low game densities and with, mainly, low value Kalahari game species. The emphasis has been on group formation and commercialisation of hunting among subsistence hunters. Product processing in the form of tanning and crafts manufacture was also promoted. An externally funded project supervisor and vehicle were supplied to each pilot project as well as some limited infrastructure.

Economic and financial appraisal of the Western Ngwaketse project before initiation (Barnes, 1989) showed it to have the potential for positive financial returns at both participant and project level, and for a highly positive economic return. Preliminary evaluation of the Kedia and Western Ngwaketse projects after several years of operation suggests that anticipated performance targets have not been met. Severe management problems, a decline in resource availability, and a tendency for benefits to be concentrated among influential community members appear to be causal factors (BNRMP, 1991).

A proposed community-based wildlife management project in the Chobe Enclave area in the north of Botswana has been subjected to detailed financial and economic appraisal Barnes (1991). Here, fairly dense populations of game, including high value, key species occur and there is potential for the community to lease out game viewing lodge sites, to lease out a safari hunting concession and to undertake small or medium scale game cropping.

The results of this study indicated that a high economic rate of return was possible and that high financial profitability was possible for both project and participants. However, this viability was highly sensitive to changes in the standard of management, wildlife densities and the presence of high value species.

There are a number of similarities between the physical and economic environments in Botswana and Namibia. In particular, the communal areas of both countries are commonly only separated by

political boundaries. The economic values (shadow prices) of labour and foreign exchange are likely to be fairly similar. The opportunity costs for land and resource use, the infrastructure, market conditions and social conditions all tend to be reasonably similar between the two countries' communal areas. This makes comparison of experiences between the two countries particularly relevant.

The economic and financial value of wildlife utilisation enterprises has received fairly detailed study in Botswana. Here financial enterprise discounted cash flow models were developed to determine the attractiveness of wildlife use enterprises to investors. The financial models were then converted to economic ones through shadow pricing to determine the economic worth of these activities for society.

Table 1 shows the results of some of these analyses for typical examples of wildlife use enterprises in Botswana (Barnes and Pearce, 1991). These are listed in order of their economic internal rate of return. While this order cannot be used to rank options by economic value, it does indicate relative profitability in economic terms. The financial internal rates of return indicate the relative overall financial profitability of the enterprise to for the entrepreneur or project.

Generally, the results in Table 1 suggest that use of free ranging wildlife populations is more profitable than more capital intensive ranching and farming of wildlife. Where enterprises have higher economic returns than financial ones, this is commonly a reflection of their value in employment creation. Where financial returns are higher than economic ones (ostrich and crocodile farming/ranching) this seems to reflect a high requirement for tradable inputs which carry a foreign exchange premium.

While safari hunting can provide a high economic return on investment, its net return per unit area is severely limited by biological factors. Only trophy animals are harvested and sustainable offtakes of these commonly amount to less than 3% of game populations. The net return per unit area for a tourist lodge investment, however, will tend to be limited by wildlife viewing tourist capacity, which can be high in prime areas.

Table 2 show the net return per unit area for four enterprises, measured in net economic benefits per hectare. Clearly this needs to be taken into account when attempting to optimise combinations of resource use enterprises. Some of the most profitable enterprises are those that require highly specialised skills such as lodge development and safari hunting. The most efficient (possibly the only) way in which the benefits of these can be obtained by communities is where CBOs make use of specialist operators to undertake enterprise management. CBO's need to be able to enter into lease agreements or partnerships with specialist private operators. In other cases, for example, with small scale hunting, fishing or crafts production, individual households can be directly involved in actual resource use.

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While the results described above cannot be applied directly in LIFE's Namibian pilot project areas, they do provide an indication of what could be expected. Namibia, itself, has had significant experience in community-based resource management, notably in the Kunene region (Damaraland/Kaokoland) under the guidance of Integrated Rural Development and Nature Conservation (IRDNC) and MWCT. The approaches here are being adapted and applied to the LIFE target areas. In particular, the village scout program is already being extended. Community managed tourism is one important component of the IRDNC experience which may well have applicability in the LIFE target areas.

TABLE 1: COMPARATIVE ESTIMATED RETURNS TO SELECTED NATURAL RESOURCE UTILISATION ENTERPRISES IN BOTSWANA, 1990

ENTERPRISE	INTERNAL RATE OF RETURN (%)		COMMENT
	ECONOMIC	FINANCIAL	
Community project prime resource area*	55	21	Biltong, skins Lease rentals
Safari hunting	45	16	Trophy offtake 12 bed lodge
Tourist lodge	35	18	Exclusive 30 bed lodge
Hardwood extraction**	29	15	Sawn timber, logs
Community project poor resource area***	28	21	Biltong, skins Lease rentals
Ostrich farming	14	19	Skins, meat, feathers
Crocodile farming	11	18	Skins, meat
Crocodile ranching	11	18	Skins, meat
Game ranching	7	6	Biltong, fee hunting 9000 ha.
Cattle ranching	na****	5	Beef, 6500 ha.

* Chobe Enclave appraisal - see above
** Reworked from Bailey (1992)
*** Western Ngwaketse appraisal - see above
**** Not available

e) Likely Resource Use Values in Mukwe District (West Caprivi)

LIFE will assist on-going pilot activities in Mukwe District, where MWCT has undertaken biological, social and economic surveys and where it is collaborating with the NGO, Integrated Rural Development and Nature Conservation (IRDNC) to develop a village scout program.

TABLE 2: COMPARATIVE ESTIMATED NET ECONOMIC RETURNS PER UNIT AREA FOR SELECTED WILDLIFE UTILISATION ENTERPRISES IN BOTSWANA, 1990

ENTERPRISE	NET ECONOMIC BENEFIT/HECTARE	COMMENT
Community project prime resource area*	$US 15.00	Biltong, skins Lease rentals
Tourist lodge	$US 15.00	Exclusive 30 bed lodge
Safari hunting	$US 01.50	Trophy offtake 12 bed lodge
Community project poor resource area**	$US 00.20	Biltong, skins Lease rentals

* Chobe Enclave appraisal - see above
** Western Ngwaketse appraisal - see above

The area is bounded on the west and east by the Okavango and Kwando rivers, receives some 600 mm annual rainfall, is dominated by Kalahari sands of poor fertility, and contains some 4000 people including Hambukushu and Bushmen groups. It is a proclaimed wildlife protected area, and contains northern Kalahari sand woodlands with some valuable timber species, including Baikaea plurijuga and Pterocarpus angolensis. Some 29 larger game mammals occur, including valuable key species such as buffalo, roan, sable, sitatunga, leopard, lion, eland, tsessebe, giraffe and relatively large numbers of elephant.

MWCT has estimated the populations of game animals in the area and the theoretical value of present sustainable offtakes in terms of trophy hunting, cropping and live sales. This total is some $US0.14 million or R0.38 million. If game numbers could be increased to the estimated carrying capacity of the area the total potential value, in these terms, would amount to some $US1.1 million or R2.9 million.

Potential natural resource use schemes for the communities in

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Mukwe district include lease of land for exclusive wildlife viewing lodge development, community managed tourism, lease of safari hunting concessions or quota, commercial or small scale timber harvesting, small scale (artisanal) hunting, artisanal fishing, lease of concessions for sport fishing, and various forms of product processing (e.g. tanning) and crafts production.

Wildlife viewing lodge development will tend provide high economic return on investment and per unit of land, moderate financial profitability and significant employment creation. Potential for this type of development will, however, tend to be limited to a few, scenic, well stocked, high quality areas. Safari hunting tourism, particularly if elephant are included in the quota, could provide even higher economic return on investment, moderate to high profitability but poor returns per unit of land and relatively poor job creation. Wider areas, including land of lower quality will, most probably, be suitable for this.

Small scale (artisanal) game cropping and fishing will tend to provide moderately high economic return on investment, moderately low financial profitability, moderate returns per unit of land and significant employment creation. It will have potential over relatively wide areas, even where key game or fish species are absent, especially where traditional hunting or fishing skills exist. It also has the advantage of having direct community involvement and simpler institutions.

Commercial timber harvesting and milling would be likely to provide moderate economic return on investment and per unit of land, significant job creation but moderately low financial profitability over fairly wide areas.

Small scale product processing e.g. tanning and crafts production will tend to provide moderate economic returns on investment and rather low financial profitability. However these activities will tend to have applicability over wide areas and will have significant employment creation potential.

Wildlife ranching and farming ventures using mixed game and ostrich or crocodile will require careful appraisal since in the remoter communal areas they would be likely to suffer from severe comparative disadvantages. Live game capture and dealing would also need careful appraisal including examination of veterinary and opportunity costs.

f) <u>Likely Resource Use Values in Eastern Grootfontein District (Eastern Bushmanland)</u>

The eastern Grootfontein area, to the east of Tsumkwe, has an already established community project in place. This is the Nyae Nyae Development Foundation of Namibia (NNFDN), supported by MWCT. The area contains some 3000 San people, some of whom retain hunting and gathering skills. The mean annual rainfall is in the region of 500 mm, soils are Kalahari sands of poor fertility and

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vegetation consists of northern Kalahari woodlands and shrublands.

The LIFE project will attempt to ensure that resource use within the Nyae Nyae community project is sustainable. Limited numbers of livestock are present around small settlements. The area contains some valuable relict key wildlife species, including elephant, buffalo, roan, wild dog, eland, giraffe, lion, leopard and cheetah. It also has some pan habitats which periodically host aquatic bird populations.

Community-based resource use in this area could involve lease of a limited amount of safari hunting rights, significant small scale (artisanal) hunting, possible community managed low impact ecotourism, wild plant resource harvesting, product processing, crafts production and improved rangeland use with livestock. Likely economic characteristics of these would be similar to those described for Mukwe.

g) Possible Economic Values in Other LIFE Interventions

The application of LIFE subgrants in other specific community resource use activities and target areas will depend on the results of planning and appraisal activities during implementation.

A likely future target area is the Oshana region (southern Ovambo) where a buffer zone between Etosha National Park and the populated regions to the north could be created. Here, a community initiative could lease safari hunting tourism rights, manage wildlife viewing tourism (possibly making use of part of Etosha) and undertake small scale wildlife harvesting, among other activities.

Another likely target area is the Nama/Topnaar community in the Kuiseb valley. This area is associated with the Namib Desert Park. Community managed or leased rights for low-impact wildlife viewing tourism are likely to be of value here. Limited small scale harvesting of wild plant and animal resources may be possible. Another possible area of intervention may be in the indigenous hardwood industry of Okavango region (Kavango), where small scale woodcarving enterprises could receive special attention.

The benefits of conservation education, management and resource management training will be manifested in the future degree of success in achieving the material objectives of LIFE. The same will apply to LIFE's investments in institutional capabilities. The return in direct utilisation values, however, is only a part of the total economic value of LIFE. Indirect use values, reflected in reduced resources degradation and possible ecological stability will, most likely, be very important. Non-use values in the form of biodiversity and wildlife preservation will also be significant. The donor's investment in LIFE is, itself, a manifestation of these non-use values.

Economic Criteria for Appraisal and Evaluation

It is recommended that economic criteria for appraisal and evaluation in LIFE include financial discounted cash flow analysis for resource use enterprises. It should also include economic valuation, and economic cost-benefit analysis, of target community resource management projects, using the Economic Rate of Return (ERR) and Economic Net Present Value (ENPV). Cost minimisation (least cost analysis) should be used selectively for training and research interventions where it is deemed that this could improve allocation of resources. It is important that indirect use values and non-use values be incorporated in all economic decisions through the assignment of minimum values.

Conclusion

Within its political policy framework the LIFE project has a set of objectives which are economically appropriate. The specific elements of LIFE, the planned interventions, are also appropriate to most efficiently meeting these objectives.

Research results from elsewhere in SADCC, and especially Botswana confirm that LIFE's assistance to community resource use in target communities will be able to provide significant positive economic returns in natural resources utilisation values. It will also be possible for individual households and CBOs to earn attractive financial profits in well planned natural resource utilisation. LIFE also has the potential to result in significant indirect use values manifested in ecological stability, and significant non-use economic values manifested in the continued existence of threatened wildlife communities.

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ANNEX G
PART B
THE ECONOMICS OF DEVELOPMENT

LINKED TO

NATURAL RESOURCES MANAGEMENT

1.0 Introduction

The LIFE Project can be looked upon as an investment in sustainable natural resource management. It has a rural development component and a conservation component and these are integrated with the aim of rural communities assisting development without jeopardizing the welfare of future generations.

The project will target two major pilot areas to test the hypothesis that by valorizing natural resources, previously unavailable to rural communities because of antiquated government laws and policies, it will be in the vested interest for these communities to sustainably manage these resources as the basis for economic development. This will be undertaken with the communities through the establishment of an integrated landuse planning process that establishes the best comparative economic landuse in the target communal areas of Bushmanland and Caprivi, Namibia.

It is further hypothesized that through the landuse planning process, but more importantly, through policy reforms which make natural resources (especially wildlife and forests) more accessible to communities to sustainably exploit for both subsistence and economic purposes, many communities will opt to move away from what are currently unsustainable landuse practices such as extensive rather than intensive management of livestock, uncontrolled poaching rather than sustainable harvesting of wildlife, and indiscriminate cutting of trees for firewood, charcoal or clearing for extensive farming (remembering that only 1% of Namibia is arable.

The long term success or failure of this program and its ability to be expanded to larger areas will depend upon rural communities in these pilot areas demonstrating that they are capable of not only collaborating with mainline government management agencies, but that they can be educated and trained in the basic principles of natural resource management and economics, enabling them to self-control access to these resources by the community, and most importantly, undertake joint ventures with the private sector to sustainably market and exploit these resources in both traditional and innovative ways.

The private sector with whom close collaboration will be encouraged include but are not limited to:

-Professional Hunters/Professional Hunting Association Of Namibia

-Tourism Operators/Tourism Association Of Namibia

-Commercial Logging Operators

-Charcoal Exporters

-Local and Export Handicraft Businesses

The fundamental approach will be one of adaptive, bottom up or grassroots decision making. The recent establishment of the Bushmanland Environmental Planning Committee, which brings together all stakeholders to undertake an integrated landuse planning process will likely serve as a model in other communal areas of the country.

The sustainability of these programs will depend on developing management plans with long versus short term prospectives, with a balanced and equitable distribution of the revenue stream from net profits between the private sector, marketing and promotion, resource management, and most importantly community development. A critical component of resource management will be the community seeing it in their economic interest to establish a system of community game guards for controlling and regulating community access, as well as, outside (poachers) access to the resources.

2.0 THE HISTORY OF CONSERVATION IN NAMIBIA

Leaving behind a colonial history of more than 150 years, Namibia became a sovereign state in March 1990. In the wake of colonialism, Apartheid and a long liberation war, socio-economic conditions for Namibians remain starkly unequal. There is a white, prosperous Namibia, and a black, impoverished Namibia.

2.1 Antiquated Wildlife/Natural Resource Laws And Policies.

The disparity began with the arrival of European settlers. The colonial regimes brought with them the concept of "King's Game", meaning that wildlife once belonging to local people became the property of the King, and eventually the State. Under colonial rule, the legal use of Namibia's natural resources was the exclusive privilege of white colonialists.

For black communal land inhabitants, wildlife was no longer seen as a resource. Under the Apartheid system, racially motivated hunting laws and government policies concerning conservation of wildlife and other natural resources made national parks basically

off limits to black Namibians, effectively denying them access to the country's resources and economic opportunities. Government representatives enforced white ownership laws and, in the process, created hostile relationships with local black residents, not only towards the Government, but towards the natural resources which they were legally denied.

2.2 Relegation Of Disadvantaged Namibians To Marginal Communal Lands. The Odendaal Commission and other Apartheid legislation relegated black Namibians to marginal areas where concentrations of people in hostile and artificial environments led to a loss of traditional ways and means of utilizing natural resources. A further consequence of these policies increased people's vulnerability to drought and led to the uncontrolled poaching of wildlife.

2.3 Creation of Foot And Mouth "Free Zone". This was exacerbated by creation of a foot and mouth Free Zone, necessary to meet veterinary requirements for the lucrative European beef export market as agreed upon under the Lome Convention. Most of the marginal communal areas are found within the Veterinary "Red Zone," a cordon fenced area north of the parallel running from Gam to Torra Bay, that is used to assure a foot and mouth "Free Zone for the majority of the commercial farmers whose land lies to the south. This market is valued at between R 250-500 million/year.

This veterinary fencing is also believed to have reduced wildlife populations through preventing their natural migrations between wet season and dry season grazing areas (e.g., the Veterinary fence along the Botswana Border, south of Kaudom Park which is believed to have resulted in decreased wildlife populations in Eastern Bushmanland.).

As a result, cattle in most of the communal areas have limited access to modern veterinary services, are considered inferior genetically and in quality, have little commercial value and thus limited market potential and limited potential to benefit from an offtake program. This, along with the inaccessibility of the natural resource base has kept the majority of communal land residents from entering into a monied economy. It also encourages overgrazing of pasture lands with large extensively managed herds of cattle goats and sheep as the only sign of wealth, and the depletion of soil productivity from inappropriate subsistence farming practices on the marginal communal lands to which the communal populations have been relegated.

Unfortunately, because most of communal areas are in the "Red Zone" they will also not be able to enter into the potentially lucrative game meat export market to Europe. Regardless, this market appears to be currently, somewhat depressed because of an over-supply of venison from Eastern Europe and New Zealand.

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2.4 Natural Resource Degradation From Increased Human/Livestock Populations. With improved medical care and limited veterinary care, combined with the crowding of many disadvantaged cultures into the communal areas, increased pressure for space and energy also has had grave consequences on the natural environment. Firewood is the major source of energy for the majority of communal residents. In many areas as Owamboland, vegetation cover is being rapidly depleted, due to demand and the lack of a comprehensive energy/natural forest management program. Many of these forests are critical wildlife habitat.

In many areas, such as Bushmanland, as human populations increased (e.g., from 650 in 1960 to 4,500 in 1992) both humans and domestic stock were settled around water holes traditionally used by or bore holes placed exclusively for wildlife, as wildlife was not seen as an economic resource. This resulted in wildlife being slowly squeezed out of many of their traditional grazing/browse areas, and in essence removed critical habitat from their access with a net result in reduced wildlife populations.

As a result of these antiquated laws and policies, the size and diversity of wildlife populations and wildlife habitat in northern Namibia, where the majority of the communal lands are found, has been seriously reduced in the last two decades due to drought, over-grazing by domestic livestock, veterinary fencing which hinders natural migrations, unbalanced predator/prey populations, poaching by increased human populations, disease and war.

2.5 Exceptions. Exceptions, as the result of innovative programs returning stewardship of the wildlife to the local communities, include the recovery of the black rhino population, elephant and other wildlife in Damaraland, and increased elephant populations in and around Etosha National Park. As a result of a policy which returned stewardship of wildlife to the local community and the establishment of a community game guard system in Damaraland between 1983 and 1992 the wildlife population increased as follows:

Wildlife	1983	1992
Black Rhino	65	125
Elephant	200	300
Zebra	400	3,000
Gemsbok	400	3,000
Springbok	1,000	10,000

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The increase was so dramatic that the hunting ban, which the community self-imposed in 1983, was lifted by 1987 (Personal Communication Garth Owens-Smith).

In an effort to redress the discrimination of the past, the Government of Independent Namibia, supported by a number of private institutions and non-governmental organizations, is now focusing a large percentage of its resources on developing the communal areas. The key to a more meaningful future depends on a community capable of making appropriate decisions regarding the re-establishment of sound environmental practices

2.6 Policy Reforms To Increase Accessibility To Wildlife As An Economic Resource To Communal Areas. The Ministry of Wildlife Conservation and Tourism (MWCT) feels that the main reason that marginal areas in arid regions of Africa have suffered from such degradation, maintaining people in an endless cycle of poverty, is a failure to recognize the most appropriate landuse potential of these dryland areas is often wildlife and forestry over livestock and crop production. MWCT believes the second major reason is the failure to return stewardship of the natural resources to rural communities for the exclusive right to manage and in return benefit economically from sustainable exploitation. MWCT is actively pursuing both of these areas. For instance, they have helped to establish the Bushmanland Environmental Planning Committee which brings together the local community, mainline management agencies, the private sector and NGO's to develop an integrated landuse management plan for the area, with wildlife being the dominant land use. MWCT is also in the process of legally extending the concept of a "Conservancy" from commercial farming areas to formal communal land areas. By forming a conservancy the communal area:

*The right to utilize and economically benefit from wildlife on communal land would be devolved to a rural community that forms a conservancy in terms of MWCT's policy on conservancies.

*Each conservancy would have the right to utilize wildlife within the bounds of the conservancy to the benefit of the community. Once a quota for each available species has been set, the committee may decide how these animals may be utilized. It may decide to allow hunting by members of the conservancy, cull game for meat, sell animals for trophy hunting or undertake live game sales.

The conservancy would be able to enter into business arrangements with private companies to carry out some or all of these activities. They would also have the right to establish tourism facilities within their boundaries or engage in a commercial arrangement with a registered tourism operator.

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*Community based Wildlife Management Committees would be established to set game offtake quotas, provide technical input on wildlife management, discuss business ventures, etc. The would be comprised of elected members from the conservancy, local MWCT field staff, the private sector and assisting NGO's.

3.0 NATURAL RESOURCE ECONOMICS IN COMMUNAL AREAS. While some information is available about the importance of natural resources to the economics of Namibia, it is clear that the existing or potential value of the resources within the pilot target areas is not completely understood.

It is known that today tourism generates in excess of R 750 million annually in foreign exchange of which 20-25% of this goes to the government as taxes. Of this gross, from R 40-50 million is generated from sport hunting (Personal Communication Volker Grellmann, Vice-President Federation of Namibian Tourism Associations - FENATA). It is believed that tourism, is a relative undeveloped industry with great growth potential.

The LIFE Project provide a natural resource economist to MWCT while training a disadvantaged Namibian in this area. One of the first tasks of the expatriate economist will be to collaborate with the Environmental Planning Committees of the two target areas to make a complete analysis of the economics from various available resources in the two target areas. This will include:

*Gross Revenue from each resource sector,

*Cost to the private sector to exploit resource (e.g., cost of putting up safari lodge or exclusive tented camp, cost of logistical support from vehicles, fuel and other supplies, cost of marketing, staff salary and overhead, etc.),

*Net Revenue after cost of doing business.

*Sharing of Net Profits (Revenue Streams)

-Share in form of Profits to safari/tourism operator, logging operation, handicraft enterprise, etc.

-Share to Community For Development

-Share to Government/Community for resource management (e.g. game counts to estimate annual offtake quotas, timber surveys, development of pasture management plans, etc.

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*Potential For expansion through improved management or innovative ways of using or exploiting a given resource (e.g. joint venture with a companies who produce high quality game leather game skin luggage or furniture.)

All information should be expressed in simple economic terms. Fancy terminology or ways of expressing results such as internal rate of return or benefit/cost ratio that may impress the lay person should be avoided as they will only confuse and be misunderstood by parties especially to the NGO's/CBO's working in the field. Rather, simple business vocabulary should be used that makes common sense to everyone.

It is critical that prior to negotiating for an equitable share of the net profits with the private sector as part of a joint venture, local communities and MWCT must have a thorough understanding of the economics of sport hunting, conventional and alternative tourism. This will require a certain amount of openness on the part of the private sector, possibly even an opening of their financial records for the purposes of auditing in order to understand the total economics of various businesses.

Also, the EEC currently is funding the development of a tourism strategy for Namibia being undertaken by the Danish consulting firm of Hoff and Overgaard. The final report is expected in October 1992 and is believed to have begun looking into the economic potentials for various sectors of this industry.

The project will encourage the active participation of the private sector in promotion of appropriate tourism within the target areas.

3.1 Natural Resource Economics In Eastern Bushmanland. Eastern Bushmanland has a population of about 2,500 who consist of the Ju/'hoan San people who are traditional hunters and gatherers. Communities have a small number of cattle for milk and slaughter and most villages are engaged in dryland gardening.

Like the West Caprivi region, there have been tensions surrounding the use of land and wildlife by people. In the past, the conservation authorities tried to establish a game reserve in the region, but the effort was resisted by the local community as a threat to their land rights. The game reserve was never proclaimed.

The biodiversity of the region has been threatened by the settlement of people at water points, especially boreholes, localized overgrazing and resulting bush encroachment, incursion of cattle herders into the region from Hereroland, and poaching from within (e.g., by Bushmen from horseback) and outside the area. Game numbers (ungulates) have declined significantly over the past decade and will soon reach critical numbers if the trend is not reversed.

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As noted, the local community has organized itself into the Nyae Nyae Farmer's Cooperative and has in turn formed the Bushmanland Environmental Planning Committee. Key stakeholders have been brought together including:

*The local community in the form of the Nyae Nyae Farmers Cooperative

*NGO's in the form of the Nyae Nyae Development Foundation

*The Private Sector in the form of ANVO Hunting Safaris

*Mainline Government Agencies including the Ministry of Wildlife Conservation and Tourism, the Directorates of Agriculture and Forestry, and the Ministry of Housing and Resettlement.

This undertaking will serve as a pilot communal land integrated planning process to be coordinated by the Ministry of Lands and Resettlement. Most importantly it brings together all the key stakeholders in the area to begin discussing the most appropriate landuses of the area, given ecological limitations, such as carrying capacity for humans, livestock and wildlife; physical and chemical limitations of the soils and climate; and the goal of maximizing economic returns to the community through sustainable natural resources management. The advantage of this process is that the traditional knowledge of the SAN people about their resources, their use and management, will be integrated into modern day concepts about wildlife, forestry, wildlife, soil, livestock and dryland farm management. In turn the private sector will be brought in to undertake joint ventures with the community in order to market these resources through both consumptive and non-consumptive uses.

It has been decided that this group will work to produce an integrated landuse plan for Eastern and Western Bushmanland. Eastern Bushmanland will be established as a Wildlife Management Area in which a mixed landuse will be established based upon wildlife, some livestock and dryland farming, and forestry.

The communities are very much aware of the overgrazing that has occurred in neighboring areas and believe that their future is still tied to the survival of large game species. The local communities would like to develop their own low impact tourism industry and explore how the wildlife of the area can become a key resource for the development of Eastern Bushmanland.

3.1.1 Current And Potential Economic Development From Sport Hunting In Eastern Bushmanland. Safari Hunting will tend to provide very high economic return on investment, excellent returns per unit area, high profitability with a minimum of investment and a low number of jobs being created (about 20 people) in areas which do not have the natural beauty nor the dry season wildlife populations necessary to support conventional photographic safaris. This is more typical of most of the communal areas. Also, since sport hunting is a low tourist volume high return investment, there is minimal adverse impact on the local culture or the environment compared to higher volume conventional tourism. (Note, plans to train Bushmen as professional hunting guides could change the quality of job factor to some degree, though the number employed will still limited).

Even ecotourism (See Section 3.2.2) does not employ large numbers of people until game guards are factored in to the formula. It is believed that if the employment of the game guards is paid for by profits from sport hunting and is the community's contribution to the conservation of wildlife populations on which sport hunting is dependent, then even sport hunting will be seen by the community as a major employer in those areas where it is the most appropriate use of the resources for economic development. This is certainly the case in the Zambian ADMADE Project.

Currently, wildlife populations are very low in Eastern Bushmanland due to the drought, a change of pattern in veld fires, termite pasture destruction, veterinary fencing, animal and human predation. The main factor, however, is believed to be due to the lack of strategically located water points so wildlife can take advantage of the excellent veld food:

Species	Estimated #'s 1990	Estimated #'s 1982
Roan	100	160
Wildebeest	250	530
Buffalo	12	70
Eland	3	500
Oryx (Gemsbok)	250	340
Giraffe	250	940
Kudu	500	850
Elephant	250	210
Hartebeest	100	200
Sassaby	0	7
Duiker	600+	600
Reedbuck	0	30
Steenbok	800+	870
Warthog	60	370
Ostrich	100	280

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Predators	Estimated #'s 1990	Estimated #'s 1982
Brown Hyena	20	50
Spotted Hyena	100	150
Cheetah	25	20
Lion	50	170
Leopard	100	80
Serval Cat	10	7
Wild Dog	37	110
Caracal	80	50

Source:Grellmann, Volker. 1991. The Bushman, What does the future hold? ANVO Hunting Safaris, Vice-President Of The Federation Of Namibian Tourism Associations, Windhoek. 28p.

The residents of Eastern Bushmanland are interested in reintroducing the now locally extinct zebra, springbok, sable and reedbuck, while building up and sustainably managing the existing population of wildlife.

With appropriate MWCT policies, it is estimated that 6 safaris conducted annually in Eastern Bushmanland with the current annual offtake of only 6 elephant, 4-5 leopards and 5-6 antelope, sport hunting has the potential to return as much as R 250,000/year (R 150,000 from trophy fees and R 100,000 from other client fees paid to professional hunter) with a great potential of increasing revenue to the community if the wildlife population can be increased from reintroduction programs and improved wildlife management (e.g., not people or cattle) (Personal Communication Volker Grellmann, ANVO SAFARIS, Vice-President Of FENATA).

It is recommended that the following numbers of animals be released into Eastern Bushmanland[1]:

*500 Zebra *1,000 Springbok

*500 Blue Wildebeest *1,000 Cape Buffalo

Additional numbers of hartebeest, giraffe and gemsbok also might be considered for release (Personal Communication, Volker Grellmann)

It is believed that much of the game may be obtained at little or no cost from MWCT. However, it is estimated that live animal capture and transport to Eastern Bushmanland will cost approximately R 100/animal using modern helicopter capture techniques (Personal Communication Volker Grellmann).

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[1]Grellmann, Volker. 1988. The Bushman. What does the future hold? ANVO Hunting Safaris. Vice-President, Federation of Namibia Tourism Associations. 29p.

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In addition the same report recommends the following priorities:

*Water from existing bore holes is pumped for game into suitable drinking places like Tebaku, Baracca, Vergenoeg (Tweeputten).

*All unequipped bore holes to be appropriately equipped

*Additional bore holes sunk, especially around Nyae Nyae Pans, south of AHA Mountains and south of Chenngo which due to water shortage are little used by wildlife during the dry season.

*Certain existing water holes like GAM, GURA, GRENSPOS and Mujuri Vley should be reserved for game only.

*Areas with suitable soil should be identified for creation of Gat Dams; cheaper than bore holes.

*Reduction of effective control of lions and leopards, if necessary using sport hunting as the most economic means of control.

Secondary priorities are also listed in this report which should be considered. It is these type of very practical undertakings that should be costed as part of the economic investments needed to manage wildlife in the NGO subgrant proposals. These management recommendations should be integrated into the landuse plan. There should be a strong link to MWCT, other relevant government agencies and the private sector (e.g., Namibia Professional Hunters Association and the Federation of Namibian Tourism Associations) whose members have the expertise to help plan and implement such practical management undertakings.

Rather than studying the matter to death before making a decision, it is recommended that a practical proactive "Adaptive Management" approach be taken with a strong monitoring component based on the advice of seasoned management personnel and the professional hunter who is also a successful game and livestock rancher.

3.1.1.1 Typical Economics Of Sport Hunting. The following information is exemplary only, and is based upon the economics of Sport Hunting in Zambia. It demonstrates the relatively simple information needed to understand the economics of sport hunting and is expressed in relatively simple terms. Similar information can be compiled for various forms of tourism or other resources. The analysis and terminology can be understood by most everyone.

Based upon discussions with professional hunters working in the field, the following costs can be allocated to operating a sport hunting concession assuming a daily client fee to the hunting operator of $US 800 (Can be as high as $US 950/day) for a Class A Hunting Block:

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*Salary of Professional Hunter	$US 225-250/day
*Operation of Hunting Camp	150-200/day
*15% Overseas Booking Agent Fee	120/day
(Note:15% to PH if has own clients with potential to be shared with community, though some will be needed to market hunt at annual Safari Club International conference in Reno, Nevada)	
Total Maximum Daily Cost To Safari Operation	$US 570/day

In essence, all profits from safari hunting beyond this daily cost have the potential to be shared between the Government of Zambia, NPWS and the Wildlife Management Authority.

A typical "CLASS A HUNTING BLOCK" in which an overseas sportsman will come for a two week lion or leopard hunt, plus a sable, buffalo and a few other antelope can typically support 18 clients on two week hunts, or 36 weeks of hunting pressure.

*Client Pays Per Day	$US 800
*Minus Cost To Safari Operator	-570
*Money left Over for Community/Govt but which is currently lost by going through Safari Operator instead of a direct contract with a professional hunter	230/day
*Plus daily concession fee-paid by client in addition to the daily rate[2]	+140
*Total Daily money to available to split between Zambian Government, Nat. Parks&Wildlife and GMA Communities	370/day
or	
Times 252 days from 36 client weeks	93,240

[2]While Safari Companies charge overseas sports hunters $US 1,000/week/hunter, ADMADE/NPWS is paid only $US 150/week/hunter. It is believed that such fees do not exist in Namibia and may be an additional source of income for the rural communities (e.g. Six, two-week hunts in Eastern Bushmanland could generate an additional $US 12,000 (R 32,400)/yr.

*Plus 18 clients at an average of $US 4,000/client in game license fees (Trophy or Head Tax)	72,000
Total to be split between GMA, NPWS and Govt	$US 165,240

Gross revenue generated from a Class A Hunting Block is $US 273,600.

It is this type of basic information that MWCT, the NGO's and the local communities need to understand if they are to undertake joint ventures with the private sector. The above information can be used as a basis in adapting appropriate figures from Namibia for the purpose of better understanding the economics of the sporthunting industry.

3.1.2 Forestry. Approximately 66% of Bushmanland is considered a Forest Reserve by the Directorate of Forestry. With appropriate policy reforms, valuable hardwoods, such as Rhodesian teak, could provide the basis for a labor intensive community enterprise with major economic returns, both to the community and to individual heads of households.

There is currently one concession, on the Western Edge of Eastern Bushmanland, let to an outsider to selectively harvests Rhodesian Teak that brings approximately R 100,000 year into the coffers of the Namibian Government. The Bushman community is not employed in nor does it receive benefits from harvesting these resources. The Bushmanland Environmental Planning Committee in their July 1992 meeting requested policy reforms that would return the right to them to sustainably manage and economically benefit from forests found within their geographical area. If this takes place, they will need training in timber cruising, timber falling, transport, sawmill operation and maintenance, and marketing.

Care must be taken that any such initiative is based upon sound landuse planning which assures protection of those forested areas critical to wildlife, as wildlife is considered to have the greatest comparative economic advantage and is the preferred land use for the area. Timber surveys must mapped and be overlain with critical wildlife habitat. This should be a major goal in the first year of funding in this target area.

A survey and a management plan is needed to assess the potential to harvest acacia bush in the area as a source of commercial charcoal. Someone involved in this industry might be invited to assess this potential, along with a forester from the Directorate of Forestry who could ascertain the sustainability of such a practice. Currently, commercial farms in Namibia produce large quantities of charcoal from acacia bush on their lands. Fifty percent of this production is exported to the lucrative overseas European market.

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There is no reason, if adequate resources exist, why the communal lands can not establish sustainable offtake programs which tie into this market, with the possibility that sustainable use of acacia bush would likely generate more income and provide a better quality of life than taking this natural system out of production and trying to survive from subsistence agriculture in these marginal areas.

Policy reform on the behave of the Directorate of Forestry, giving stewardship over this resource to the local community will also be critical to whether forestry becomes a long term sustainable industry protected by the community

3.1.3 Alternative Tourism. Alternative Low Volume Tourism, such as community based guide services for foot and ornithological safaris, pay-to-camp sites, handicrafts and model villages will provide high returns per investment, moderate returns per unit area, moderate profitability and high job creation/satisfaction among the community.

Alternative forms of Supply Driven Tourism in which the local communities would be active participants and which have been discussed include:

*Craft marketing,

*Demonstration Villages for tourists,

*Training Bushmen to become professional trophy hunting guides to take out bowhunters and eventually big game hunters,

*Developing pay-to-use camping facilities,

*Providing a Bushman Guide Service for tourists coming into the area; both foot and vehicle safaris.

*Conducting ornithological tours when the local pans are seasonally inundated and serve as important waterbird habitat.

While these are being discussed by everyone, not one piece of information has been seen with regard to the economics and income generating potential of such activities. In the first year of the project representatives from the Federation of Namibian Tourist Associations should be involved ir looking at the market potentials in these areas and the opportunities for joint ventures through interested members of their association.

Also marketing is extremely important. For instance, by failing to undertake marketing, a recent shipment of traditional Bushman Art to the United States was thrown overboard because, being made of veld products, it had not been properly treated chemically in order to assure that it was pest free and thus failed to pass U.S. Department of Agriculture requirements at the port of entry.

Likewise, investigations should be made to determine if Namibia is a favored nation with regard to the Unites States. If so, a properly filled Form A, usually obtainable from the Ministry of Foreign Affairs, that states 35% or more of the product and its workmanship originates from within the favored nation can enter the United States duty free. This can provide a major comparative economic advantage for Namibia over other countries in marketing its goods.

As an example of alternative tourism, in the IRDNC Purros Project undertaken with the Himba Nomads of Kaokoland, tourists pay R25/person to visit the area. This has netted approximately a total of R 40,000 over the last 3-4 years for the community. Additionally, a handicraft industry has been developed to take advantage of the purchasing power of the tourists.

3.1.4 Potential For Livestock Production In Eastern Bushmanland. Some potential exists to develop small scale livestock production, though the fact that Bushmanland is in the "Red Zone," or foot and mouth zone, limits the potential to develop this area without jeopardizing wildlife due to the fencing of Kaudom Park which would be required in order to move Bushmanland into the foot and mouth "Free Zone." Such fencing would not only be harmful to the wildlife populations in the Park which use Bushmanland as a rainy season dispersal area, but would drastically reduce the available game for traditional hunting and for economically important sport hunting. Any considerations for the expansions of such livestock production would have to be part of an integrated landuse plan, currently being undertaken in the area.

Currently, due to the new Government's politics, "One Namibia One Nation," there is tremendous political pressure to move people from the more populated and thus environmentally degraded communal areas, as well as, Herero refugees from Botswana (Approximately 4,000 Herero refugees with 50,000 head of cattle) without considering the landuse potential/economics, and the human/livestock carrying capacity of Bushmanland. This would be not only disastrous for wildlife but for the Bushman culture as well.

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3.1.5 Dryland Agriculture. In the July 1992, Bushmanland Environmental Planning Committee, discussions took place with regard to developing small scale dryland agriculture for both subsistence and economic purposes. The Nyae Nyae Development Foundation has already begun pilot drip irrigation projects. Prior to entering too far into this endeavor, the technological and long term economical sustainablity of irrigation in Bushmanland should be investigated in collaboration with the Directorate of Agriculture.

In many dryland areas of Africa, insensitive decision-makers and planners have jumped full bore into irrigation schemes without addressing water quality or quantity. For instance, many NGO's working in Mozambique have run into major salinity problems completely ruining their hopes for this technology as a source of increased crop production. Between Zeerust and Rustenberg, in the Transvaal of South Africa, huge areas of commercially irrigated lands have been abandoned due to a combination of soil salinization and depletion of the groundwater table.

In most cases this results from the failure to have accurate agronomic advice prior to entering into such endeavors. In the case of water quality it will be important to have all waters being considered for irrigation tested for magnesium, sodium and potassium. These parameters should be input into the Sodium Adsorption Ratio (SAR) developed by the U.S. Soil Conservation Service, as an indicator to what degree salinization might become a problem, and given the degree of the potential problem, the cost effectiveness of mitigative measures. It appears that for Eastern Bushmanland, water quality data may exist from the Department of Water Affairs. It is very likely, that application of this data to the SAR by a qualified technician is all that would be required in locating or determining what if any bore holes are suitable for irrigation.

Likewise, soils will need testing for both chemical and physical traits (e,g, Quality of drainage) and quantitative estimates of water supplies most be determined to assure sustainability.

3.2 The Economic Potential Of Natural Resources In Caprivi.

Plans exist to operate the West Caprivi Game Reserve in the flavor of a UNESCO "Biosphere Reserve". Two core "exclusion" areas will be established and will be operated along the lines of classical parks for game viewing safaris:

*Along the western edge of the Reserve from the Okavango River east to the 22nd parallel,

*Along the Eastern edge from the Kwando River west to the 23rd parallel.

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PROFILE

NAMIBIA ANIMAL REHABILITATION, RESEARCH & EDUCATION CENTER (NARREC)

Type: Nonprofit veterinary clinic and educational center located in Windhoek.

Basic purpose: Rehabilitation of injured animals, environmental education, research and tertiary education.

Structure: Independent organization with funding from several donors.

Accounting: Detailed accounts of funds expended are provided to donors. An outside auditor audits accounts.

ADDITIONAL INFORMATION:

The Center carries out activities which benefit wildlife directly and provide "hand on" environmental education for students. It is one of the few research and education facilities for conversation agencies, veterinary scientists, biologists and similar scholars in Namibia. The Center in Windhoek also works closely with the impoverished communities in training persons selected from there for jobs in veterinary medicine and wildlife conservation.

The year 1991 saw 500 students visit NARREC and the pace of visits in 1992 is double last year. There are over 25,000 students in the Windhoek area and the Center hopes to eventually reach all of them. The Center is also planning to have camping facilities to provide the students with a "camping experience" to add to the "hands on" environmental education received.

PROFILE

NAMIBIA DEVELOPMENT TRUST

Type: Trust. Board of Trustees consisting of church leaders, labor officials and the President of the National Students Organization.

Basic Purpose: Community Development in urban and rural Namibia. NDT is also the organizer of the Namibian NGO Forum, a group of locally based NGOs and CBOs.

Structure: Originally created by the Council of Churches of Namibia, now an independent organization with staff of 10.

Accounting: Has its own bookkeeper, audited by outside auditor. Programs are evaluated every six months with report to donors.

ADDITIONAL INFORMATION:

NDT's work in conservation and environment protection is through its activities with communal farmers. NDT sponsors programs for communal farmers which include improvement of livestock, better water utilization, providing technical assistance, training in various agricultural practices, seminars and workshops on marketing, credit and extensive training in environmental protection.

The environmental component of its communal farm work is a carefully constructed program. The NDT program officer and four community representatives are to be sent for conservation courses in Kenya and Zimbabwe organized by Kengo and ENDA. The group will also plan to attend courses on reforestation, with the program officer also participating in courses on land use management. These key people will then conduct seminars in their respective communities and initiate community reforestation and conservation activities.

PROFILE
NAMIBIA NATURE FOUNDATION

Type: Foundation

Basic Purpose: Fund raising and Financial Backstopping for Conservation and Environmental Projects.

Structure: An independent organization operating under a Board of Trustees with substantial support from Alt Hana List Group. It has two full-time employees.

Current Activities: The Foundation has become the nexus of external fundraising for conservation programs in Namibia. It solicits funds and then allocates them among projects accepted by its selection committee. From Oct 1989 to Oct 1991, R 585,000 have been expended on projects and R 2,855,000 worth of projects have been accepted for funding.

Accounting: Accounts are kept in accordance with general business practices and are audited by an outside auditor.

ADDITIONAL INFORMATION:

The activities of the Foundation are growing faster than its organizational ability to keep pace. Moreover, while its facilities and its director are provided without charge by Althaver List, Namibia's largest business group, the director's salary is structured as a loan to the Foundation that is reported annually. Several income generation initiatives are being developed to make the Foundation's financing less dependent on its principal contributor.

The first income source will be the Foundation's corporate membership scheme, "corporate ecology". This will generate discretionary funds for the Foundation. Further along two parallel businesses will be established to complement the work of the Foundation and to provide additional sources of revenue. One of these will be an ecotourism company that will work with the NGOs funded through the Foundation in assembling travel packages for this sector of the tourism market. Another will be a firm to market wild plant products developed by NGOs funded by the Foundation.

PROFILE

NAMIBIA SPORT AND RECREATION CLUB (NSRC/NASOK)

Type: Independent non-profit organization.

Basic Purpose: Upliftment of disadvantaged Namibians through athletics and community service work.

Structure: Chairman and Secretary are volunteers. Board of Directors are also volunteers.

Accounting: Accounts maintained by director

ADDITIONAL INFORMATION:

The NASOK/NSRC "Bioland" project is a multifaceted conservation/environmental awareness campaign designed to get maximum community participation in efforts to improve the natural habitat. The project is composed of several specific actions.

The National "Tidy-up" Operation involves students in community clean-up activities where they are taken to areas that as a group they clean of litter and garbage. "Rhino and Rubbish" is a joint project to educate school children about the destruction of the natural habitats of endangered species by man. "Where's Your Habitat Gone?" is aimed at educating adults about ecological destruction, how to prevent it, how to avoid it, and how to correct it. The Bioland Awareness Campaign is a media and billboard campaign to make people more aware of environmental protection. NSRC/NASOK Bioland Leagues promote environmental concern through sports activities for the students involved in the "Tidy-up" Operation.

While the program has been mainly directed toward the Windhoek area, NASOK/NSRC has recently worked with the Save the Rhino Trust to promote nationwide the concept of community involvement in conservation.

PROFILE

NAMIBIAN ASSOCIATION OF NGOs (NANGOS)

Type: Umbrella nongovernmental organization.

Basic Purpose: Sharing of experiences among the NGO community and pooling resources for specific community projects.

Structure: Composed of 24 member NGOs and 6 Regional Farmers' Associations.

Accounting: Accounts kept by volunteer staff.

ADDITIONAL INFORMATION:

NANGOS is directly supporting a community based project called the Eastern Region Environmental Project. Activities are aimed at pollution control and protection of natural flora and fauna. Specific problems addressed are destructive utilization of brush for firewood and overhunting of game animals. The project is at present organized, operated and funded by concerned teachers from the community. They engage their students in clean-up campaigns and foster better understanding of the natural habitat among the students and community at large. NANGOS would like to build on this initial experience by establishing a permanent center for environmental education that would train key persons, most likely teachers, from other communities that could then initiate similar projects in their home communities.

PROFILE

NAMIBIAN CENTRE FOR HOLISTIC RESOURCE MANAGEMENT

Type: Non-profit organization

Basic Purpose: Holistic management teaches people to pinpoint and address the causes of land, wildlife, and financial deterioration rather than applying "quick fixes" to the symptoms. It is a process of goal setting, decision making and monitoring through which stable environments are created with sound watersheds thereby restoring profitability to agriculture and increasing citizen participation in resources management.

Structure: An independent association of members guided by a board, consisting of full time farmers, and funded currently through membership fees and private sponsors.

Accounting: Outside auditors monitor accounts, while annual progress reports are presented on the Annual General Meeting. Minutes of each Board Meeting are also kept.

PROPOSED PLAN:

The Centre plans to expand and diversify its range of resource management activities especially those concerning communities in the so-called communal areas. This goal can at this stage not be achieved to the fullest extent, because the Centre is currently run by full-time farmers with a wide range of commitments. The time has therefore come to employ a permanent executive officer who would be able to direct the training and community activities, which would be necessary to lead to sustainable resource use. The establishment of an office including support services would be around $120,000, while another $200,000 would be needed for a bridging period of two years till the funding of the Center is stabilized and self sustaining.

PROFILE

NEWVELD VENTURES INVESTMENT AND DEVELOPMENT COMPANY

Type: Private Sector Development Agency similar to a venture

Basic Purpose: Promote economic, financial and industrial development through start-up assistance to community enterprises.

Structure: A non-profit company held by 27 private sector shareholders (donors).

Current Activities: Production of crafts, charcoal, and other products in rural communities and establishing domestic and international marketing channels for those products such as the Craft Center in Windhoek.

ADDITIONAL INFORMATION:

Newveld has established community based industries in several rural areas of Namibia as well as channels for marketing the products of those industries. One example is its work with the Kavango Wood Carvers Union. It brought some of the carvers from the far north of the country to the Namibian Craft Center in Windhoek, also set up by Newveld, to teach them how to better respond to the needs of the market. This improved the cooperative's production by making it more market oriented.

Another venture is production of charcoal which introduces an alternative fuel, reduces deforestation, combats a nuisance plant (invader bush), creates employment and transfer technology (how to make charcoal) to microindustry operators. This successful enterprise is now experimenting with using the "fines" or ash produced in the charcoal process to make charcoal briquettes.

PROFILE
THE NYAE NYAE DEVELOPMENT FOUNDATION OF NAMIBIA

Type: Non-governmental organization working in Bushmanland.

Basic Purpose: Self development of the Ju/'hoan Bushman people.

Structure: Works as a support organization for the Nyae Nyae Farmers Cooperative.

Current Activities: Development of the Eastern Bushmanland community in an effort to allow this unique community to be self sustaining by effective management of its not yet overutilized natural resources.

Accounting: Annual progress report and accounting of expenditures submitted to all donors. Organization's books are audited by an outside CPA firm.

ADDITIONAL INFORMATION:

The Foundation was established in 1981, and its community based counterpart, the Cooperative, in 1986. It represents the best example in Namibia of a sound, functioning NGO/CBO relationship.

The Foundation's own projects to develop the Ju/'hoan community rest on the principle that the community must have a secure land tenure system based on traditional values and customs. This is particularly true since the area has better grazing than neighboring areas. Fear of being dispossessed by the Herero Community or having other encroach on the land drives the community and the Foundation.

PROFILE

THE ROSSING FOUNDATION

Type: Community Development and Educational Organization.

Basic Purpose: Creation of jobs and income generating activities for disadvantaged urban and rural Namibians.

Structure: Originally the social responsibility program of the Rossing Company, it is now a largely independent foundation which has recently expanded its sources of funds to include international donor organizations.

Accounting: Regular evaluation of projects and complete internal accounts audited by outside auditors.

ADDITIONAL INFORMATION:

The Foundation is focused on rural development and as such is directly related to the concept of community based natural resource management. One of its programs, Conservation Trails, constitutes an "outdoor laboratory" for environmental education. The Director of the Trails program was also the driving force in the construction of an environmental education center at Wereldsend that is managed by another NGO, Integrated Rural Development and Nature Conservation and has been a leading force in environmental education.

PROFILE

THE SMALL INDUSTRIES PROJECT

Type: Non-governmental organization based at Brakwater.

Basic Purpose: Development and promotion of renewable energy technology. Training and creation of informal sector employment opportunities.

Structure: A project of the Methodist Church but with an independent constitution.

Current Activities: Development and promotion of fuel-efficient wood-burning stoves for domestic and institutional uses. Training of domestic stove manufacturers.

Accounting: Bookkeeping is subcontracted to a professional accountant and is subject to an independent, annual audit.

ADDITIONAL INFORMATION:

The Small Industries Project wishes to expand and diversify its activities. However, the financial security of the project will decrease considerably in 1993 when the principal donor ends its support. The Small Industries Project plans include:

a) Development, promotion, training and extension with regard to fuel-efficient wood-burning domestic stoves that are constructed out of local natural resources such as clay.

b) Development and promotion of biogas digesters to power water pumps, refrigerators and stoves.

c) Development and promotion of fuel-efficient wood-burning stoves that both cook food and heat water for bathing and washing.

d) Development and promotion of fuel-efficient wood-burning ovens for rural and urban bakeries.

e) Promotion of small sheet-metal industries to produce pots, pans, jugs, buckets, lanterns, lamps, etc.

The Small Industries Project will also continue to promote and train people in the production of the successful metal stoves that the project has already developed.

PROFILE

THE SAVE THE RHINO TRUST

Type: Non-governmental organization working with communities in Damaraland.

Basic Purpose: Conservation of certain endangered species, specially rhino and elephant, through community-based protection schemes.

Structure: Independent organization with main center located in Damaraland.

Current Activities: Several programs focused on protecting wildlife by directly involving the local inhabitants through game wardens and the establishment ecotourism camping facilities.

Accounting: Audited, annual financial statement is provided to all donors and other interested parties.

ADDITIONAL INFORMATION:

The Trust has grown faster than its administrative structure can support. Its annual expenditure on field activities has grown from R 100,000 to R 320,000 and it now has a field staff of 48. Lack of adequate institutional infrastructure - permanent administrative and promotional staff, office, communications and publication equipment, and vehicles - impedes its ability to operate effectively and is the source of concern among the organization's leadership and donors.

PROFILE

WILDLIFE SOCIETY OF NAMIBIA

Type: Non-profit organization.

Basic Purpose: Conservation of Wildlife and sustainable utilization of natural resources.

Structure: Membership of 450-500 support organizations and its work. Three centers - Windhoek, Swakopmund, and Tsumeb.

Current Activities: Conservation and protection of wildlife through education, assistance to community based projects and advocacy. Distributed 1000 tree seedlings to bushmen in the north and will buy back trees when they reach commercial size. Set up the recycling of glass operation in Swakopmund. Publishes "Roan News" and holds monthly series of talks.

ADDITIONAL INFORMATION:

The Society believes that the main need in environmental protection and conservation in Namibia today is to position people on site in the communities to deliver advice, assistance, education and guidance. It proposes doing this with full time environmental education officers to carry out its programs.

ANNEX K

ZOOLOGICAL SOCIETY OF SAN DIEGO RESEARCH PROPOSAL

DIRECTORATE OF WILDLIFE CONSERVATION AND RESEARCH

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Etosha Ecological Institute
P.O. Okaukuejo
Via Outjo
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1992-08-02

Dear Richard

COOPERATIVE RESEARCH IN ETOSHA NATIONAL PARK

This letter is to confirm that the USAID project "Changing large mammal abundance in the Etosha ecosystem and its impact on conservation and economic development in Namibia" is a cooperative research project by the Zoological Society of San Diego and the Etosha Ecological Institute of the Ministry of Wildlife, Conservation & Tourism. We have a long-term agreement with the ZSSD regarding cooperation in the fields of research, training and funding, and the USAID project fits this agreement perfectly. Not only will staff and associates of the ZSSD be involved in this project, but research staff in Etosha will devote the bulk of their time in the next 3-5 years on this project.

We have an excellent working relationship with the ZSSD, and are looking forward to participate in the USAID funded project as equal partners.

Thank you again for making this project possible.

Yours sincerely

Dr. M. Lindeque (Head: Etosha Ecological Institute)

All correspondence to be addressed to The Director: Wildlife Conservation and Research
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CHANGING LARGE MAMMAL ABUNDANCE IN THE ETOSHA ECOSYSTEM AND ITS IMPACT ON CONSERVATION AND ECONOMIC DEVELOPMENT IN NAMIBIA

A Biodiversity Project

Formal Proposal to USAID, Namibia Mission

Richard Shortridge, Jr., and Mark Johnson

5 Dec 1991

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SUMMARY

The government of Namibia is intent on developing self-sufficiency through a wildlife- and tourist-based economy. The following program is designed to enhance Namibia's efforts to achieve their goal through sustained uses of wildlife. Etosha National Park is a critical link in this development scheme. Etosha is Namibia's centerpiece for attracting international tourists, the nucleus for economic development on adjacent communal and private lands, and the only realistic source of wildlife for repopulating many depleted areas throughout Namibia, especially northern communal areas. However, the continued decline of Etosha's plains wildlife compromises international tourism, restoration of wildlife populations, and a wildlife- and tourist-based economy. The proposed 5 year program addresses these problems by (1) identifying biological factors responsible for the declining plains wildlife populations; (2) implementing strategies that increase the abundance of plains animals necessary to sustain a thriving tourism industry; (3) collecting socio-economic information to determine what local people and tourists want from wildlife and wild lands; (4) beginning the restoration of wildlife in some depleted areas and augmenting wildlife in other areas to benefit rural people; and (5) training Namibians in methods required to continue facets of the program, promote self-sufficiency, and maintain biodiversity.

THE PROBLEM

Etosha National Park is Namibia's primary international tourist attraction, principally because Etosha has supported large herds of plains animals and their predators. Etosha is also attractive because it is home for five conspicuous endangered or threatened species (black rhino, elephant, Hartmann's zebra, black-faced impala, and cheetah). Thus, the preservation of Etosha as a large intact ecosystem is critically important for maintaining international tourism and biological diversity.

A strong wildlife- and international tourist-based economy in Namibia is dependent on healthy plains wildlife populations in Etosha. Most foreign currency derived from tourism in Namibia is dependent in some way on Etosha. Wildlife populations in Etosha are potentially the nation's major source of animals to repopulate areas where humans have dramatically reduced or extirpated wildlife, such as most communal lands. Restored wildlife populations can be the foundation for additional tourism, protein resource, game ranching, and wildlife-based cottage industries.

A major impediment to achieving a wildlife- and tourist-based economy is the decline of most major wildlife populations on Etosha's plains, which will inevitably compromise Namibia's tourist industry and the potential restocking of areas depleted of wildlife. The plains populations include wildebeest, plains zebra, springbok, gemsbok, eland and the carnivores and scavengers that depend on them as food sources such as lions, cheetahs, hyaenas, jackals, and vultures. To date, no

comprehensive, systematic study of factors causing the decline of plains wildlife has been initiated. Details on the declines are in Appendix 1.

A second impediment to achieving a widespread wildlife- and tourist-based economy in rural Namibia is the low density of wildlife on communal lands. Drought, competition with domestic stock, and unrestrained harvests of wildlife decimated the wildlife populations from the 1960's through the early 1980's. Restoration of wildlife populations on communal lands must occur before rural Namibians can derive substantial sustenance and economic benefits. Through appropriate assessment and management, Etosha's wildlife populations can be the source for restocking these areas. However, prior to restocking, rural people must participate in the development of wildlife restoration plans that will result in sustainable wildlife use. Currently, several opportunities for restoration exist in Owamboland and Kaokoland. Rural people must be the primary conservators and beneficiaries of these wildlife programs, otherwise attempts at restoring wildlife will fail (Cumming and Taylor 1989, Owen-Smith and Jacobsohn 1990).

Clearly, there is a need to understand what factors have caused the decline in plains wildlife in Etosha and how managers can alter these factors so that the plains ecosystem promotes a wildlife-based economy in Namibia. Adapting this information and applying it to potential restocking of rural lands affords an opportunity to provide a model system for wildlife conservation/management and to directly influence rural socioeconomics through the use of natural resources from a park.

PROGRAM GOALS

The overall goal is to contribute to Namibia's economic self-sufficiency through diverse and sustained uses of wildlife and, in the process, enhance and maintain Namibia's biological diversity. This will be accomplished by:

1) Identifying factors causing Etosha's core plains wildlife populations (wildebeest, plains zebra, springbok, and gemsbok) to decline or remain at low densities.

2) Developing conservation strategies that maintain or increase Etosha's plains animals to support a thriving tourist industry and restore wildlife in depleted portions of Namibia to benefit local people through meat production, tourism, and cottage industries.

3) Training Namibians in conservation methods that sustain wildlife-based economic development and conservation.

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PROGRAM DESCRIPTION

A proposed [illegible] economic development, environmental education, and biological diversity in Etosha and adjacent areas. Technical details on phases 2 and 3 are presented in Appendix 1.

Phase 1: Compiling A Historical Perspective of Wildlife Population Dynamics–Year 1

We will continue our comprehensive analysis of past data on plains wildlife populations in Etosha, adjacent study areas, and the communal lands. Published and unpublished historical data and reconnaissance trips are being used to describe population sizes, trends, and potential factors limiting population growth of plains zebra, wildebeest, springbok, and gemsbok.

Significance: A historical perspective is essential for understanding how past events shaped the ecology and economy of the Etosha region and for designing new research and management programs.

Phase 2: Establishing Ecological Monitoring Programs–Years 1-2

We will establish a monitoring system for parameters that describe the dynamics of plains zebra, wildebeest, springbok, and gemsbok populations, and their foods, predators, and diseases. Numbers of plains zebra, wildebeest, springbok and gemsbok will be estimated from annual aerial surveys, and their movements, habitat use, areas of high mortality, and mortality rates will be estimated from ground surveys and from tracking radio-collared animals. Predator numbers will be estimated by techniques that rely on marking and resighting many individuals in the populations (White et al. 1982, Stander 1991). Predator movements, kill rates, and species killed will be monitored by following radio-collared predators (Gasaway et al. 1989, 1991; Stander 1992). Diseases affecting the animals will be monitored from blood and other tissue samples obtained from captured or dead animals.

Significance: These scientifically sound ecological monitoring techniques provide information essential for developing comprehensive wildlife and wildlife-based economic programs in the Etosha region.

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Phase 3: Determining Factors Preventing Growth of Plains Zebra, Wildebeest, Springbok, and Gemsbok Populations--Years 1-5

In this phase we collect extensive data needed to assess the roles nutrition, rainfall, disease, predation, and removal of animals by humans play in causing declines and preventing growth of populations of the four plains wildlife species. Hypotheses stating possible causes for declines or lack of population growth will be rigorously tested using scientific methods, statistical procedures, and computer modeling. The end product will be an understanding of what factor(s) regulate animal abundance and which factor(s) must be altered for populations to grow.

Significance: This information is critical for building management strategies that allow plains animals to increase in numbers and for establishing minimal/maximal removal rates of plains animals for translocation from Etosha to other areas.

Phase 4: Training Namibians--Years 1-5

Enhancing Namibians' skills in natural resource management is essential for developing a sustainable wildlife- and tourist-based economy. To help achieve this end, a cooperative training program is being developed among the University of Namibia (U of N), the University of California (U of C) at Santa Cruz, Etosha Ecological Institute, and the Zoological Society of San Diego. Our emphasis will progress from basic education towards training wildlife professionals. Initially, we will focus on upgrading the education of outstanding Ministry employees to qualify them for advancement and allow entry into the U of N's Wildlife Conservation Management Program, a program that trains senior rangers. We will participate with environmental education centers in Etosha, Ovamboland, and Namib-Naukluft Park and instruct U of N undergraduate Life Science students in research and management methods during their field trips in Etosha. Following the inception of the U of N's Honors degree program in 1993, we will support 2 Honors students per year that undertake field projects in Etosha. We will support two M.Sc. students for 2 years when the U of N starts a M.Sc. program in 1994. The U of N will not have a Ph.D. program in the near future, but qualified Namibian students may enter the Environmental studies program at the U of C and will be given some support in Etosha. Namibian students will also learn research and management methods in a field setting by working along side our project staff; ultimately they should develop the skills needed to replace foreign ecologists.

Significance: Only by training Namibians in conservation methods will Namibia build self-sufficiency in conserving its natural resources and developing a wildlife- and tourist-based economy.

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Phase 5: Assessing Attitudes Towards Conservation and Economic Development—Years 1-3

We will develop an understanding of rural people's problems with and attitudes toward wildlife, its uses and conservation. A socio-economic survey of a cross-section of people living on communal lands near Etosha will be the basis of the assessment (Infield 1988). The end product will be recommendations on how economic development, conservation, and people's aspirations can be best integrated.

Significance: Recommendations resulting from this survey are critical to guide future conservation, economic, and community development programs in the buffer zone around Etosha.

Phase 6: Developing and Implementing Conservation and Economic Strategies—Years 1-

The results of Phases 1-5, along with practical experiences from programs in Zimbabwe, Kenya, and Botswana, will be used to assist communities, NGO's, private ventures, and government in developing a suite of integrated conservation and economic strategies for Etosha and the surrounding area. Emphasis will be on tactics that maintain or increase plains wildlife in Etosha and the adjacent buffer zones and that yield a variety of sustainable wildlife use programs and diversify tourism. A pilot program of wildlife- and tourist-based economic development will begin in year 1 in the buffer zone adjacent to northwestern Etosha. This pilot program will initially include the restocking of wildlife and the development of water points exclusively for wildlife. The relatively small number of animals needed for restocking during the pilot project will not compromise Etosha's populations prior to population increases. Rural people living near Etosha will play a major role in determining program goals especially in the buffer zone. Buffer zone programs will be designed to benefit local residents and their enthusiastic participation and eventual control of programs is essential. Full implementation of conservation and economic programs is a long-term project for many organizations and is beyond the scope of the present proposal. Workshops will be held in years 3 and 5; the objectives will be to exchange information that enhances wildlife based development programs and specifically to help develop a suite of management options for the Etosha region.

Significance: This is the phase where conservation and economic benefits begin to accrue to the people of Namibia and newly trained Namibians participate in developing a sustainable wildlife- and tourist-based economy.

EXPECTED RESULTS AND RELATIONSHIPS TO OTHER PROGRAMS IN NAMIBIA

Results of the proposed 5-year program will help guide and develop a sustainable wildlife- and tourist-based economy in Namibia. Expected tangible results of the program are (1) helping to

secure Etosha's future as a national park by putting in place conservation strategies that maintain or increase Etosha's wildlife, diversity, its use, and strengthen its international tourist appeal; (2) understanding rural people's problems with and attitudes toward wildlife use, protected areas, and conservation, and making recommendations for integrating rural people's aspirations, conservation and economic advancement; (3) assisting in developing sustainable wildlife use programs and tourism in Etosha and adjacent communal lands; (4) setting the stage for larger scale wildlife restocking programs in Namibia once Etosha's populations are increasing; (5) training Namibians in research and conservation methods; and (6) maintaining biological diversity.

The above results will be of direct use in other on-going and planned wildlife- and tourist-based economic and conservation programs. The following are some examples of how such information has and can be used in Namibia. 1) Sustainable wildlife use and tourism is currently being planned along a buffer zone on communal land adjacent to Etosha's west and north boundaries. Participants include local communities, private ventures, and the Ministry of Wildlife, Conservation and Tourism. The influence of Etosha would be extended beyond its boundaries and in some areas semipermeable boundaries would allow wildlife to leave the park. The goals include restoring wildlife and wildlife management authority to local communities thus allowing them to benefit directly from Etosha and their own conservation practices, restoring and maintaining biological diversity in local areas, and increasing Namibia's tourism and foreign exchange. Long-term goals include diverse forms of tourism, meat production, subsistence and trophy hunting, sale of live game, development of cottage industries, and employment. Results of our proposed program could be applied in this buffer zone development. 2) A wildlife use program in Damaraland now provides meat and animal products to communities on communal lands. This is a joint venture of local communities, government, private donors, and NGO's. Restocking Etosha's wildlife to other portions of Damaraland and to Kaokoland and Ovamboland will eventually allow the expansion of such programs. 3) Commercial game farming can be accelerated as breeding stock of native species becomes available from Etosha's increasing wildlife populations. These farms generally cater to foreign markets and provide wildlife viewing, trophy hunting, and meat for local and export markets. 4) Environmental education centers such as those planned in Etosha, Owamboland, and Namib-Naukluft Parks and the University of Namibia's Life Sciences and Wildlife Conservation Management programs will receive classroom instruction, written material, and field training of students from our proposed program.

SIGNIFICANCE TO ECONOMICS AND CONSERVATION

Namibia is in the process of land reform, and decisions made during the next few years may dictate land use, economic development, and conservation options for the future. Unemployment and poverty are major causes driving land reform efforts. An urgent need exists to foster wildlife- and tourist-based economic development and conservation. Integrated conservation and economic

enhancement programs must be proposed and initiated before they are precluded by programs that commit to other land use schemes. Etosha National Park can be the immediate basis for expanding wildlife-based economic development because a superb infrastructure exists and is secure, the park is large (22,270 km²), and its diverse habitat can support large numbers of animals and tourists. Also, diverse uses of wildlife along the borders of the park can be rapidly developed, thus offering economic options on adjacent communal lands where few opportunities now exist for rural people. From a long-term perspective, Etosha can supply wildlife to restock other depleted communal lands. But, to sustain these Etosha-based programs declines in some of Etosha's wildlife populations soon must be reversed. If declines continue, opportunities for sustainable wildlife-based economic development and conservation may be irreparably compromised.

We predict that the continued decline of plains animals in Etosha will have dyer economic and conservation consequences in much of Namibia. Continued declines will most likely preclude the development of a significant tourist- and wildlife-based economy. This conclusion is based on: 1) A survey of visitors indicated Etosha and its wildlife was the primary factor attracting foreign tourists (Ministry of Wildlife, Conservation and Tourism). 2) About 80% of visits to other government-operated parks, reserves, and recreation areas were spin-offs from their visit to Etosha. 3) Etosha generates about 50% of all revenue spent in government-operated parks, reserves, and recreation areas. 4) For each dollar spent by foreign visitors in these government-operated areas, visitors, attracted to Namibia by Etosha, spent $10 elsewhere in Namibia; these visitors spend about US$100,000,000 per year. A significant portion of this amount is at risk.

The loss of foreign exchange from tourism will have widespread economic consequences. 1) Tourist dollars that help support rural and urban economies will be lost. 2) The loss of tourists in Etosha will close the door to additional economic options on adjacent communal lands where there are few economic options to subsistence living. 3) The loss of tourist dollars will also reduce the incentive for Namibians to maintain or increase wildlife. This situation may fuel a downward spiral in wildlife numbers and economic growth—fewer animals results in fewer tourists—fewer tourists result in less effort to conserve animals. Eventually, wildlife and wildlands may be replaced by domestic stock and human settlements. There is a precedent; about one-half of Etosha was removed as recently as 1970—most was used for human resettlement. Pressure to repeat this for western Etosha continues. If Etosha cannot pay its way and offer direct benefits to local rural people and the nation as a whole, all or part of it may be lost.

BUDGET JUSTIFICATION

The proposed budget is in Table 1 (page 1[illegible]). Values are in US dollars and budget years 2-3 are adjusted for annual inflation.

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The proposal budget is divided into three source categories: the Zoological Society of San Diego (ZSSD), United States Agency for International Development (USAID), and other funding agencies (OTHER). Agencies providing (or potentially providing funding) in the OTHER category are the US Fish and Wildlife Service, Pew Charitable Trust, Aston-Jones Foundation, Frankfurt Zoological Society, Center for Field Research (Earthwatch), and the Ministry of Wildlife, Conservation and Tourism of Namibia. This is a 5-year research program; funds requested from USAID would be paid during the first 3 years.

Funds from the Zoological Society of San Diego are committed through FY 1994. From FY 1990 through FY 1994 (a five-year period) the ZSSD will have committed over $500,000 to this and other projects with Etosha National Park as the focal facility. (The FY 1991 commitment of the ZSSD is given as an example in Table 1.) In the proposed budget an asterisk (*) in the OTHER category indicates that these funds are currently committed from one or more of the previously named sources.

Specifically, the annual budgets are divided into five sub-headings: LABOR, SUPPLIES, EQUIPMENT, SHIPPING, AND TRAVEL. Equipment is defined as single items with a cost of at least $1,000 and a usable life of three years. Parts (e.g., pumps, solar panels) to be installed by outside contractors are included as supplies in Owamboland operational/supply category.

LABOR: With the exception of one principal investigator (PI), the ZSSD and Ministry assume the PI salaries. The three principal investigators have combined for over 12 years of field work in Etosha (Lindeque, 8 years; Gasaway, 2 years; Phillips, 2 years). The PI's have published over 100 scientific articles including biodiversity (Lindeque), biomass estimates (Lindeque, Gasaway, Phillips), production of wildlife as native food resources (Phillips, Gasaway), and conservation education (Phillips). Dr. Lindeque is a member of the IUCN African elephant and rhinoceros specialist group. Dr. Phillips is a member of the Society for Conservation Biology elementary education group, an advisor to the State of California science curricula task force, and an advisor to the National Academy of Sciences (USA) alternative food resource program. Dr. Gasaway conducted research in Alaska that identified the factors regulating moose populations and their predators and developed wildlife utilization/management programs. The three principal investigators will be involved in, and responsible for, all aspects of the proposed studies.

The request for labor from USAID accounts for 15% of the cost of the entire proposal. The positions requested include technical and clerical support staff to collect, transpose, and analyze data. The salary of Ministry personnel identified as collaborators in Appendix 3 will be assumed by the ministry. The other collaborators, Garth Owen-Smith and Dr. Margaret Jacobsohn, are internationally-known ethno-sociologists and conservationists, and are essential for assessment of the attitudes of rural people toward sustained wildlife utilization. Funds are requested from USAID to support a percentage of their salaries. Throughout the phases of this proposal, the principal investigators will coordinate all projects, but expert collaborators (e.g., Mr. Owen-Smith) will establish the most

appropriate agenda for their portions of the studies (e.g., involvement of rural people with wildlife). USAID is requested to assume costs of a 1-2 month constract with a statician.

SUPPLIES. Over $800,000 in consumable supplies are required to complete the program. Fifteen percent of the supply budget is covered by secured funds, whereas 68% is requested from USAID. Supplies are contained under four major categories: immobilization, radiotracking, Owamboland, and operational.

Immobilization and analysis includes costs to determine the pregnancy rate and nutritional state of animals, and to radiocollar selected individuals. These costs are assumed by the ZSSD as part of its continued effort to support basic management at Etosha.

Radiotracking supplies include the cost of collars required to conduct a three-year analysis of the contribution of anthrax to the mortality of hoofed wildlife, especially zebra, and to assess the impact of predation on pery population. Such knowledge will be essential when animals are translocated to communal areas, such as Owamboland, and for building management strategies for the Etosha region.

Owamboland and Kaokoland, especially tracks of land near northwestern Etosha, have been designated as the site for initial reintroduction of game. This area is termed Owamboland in the budget. Supplies for Owamboland include fence materials for corrals, solar water pumps, and drilling and maintenance of bore holes. The ZSSD has provided supplies for initial bore holes and fencing in FY 1991. Requests for additional Owamboland funds from USAID to supplement ZSSD and OTHER funds are basically restricted to FY 1992.

Operational supplies include fuel and maintenance costs for vehicles and aircraft, office supplies, and computer services. As we are requesting little equipment from USAID, the majority (89%) of the operational supplies to maintain that equipment are being requested.

EQUIPMENT: Eight percent of equipment items, including six vehicles and an airplane, are being funded by the ZSSD and OTHER sources. As in the past, equipment will remain the property of the ZSSD but for specific use in approved projects involving Etosha National Park. Thus, all equipment will remain in Namibia with the exception of the airplane, which will retain a United States registration.

SHIPPING: No shipping costs for equipment are requested from USAID. ZSSD and OTHER sources are covering the transport of vehicles, the airplane, and larger computer equipment.

TRAVEL AND PER DIEM:

Approximately $92,000 are requested for travel costs throughout the study period. Of the total, 37% is assumed by the ZSSD. USAID is requested to pay 52% of the travel and per diem costs.

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FY 93

		ZSSD	USAID	OTHER
LABOR	PI	14,560 (25%)		
	PI	13,520 (50%)	17,600 (50%)	
	PI			1,980 (10%)
	TECHNICIAN 2	12,480 (50%)		
	TECHNICIAN 1		11,000 (100%)	11,000 (100%)
	TECHNICIAN 2		18,700 (100%)	
	CLERICAL		9,900 (100%)	
	MANAGEMENT STUDENTS		9,350 (200%)	
	CONSULTANTS		22,000	
	GRAND STUDENTS			30,160 (150%)
	TRAINEES			22,880
	TEACHER			12,000
				13,520
	SUBTOTAL	40,560 (18%)	88,550 (40%)	91,540 (41%)
SUPPLIES	IMMOBILIZATION AND ANALYSIS	17,680		
	RADIO TRACKING		80,000	10,400
	OWAMBOLAND	22,880	4,160	26,000
	OPERATIONAL		96,500	12,480
	SUBTOTAL	40,560 (15%)	180,660 (67%)	48,880 (18%)
EQUIPMENT	OPTICALS			520
	VEHICLES	37,500		
	COMPUTER/ SUPPORT	3,950		
	NIGHT SCOPE			7,800
	TENT CAMP		13,000	
	SUBTOTAL	41,450 (66%)	13,000 (21%)	8,320 (13%)
SHIPPING		8,500		2,080 (20%)
TRAVEL & PER DIEM		11,650 (38%)	15,800 (52%)	3,120 (10%)
TOTAL		142,720 (24%)	298,010 (50%)	153,940 (26%)
GRAND TOTAL FY 93		594,670		

FY 94

		ZSSD	USAID	OTHER
LABOR	PI	15,150 (25%)		
	PI	14,070 (50%)	19,360 (50%)	
	PI			2,060 (10%)
	TECHNICIAN 2	12,980 (50%)		
	TECHNICIAN 1		12,100 (100%)	12,100 (100%)
	TECHNICIAN 2		20,570 (100%)	
	CLERICAL		10,900 (100%)	
	MANAGEMENT STUDENTS		10,300 (200%)	
	CONSULTANTS		24,200	
	GRAND STUDENTS			31,380 (150%)
	TRAINEES			23,800 (200%)
	TEACHER			13,200 (400%)
				14,070 (100%)
		42,200 (18%)	97,430 (41%)	96,610 (41%)
SUPPLIES	IMMOBILIZATION AND ANALYSIS	22,720		
	RADIO-TRACKING		65,000	10,820
	OWAMBOLAND	23,800	4,330	
	OPERATIONAL		105,000	12,980
		46,520 (19%)	174,330 (71%)	23,800 (10%)
EQUIPMENT				
	SUBTOTAL	0	0	0
SHIPPING		1,080 (33%)		2,160 (67%)
TRAVEL		12,120 (36%)	17,900 (54%)	3,250 (10%)
TOTAL		101,920 (20%)	289,660 (56%)	125,820 (24%)
GRAND TOTAL FY 94		517,400		

Table 1: Proposed Program Budget

	FY 91	ZSSD			FY 92	ZSSD		USAID		OTHER	
LABOR	PI	26,000	(50%)	LABOR	PI	14,000	(25%)				
	PI	6,000	(25%)		PI	13,000	(50%)	16,000	(55%)		
	PI				PI					1,900	(10%)
	TECHNICIAN 2	5,400	(50%)		TECHNICIAN 2	6,000	(25%)				
	TECHNICIAN 1				TECHNICIAN 1			10,000	(100%)	10,000	(100%)
	TECHNICIAN 2				TECHNICIAN 2			17,000	(100%)		
	CLERICAL				CLERICAL			9,000	(100%)		
	MANAGEMENT STUDENTS				MANAGEMENT STUDENTS			8,500	(200%)		
	CONSULTANTS				CONSULTANTS			20,000	(150%)	29,000	(26%)
	SUBTOTAL	37,400				33,000		80,500		40,900	
SUPPLIES	IMMOBILIZATION	10,700		SUPPLIES	IMMOBILIZATION	19,000					
	DRUGS & EQUIPMENT				AND ANALYSIS						
	GLASSWARE/PLASTIC	2,400			RADIO-TRACKING			97,000		30,000	
	OWAMBOLAND	22,000			OWAMBOLAND	22,000		29,000		25,000	
	TOOLS	1,400			OPERATIONAL			89,000		12,000	
	SUBTOTAL	36,500				41,000	(13%)	215,000	(67%)	67,000	(21%)
EQUIPMENT				EQUIPMENT	TENT CAMP			12,000			
					OPTICALS	2,500					
					VEHICLES	37,500					
	COMPUTER	3,800			COMPUTER/SUPPORT	3,500					
	TRAILER	8,500			TRAILER	8,000					
					AIRPLANE					54,000	
					RADAR ALTIMETER			3,000			
					GPS			4,000			
	SUBTOTAL	12,300			SUBTOTAL	51,500	(41%)	19,000	(15%)	54,000	(43%)
SHIPPING		11,400		SHIPPING		7,500	(100%)				
TRAVEL		13,400		TRAVEL & PER DIEM		11,200	(40%)	14,000	(50%)	3,000	(11%)
TOTAL		111,000				144,200	(23%)	328,500	(52%)	164,900	(26%)
GRAND TOTAL FY 91		111,000			GRAND TOTAL FY 92	637,600					

APPENDIX 1. TECHNICAL INFORMATION

THE DECLINE OF ETOSHA'S PLAINS WILDLIFE

In Etosha, surveys and observation indicate numbers of wildebeest, plains zebra, springbok, gemsbok, eland, lions, and cheetahs have dramatically declined since the 1960's or early 1970's. Wildebeest declined from 25,000-30,000 in the 1950's and early 1960's to about 2,200 in 1978 and have remained low through 1990. Zebra declined from about 15,000 in 1974 to about 5,000 by 1990 (Berry 1981b; Berry and Louw 1982a; Lindeque and Lindeque 1987, in review). Gemsbok and springbok declined lesser percentages between 1982 and 1990 (Lindeque and Lindeque 1987, in review). Lions declined from about 500 during the mid 1970's (Berry 1981a) to 270-340 by 1989 (Stander 1991) and about 250-300 by 1991 (L. Scheepers, unpubl. data). Cheetahs, commonly observed during the 1970's, were rarely seen by the mid 1980's (H. Berry, pers. commun.). Similarly, black-backed jackals declined during the 1980's (M. Lindeque, pers. obs.). Population trends are not available for other large carnivores, but their populations also may have followed a downward path.

Several studies have begun to address the causes of the downward trend in zebra and wildebeest populations. Ebedes (1976) suggested anthrax was a major source of mortality for these species during 1966-74. Berry (1981a) concluded anthrax and lion predation were two of the main factors limiting population growth during 1974-78 and that nutrition was not limiting. Preliminary results of a study on plains zebra population dynamics indicate population growth during 1986-91 is limited by high mortality among foals and adults (W. Gasaway and K. Gasaway, unpubl. data); the major causes of mortality have not been defined. Until survival improves, the zebra population will remain at low, and possibly declining, densities. The study of anthrax ecology and its effect on wildlife in Etosha has continued (Winter 1985; Turnbull et al. 1986, 1989; P. Lindeque, unpubl. data), but the degree that anthrax limits population growth remains unknown. Little is known about causes of declines in large carnivores, although food limitations and human killing of predators that leave Etosha probably are major factors.

During the mid 1980's, increased emphasis was placed on evaluating predation as a factor limiting population growth of large grazing mammals. Preliminary information on lion and spotted hyaena demography, prey preference, and kill rates were obtained (H. Berry and L. Scheepers, unpubl. data; Gasaway et al. 1989, 1991; Stander 1991, 1992). Lions were formidable predators on all plains prey populations, killing about 4,400 kg of prey/year/lion (Stander 1992). Recognizing that lion predation may be an important limiting factor, Orford et al. (1988) developed a technique to reduce lion numbers through contraceptive implants in lionesses; this technique has not been used to manage lion numbers in Etosha. Hyaenas were major predators also, killing about 1,400 kg of prey/year/hyaena; plains animals were a large part of that total (Gasaway et al. 1991). Despite

these studies, the effects of predation on prey populations are inadequately understood for developing effective management strategies in Etosha.

DESIGN AND METHODS FOR PHASES 2 AND 3

This section is a detailed description of Phases 2 and 3 of the proposed program and contains some technical terms that will be unfamiliar to readers not versed in ecological jargon. Use of these terms make this section clearer and more concise to the ecologists who will evaluate our approach. We have kept the jargon to a minimum for everyone's convenience. The one term we will define at this time is ungulates—hoofed mammals. We use this to collectively refer to plains zebra, wildebeest, springbok, and gemsbok.

PHASE 2: Establishing Ecological Monitoring Programs—Years 1-2

We will establish monitoring programs for parameters that describe the dynamics of the four plains ungulate populations and their foods, predators, and diseases. During Phase 3, these and other data will be used to identify the factors that limit ungulate population growth.

<u>Ungulate Population Sizes and Trends</u>: Ungulate numbers will be annually estimated during the wet season when ungulates are concentrated and highly visible on a small portion of the plains. Zebra and wildebeest population sizes will be estimated by the number counted during an intensive search from a Piper Super Cub aircraft; large groups will be photographed from the air and counted later (Berry 1981b, Norton-Griffiths 1978). Springbok will be estimated using the two-stage stratified random transect sampling method (Gasaway and Gasaway 1990). Gemsbok is the most difficult species to census. Gemsbok in zebra and wildebeest habitats will be counted during zebra and wildebeest surveys; in the remainder of Etosha, either aerial stratified random transect sampling will be used throughout or intensive aerial surveys will be restricted to limited areas.

Population trends and finite rates of change (lambda) will be estimated from population estimates (Caughley 1977, Gasaway et al. 1986). Juvenile and adult ungulate mortality rates will be estimated from pregnancy, recruitment, and finite rate of change estimates (Sinclair 1974ab, Bergerud and Elliott 1986, Gasaway et al. 1992).

<u>Ungulate Birth and Mortality Rates</u>: Birth rate will be estimated annually from pregnancy rates based on hormones in urine and feces of 100 females for each species (Safar-Hermann et al. 1987, Hessler et al. 1990).

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Juvenile mortality rates will be estimated by two methods. (1) Mortality rates for each species will be estimated from the difference between the proportion of pregnant females and the proportion of females with offspring. Females with offspring will be estimated yearly from sex and age composition surveys conducted from the ground. (2) The timing, causes, and rates of juvenile mortality will be estimated from radio-collared new-born animals during one or two years for springbok and wildebeest (Gasaway et al. 1992). Animals will be fitted with an expanding collar containing a motion-sensitive radio (Ballard et al. 1979, Schwartz et al. 1983, Gasaway et al. 1992). When the radio is motionless for one hour the signal pulse rate doubles, indicating a probable mortality.

Adult mortality rates will be estimated from (1) mortality rates of radio-collared ungulates (Pollock et al. 1989) and (2) finite rate of population change (lamoda) and recruitment (Bergerud and Elliott 1986, Gasaway et al. 1992).

Ungulate Ecology and Mortality: Thirty-five individuals of each of the four ungulate species will be radio-collared and located monthly for three years to identify movements, habitat use, and locations of mortalities. These data will improve our understanding of (1) how variation in rainfall affects ungulate distribution and habitat use, (2) the extent to which plains ungulates vary seasonally in their use of shrublands and woodlands, (3) the period ungulates are susceptible to predation in specific areas, (4) the period ungulates are in anthrax endemic areas, and (5) seasonality and locations of mortalities.

Ungulate Foods: The biomass of grass available will be estimated annually at the end of the wet and dry seasons in portions of Etosha using a pasture meter (W. du Plessis, unpubl. data). Yearly primary production of grasses will be estimated from annual rainfall using regression equations developed in Etosha (Coe et al. 1976, Seely 1978, Le Roux 1980, Berry and Louw 1982b, Nott 1988).

Sizes, Trends, and Movements of Large Predator Populations: Predator numbers, distribution, movements, and population trends will be required as inputs to models that estimate impacts of predation on ungulate population dynamics. Monitoring of cheetahs, lions and spotted hyaenas will be accomplished with individually identifiable, marked, or radio-collared animals. Additionally, the relative abundance of hyaenas will be monitored, as in Kruger National Park, by counting the number of hyaenas coming to recorded calls that are played at regular intervals along specified roads (Mills 1985). Jackal numbers will be estimated on the springbok lambing areas using (1) mark-recapture methods (White et al. 1982) and (2) attempting to mark all individuals in small areas. Movements of lions, cheetahs, jackals, and hyaenas in relation to the seasonal distribution of plains ungulates will show (1) the extent that these predators shift home ranges to maintain migratory plains ungulates as prey and (2) the number of predators and the period they prey on plains ungulates.

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Diseases: Diseases affecting the plains ungulate species and their predators will be identified and monitored by (1) collecting tissue and sera samples for pathological analysis from dead or sick animals and (2) conducting a broad spectrum periodical survey of diseases by sampling animals captured at regular intervals.

PHASE 3: Determining the Factors Limiting Growth of Plains Zebra, Wildebeest, Springbok, and Gemsbok Populations—Years 1-5

In this phase we will assess the roles nutrition, rainfall, disease, predation, and culling-translocation play in limiting plains ungulate populations. We will use inductive and hypothetico-deductive methods to build arguments for the importance of each factor.

Nutrition, Rainfall, and Surface Water:

We will evaluate the general hypothesis that nutrition is a major factor limiting growth of plains ungulate populations. This hypothesis leads to two subsidiary hypotheses with specific predictions that are testable.

Hypothesis 1: **Plains ungulates are nutritionally stressed.**

Alternative hypothesis: Plains ungulates are not strongly affected by nutritional stress.

Significance: This hypothesis sets the stage for evaluating whether nutritional limitations could be sufficient to strongly retard or prevent population growth, as expected if populations are near K carrying capacity (KCC), and for evaluating whether nutritional stress predisposes many ungulates to disease, predation, or starvation. KCC is conceptually the number of animals that can be supported at equilibrium in a steady environment and in the absence of time lags, harvest, and predation (McCullough 1979:85). Although the KCC concept is controversial, it is useful for constructing comparisons.

Predictions of Hypothesis 1:

1) If animals are strongly stressed and near KCC, we should observe the following nutritional indicators:

a) Low reproductive rates (Blood 1974, McCullough 1979, Albon et al. 1983, Albright and Keith 1987).

b) High neonate or adult mortality rates (Verme 1967, 1969; Child 1972; Sinclair 1974b; Hillman and Hillman 1977, McCullough 1979, Owen-Smith 1990).

c: Poor physical condition and low fat content in bone marrow (Riney 1960, Sinclair and Duncan 1972, Brooks et al. 1977, Brooks 1979)

d: Retarded body growth rate (Peterson 1977)

e: Starvation (Bergerud et al. 1983, Williamson and Wobeno 1988, Walker et al. 1987)

f: High utilization rates of preferred foods (Albright and Keith 1987, Dunnam 1990).

2: Animal abundance will not increase significantly if disease and predation are reduced.

Tests of Hypothesis 1: Four tests of this hypothesis will be made. First, nutritional indicators for ungulates in Etosha will be compared to similar indicators in nutritionally stressed (near KCC) and unstressed (well below KCC) populations elsewhere. Second, nutritional indicators within Etosha will be compared among years or among local areas of differing KCC and ungulate densities. Third, proportion of the population found dead during drought years (low KCC) will be compared to the proportion found during years with rainfall (1) within +-15% of the long-term median and (2) greater than 15% of the median (high KCC). Fourth, densities of gemsbok and plains zebra in Etosha will be compared to densities where disease and predation are reduced (Kaross). Kaross is a fenced 140 km^2 experimental area in western Etosha.

The rationale for Tests 1-3 is that rainfall is directly related to grass production (Coe et al. 1976, Le Houeron and Hoste 1977, Seely 1978, Desnmukh 1984, McNaughton 1985) and hence to KCC for grazing ungulates. In Etosha, KCC varies widely among years as a result of variation in rainfall. Periods of drought and above average rainfall may strongly affect ungulate population dynamics in Etosha as in other areas (Williamson et al. 1988, Walker et al. 1987, Owen-Smith 1990). Drought, operating through under-nutrition, may be a limiting factor in Etosha. Therefore, we will estimate annual variation in grass production (a KCC index) by regressing annual grass production on rainfall. If nutrition is strongly limiting the populations through density-dependent negative feedback, we predict significant positive correlations between the annual KCC index and the nutritional indicators from the ungulate populations. If nutrition has little or no limiting effects, nutritional indices will be independent of KCC. If animals are not stressed during years of low KCC, then we conclude that they are not nutritionally limited during other periods.

The rationale for Prediction 2 and Test 4 is as follows. If plains ungulates are already at or near KCC in Etosha then density should not increase significantly following a large reduction in disease and predation. Anthrax is rare and predators have been reduced in Kaross. Therefore, if densities can become significantly greater in Kaross than Etosha, Etosha's populations are likely below KCC and not strongly nutritionally stressed.

Hypothesis 2: Closing artificial water holes and drying up of natural springs reduced the area and consequently the food accessible to ungulates.

Alternative Hypothesis: Closing of artificial water holes and drying up of natural springs did not reduce the area accessible to ungulates.

Significance: Acceptance of this hypothesis suggests nutritional limitations, operating through reduced food availability, could have been involved in the population declines.

Prediction of Hypothesis 1: If the proportion of habitat lost to each ungulate species was large, a reduction in food could have caused the decline.

Test of Hypothesis 2: The prediction will be tested using data for annual drinking site availability, distance each ungulate species grazes from drinking sites, and the estimated numbers of ungulates during aerial census in Etosha. The proportional change in the area available for grazing will be calculated and compared to the proportional change in ungulate numbers.

The rationale is that a reduction in the number of drinking sites may have reduced the food available to a population because ungulates graze limited distances from drinking sites during the dry season. In Etosha, Berry and Louw (1982a) found wildebeest grazed up to 15 km from water, zebra to 20 km, and springbok and gemsbok to 24 km, although the later two species can live without surface water for long periods.

Disease:

We will identify the diseases affecting the plains ungulates and evaluate the general hypothesis that disease is a major factor limiting growth of plains ungulate populations. This hypothesis leads to four subsidiary hypotheses with specific predictions that are testable.

Diseases will be identified by examining tissues from dead or sick animals for pathology and identified through a broad spectrum serological survey of captured animals (Sinclair 1974b). Dead animals will be located by following scavenger/predators as they forage, and by searching the area on foot and from a truck and airplane. Because of high mortality rates among juveniles, samples for the serological survey will be collected within one week of birth and at about 2 months, 4 months, and 12 months of age. Sera samples will be collected annually from animals older than one year.

Although anthrax has been studied intensively in Etosha and is the only disease known to regularly kill plains ungulates during the past 25 years, the number of anthrax-caused deaths and their effect on plains ungulate population dynamics remains in question. Ebedes (1976) and Berry (1981a) concluded anthrax affects primarily adults and was the most important single cause of mortality for adult zebra and wildebeest in Etosha from 1965 to 1978. However, the sampling methods they used to locate dead animals were differentially biased among causes of death and few of the total deaths were recorded; therefore, the proportion of deaths due to anthrax versus other factors remains uncertain. Because anthrax is potentially one of the most crucial factors affecting the development

in a management strategy for Etosha and the buffer zone. It is essential that unbiased and conclusive tests be used to assess the affect of anthrax on ungulate population dynamics. We will test four hypotheses to assess if anthrax is a major limiting factor.

Hypothesis 3: **Anthrax-resistance ungulates have a significantly greater survival rate than anthrax-susceptible ungulates.**

Alternative Hypothesis: Survival rates of **anthrax-resistance ungulates and anthrax-susceptible ungulates do not differ significantly.**

Significance: This hypothesis sets the stage for determining whether controlling anthrax in the environment will be an effective means of increasing wildlife abundance. The test will give a direct estimate of mortality due to anthrax, which is crucial for assessing anthrax's relative importance to the dynamics of ungulate populations.

Prediction of Hypothesis 3: The difference in mean annual survival rates between anthrax-resistant and anthrax-susceptible adult ungulates differs significantly ($P \leq 0.1$ and a 80% chance of detecting a 8% difference).

Test of Hypothesis 3: The prediction will be tested using the difference between survival rates of 130 anthrax-vaccinated (resistant) and 130 unvaccinated (susceptible) radio-collared adult ungulates per species over a 3 year period. Because anthrax has its greatest effect on zebra and wildebeest (Ebedes 1976, Berry 1981a), our focus will initially be on one of these species, zebra.

Hypotheses 4: **A large reduction in anthrax increases a population's finite rate of growth (lambda).**

Alternate Hypothesis: A large reduction in anthrax does not alter a population's finite rate of growth.

Significance: Like Hypothesis 3, this hypothesis helps determine if controlling anthrax in the environment will be an effective means of increasing wildlife abundance.

Predictions of Hypothesis 4:

1) The gemsbok population, which is largely anthrax-resistance, will have a larger finite rate of growth than the anthrax-susceptible populations of plains zebra, wildebeest, and springbok.
2) Subpopulations of plains zebra, wildebeest, and springbok in western Etosha will have larger finite rates of growth than subpopulations in central Etosha and, if anthrax is the primary limiting factor, the western subpopulations will increase.
3) Subpopulations of plains zebra, wildebeest, and springbok in eastern Etosha will have larger finite rates of growth than subpopulations in central Etosha and, if anthrax is the primary limiting factor, eastern subpopulations will increase between major outbreaks of anthrax.

Tests of Hypothesis 4: The predictions will be tested by comparing finite rates of growth for subpopulations in western, central and eastern Etosha. Rates of growth for each species will be calculated from population estimates based on aerial surveys. These tests are contingent on radio-tracking movement studies confirming that subpopulations during the wet season in western, central and eastern Etosha are discrete.

The rationale is that if anthrax is a major limiting factor, a graded response in population growth rates should be detectable because (1) subpopulations of ungulates are exposed to varying levels of anthrax and (2) species vary in resistance to anthrax. Plains ungulates rarely die from anthrax in western Etosha and the last significant outbreak in eastern Etosha occurred during 1984. In contrast, anthrax-killed ungulates are found each year in the central area. Resistance to anthrax appears high in gemsbok, intermediate in springbok and low in wildebeest and zebra, based on the percentage of anthrax-caused deaths among recorded natural mortalities (Ebedes 1976; Berry 1981a; P. Lindeque, unpubl. data).

Hypothesis 5: The frequency of anthrax-caused deaths is density-dependent, i.e., the proportion of the ungulate population killed by anthrax increases with increasing ungulate density.

Alternate Hypothesis: The frequency of anthrax-caused deaths is independent of ungulate density.

Significance: This hypothesis evaluates whether anthrax has a regulating effect on ungulate numbers. If anthrax-caused deaths are density-dependent, the effect of anthrax on declining populations will diminish, whereas the effects on increasing populations will accelerate. Thus, its effects would be somewhat predictable, which will be important knowledge when developing conservation strategies for Etosha. If anthrax occurrence is independent of density, its effect will be unpredictable.

Predictions of Hypothesis 5:

1) The number of confirmed anthrax-caused deaths, expressed as a proportion of the estimated live population, will increase with ungulate density.
2) The anthrax-caused proportion of all natural deaths will increase with ungulate density.

Tests of Hypothesis 5: The predictions will be tested by regressing anthrax-caused deaths (expressed as proportions of the estimated population) on estimated population size. The proportion of anthrax-caused deaths will be derived from recorded animal deaths and their diagnosed causes; population estimates will be based on aerial surveys. The rationale is that the incidence of most diseases increases with the density of the host; anthrax in Etosha is expected to behave similarly.

Hypothesis 6: **Anthrax primarily kills animals that are not predisposed to death from other causes, i.e., additive mortality.**

Alternative Hypothesis: Anthrax primarily kills animals that are predisposed to death from other causes, i.e., compensatory mortality.

Significance: This hypothesis helps evaluate whether anthrax-caused deaths limit population growth rate (additive mortality) or have little effect on population growth rate because the animals were likely to die soon from other causes (compensatory mortality). If anthrax-caused mortality is largely additive, it will limit population growth to the extent that these deaths occur; significant sources of additive mortality must be considered and controlled when developing Etosha's conservation strategy. In contrast, sources of compensatory mortality are of lesser consequence.

Predictions of Hypothesis 6: Anthrax kills mostly young and prime age adults and adults that are in good body condition with a high percentage of fat in bone marrow.

Tests of Hypothesis 6: The predictions will be tested by comparing age specific body condition rankings and percentage marrow fat in leg bones of anthrax-killed animals to similar parameters from nonanthrax-killed and live animals. The rationale is the following; animals that are in very poor condition or are very old will likely die in the near future from predation, disease, malnutrition, or senescence. Thus, if anthrax kills them, it will have little effect on the population.

Predation:

Predation, like anthrax, has been identified as one of the major sources of ungulate mortality in Etosha (Berry 1981a; Gasaway et al. 1991; Stander 1992). We will evaluate the hypothesis—predation is a major factor limiting ungulate population growth. This general hypothesis leads to the more easily tested subsidiary hypotheses and predictions listed below.

Hypothesis 7: **Predation is a major cause of additive mortality for plains ungulates.**

Alternative Hypothesis: Predation is not a major cause of additive mortality.

Significance: This hypothesis sets the stage for evaluating the role predation plays in maintaining population declines and low densities, which is crucial knowledge for developing an effective conservation strategy for Etosha.

Predictions of Hypothesis 7

- Predation is a primary cause of death for ungulates less than 2 months old.

2) Estimated predation rates on plains ungulate populations account for a large proportion of the estimated annual mortality.

3) Predators primarily kill animals that are not predisposed to death by other causes, i.e., young and prime age adults and adults in good body condition with moderate to high percentages of fat in bone marrow. Thus, predation is largely additive mortality as opposed to compensatory mortality.

Tests of Hypothesis 7: Prediction 1 will be tested by radio-collaring newly born wildebeest and springbok and determining causes of death (Gasaway et al. 1992). Prediction 2 will be tested through models that compare estimates of predator-caused mortality to estimates of total mortality. Predator-caused mortality will be calculated from observed kill rates of hunting predators, predator numbers, and estimated predation rates on radio-collared juvenile ungulates. Total mortality will be estimated from ungulate demographic data in population models. Prediction 3 will be tested by comparing relative body condition rankings and percentage marrow fat in leg bones of predator-killed animals to similar parameters in nonpredator-killed animals and samples from the living populations. Age of predator-killed animals will be compared to the longevity for the species and the age structure of living populations.

The rationale for the tests is as follows. For predation to be a major factor limiting population growth, predators must (1) kill large numbers of prey that (2) are in good condition and not old-aged, i.e., mortality must be additive to other sources. We will test for both criteria. If prey are largely predisposed to death by other factors such as disease, senescence, or malnutrition, then predation will have a small effect on the population growth rate regardless of the number killed.

Hypothesis 8: A large reduction in predation results in increased ungulate survival and population growth rates.

Alternative Hypothesis: A large reduction in predation has little effect on survival and population growth rates.

Significance: This hypothesis helps to directly determine if (1) predation is an important limiting factor and (2) if temporarily reducing predation will be an effective means of increasing prey abundance.

Predictions of Hypothesis 8:

1) Populations of plains ungulates in areas of reduced predator densities will have higher finite rates of growth and juvenile survival rates than populations in western Etosha.

2) Prey:predator biomass ratios in Etosha are similar to ratios in areas where predation is a major limiting factor.

Tests of Hypothesis 9: Prediction 1 will be tested by comparing finite rates of population growth and juvenile survival rates in populations of western Etosha to similar parameters of populations living with reduced predator densities. Reduced predator densities are found on game farms and Kaross. Rates of population growth for each species will be calculated from population estimates based on aerial surveys, and juvenile survival rates will be estimated from sex and age composition surveys conducted from the ground. These tests are contingent on ungulate movement studies confirming that populations in western Etosha are discrete from the remainder of Etosha. Prediction 2 will be tested by compiling prey predator ratios in Etosha and comparing them to ratios from published and unpublished literature for areas where the limiting effects of predation range from small to large.

The rationale for prediction 1 is that a graded response in population growth rates and juvenile survival rates should be detectable in populations exposed to varying levels of predation if predation is a major limiting factor. Compared to western Etosha, lion density has been reduced in Kaross and all predators have been reduced on the game farms. Deaths from anthrax do not confound these comparisons because anthrax rarely kills plains ungulates in any of these areas. The rationale for prediction 2 is that low prey biomass per unit of predator biomass is characteristic of areas where predation is a major limiting factor; the contrary occurs where predation is a minor limiting factor.

Removal of Ungulates by Culling or Translocation:

Records of the number of animals translocated from and the number killed by humans in Etosha will be compiled for each plains ungulate species. Then population models will be used to assess the importance of these removals on the population dynamics of each species .

Multiple Causes:

Populations in Etosha likely are limited by a combination of factors, with one or two prevailing at any given time. Based on our historical knowledge of population dynamics in Etosha, we propose the following hypotheses.

Hypothesis 9: Specific plains ungulate populations are limited at densities well below KCC primarily by predation and secondarily by disease.

Hypothesis 10: Specific plains ungulate populations are limited at densities well below KCC primarily by predation; disease is trivial.

Hypothesis 11: Specific plains ungulate populations are limited at densities well below KCC primarily by disease and secondarily by predation.

Hypothesis 12: Specific plains ungulate populations are regulated near or slightly below KCC primarily by nutritional limitations: disease and predation are secondary.

Significance of Hypotheses 9-12: These hypotheses predict the combination of factors that limit the specific populations. They provide the synthesis of the single factor hypothesis tests that identify limiting factors and their intensity. This synthesis provides the overview needed to develop effective conservation strategies for the Etosha ecosystem.

Predictions of Hypotheses 9-12: Table 2 summarizes the predictions for the four hypotheses.

Tests of Hypotheses 9-12: The earlier single factor hypotheses and their tests will aid in testing the predictions of these multiple cause hypotheses.

The results of these tests will be a synthesis of population limitations based on empirical data and theoretical concepts similar to that developed in Alaska and Canada for moose-wolf-bear systems (Gasaway et al. 1992).

Table [illegible]: Predictions of multiple cause hypotheses on factors limiting plains ungulate populations in Etosha National Park. Predictions in the body of the table are those expected for the ungulate populations.

Hypotheses (Major limiting factors listed in order of importance for each hypothesis)	BODY GROWTH RATE	BIRTH RATE	RECRUITMENT	ADULT MORTALITY RATE	MORTALITY DURING DROUGHTS	MAJOR CAUSES OF DEATHS (Listed in order of importance)	NUTRITIONAL CONDITION OF UNGULATES IN THE DRY SEASON		
							LIVE ANIMAL	DISEASE KILLED	PREDATOR KILLED
[illegible] BELOW KGS. PREDATION DISEASE, NUTRITION	FAST	HIGH	LOW	HIGH	LOW	PREDATION, DISEASE	GOOD	GOOD	FAIR GOOD
[illegible] BELOW KGS. PREDATION NUTRITION, DISEASE TRIVIAL	FAST	HIGH	LOW	HIGH	LOW	PREDATION	GOOD	GOOD	FAIR GOOD
[illegible] BELOW KGS DISEASE, PREDATION NUTRITION	FAST	HIGH, IF DISEASE DOES NOT IMPAIR IT	MODERATE	HIGH	LOW	DISEASE, PREDATION	GOOD	GOOD	FAIR GOOD
[illegible] KGS. NUTRITION, DISEASE, PREDATION	SLOW	LOW	LOW	LOW	HIGH	DISEASE OR PREDATION, MALNUTRITION	POOR FAIR	POOR GOOD	POOR FAIR

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1974 -	University of Alaska Ph.D. in Zoo Physiology
1967 -	Washington State University M.S. in Zoology
1965 -	Michigan State University B.S. in Wildlife Biology

PROFESSIONAL BACKGROUND

1991 - Present	Research Coordinator, The Zoological Society of San Diego
1976 - 1991	Affiliate Assistant Professor, University of Alaska
1972 - 1990	Research Biologist, Alaska Department of Fish and Game
1989 -	Research Biologist, Directorate of Nature Conservation, Namibia
1987 -	Acting Research Coordinator, Alaska Department of Fish and Game
1986 -	Research Biologist, Directorate of Nature Conservation, Namibia
1969 - 1972	National Institute of Health Fellow, Institute Arctic Biology, University of Alaska
1967 - 1969	Biologist, U.S. Army
1966 - 1967	NDEA Fellow, Department of Zoology, Washington State University
1965 - 1966	Teaching Assistant, Department of Zoology, Washington State University

ADDITIONAL SKILLS

Aircraft pilot: single engine, commercial rating.
Experienced in flying aerial surveys, radio telemetry, wildlife photograph, and hunting.
Computer skills in data bases, spreadsheets, word processing, statistics, and graphics.
Knowledge of African large mammal ecology based on 7 trips and field research.

AWARDS

1987 Distinguished Moose Biologist award from the North American Moose Conference

PROFESSIONAL REFERENCES

Dr. Eugene Joubert, Deputy Director, Directorate of Nature Conservation, Private Bag 13306, Windhoek 9000, Namibia

Dr. Wayne Regelin, Deputy Director, Alaska Department of Fish and Game, 1200 College Road, Fairbanks, Alaska 99701 USA

Dr. Albert Franzmann, Wildlife Consultant, P.O. Box 666, Soldotna, Alaska 99669 USA (Retired from Alaska Department of Fish and Game)

BIBLIOGRAPHY

Scientific Articles:

1. Gasaway, W.C.: Zinc toxicity and turnover in the mallard duck (Anas platyrhynchos). M.S. Thesis. Washington State University, Pullman. 88pp. 1967.

2. Coady, J.W. and Gasaway, W.C.: Rumen function and energy production of moose in interior Alaska. Proc. N. Am. Moose Conf. 8: 80-104. 1972.

3. Gasaway, W.C. and Buss, I.O.: Zinc toxicity in the mallard duck. J. Wildl. Manage. 36(4): 1107-1117. 1972.

4. Gasaway, W.C.: Cecal function in ptarmigan. Ph.D. Thesis. University of Alaska, Fairbanks. 125 pp., 1974.

5. Gasaway, W.C. and Coady, J.W.: Review of energy requirements and rumen fermentation in moose and other ruminants. Nat. Can. 101: 117-262.

6. Gasaway, W.C., Holleman, D. and White, R.: Digesta flow in the intestine and cecum of the rock ptarmigan. The Condor 77(4): 467-474. 1975.

7. Gasaway, W.C.: Seasonal volatile fatty acids production and metabolizable energy derived from cecal fermentation in rock ptarmigan. Comp. Biochem. and Physiol. 53:A 109-114, 1976.

8. Gasaway, W.C.: Volatile fatty acid production and metabolizable energy derived from cecal fermentation in willow ptarmigan. Comp. Biochem. and Physiol. 53: A 115-121, 1976.

9. Gasaway, W.C.: Cellulose digestion and metabolism by captive rock ptarmigan. Comp. Biochem. and Physiol. 54:A 179-182, 1976.

10. Gasaway, W.C.: Methane production by rock ptarmigan. Comp. Biochem. and Physiol. 54:A 183-185. 1976.

11. Gasaway, W.C., White, R. and Holleman, D.: Dry matter digestion and water absorption in the intestine and cecum of rock ptarmigan. The Condor 78(1): 77-84. 1976.

12. Gasaway, W.C., Haggstrom, D. and Burris, O.E.: Preliminary observations on the timing and causes of calf mortality in an interior Alaskan moose population. Proc. N. Am. Moose Conf. 13: 54-70, 1977.

13. Gasaway, W.C., Franzmann, A.W. and Faro, J.B.: Immobilizing moose with a mixture of etorphine and xylazine hydrochloride. J. Wildl. Manage. 42(3): 586-590. 1978.

14. Gasaway, W.C., Hankness, D.B. and Rausch, R.A.: Accuracy of moose age determinations from incisor cementum layers. J. Wildl. Manage. 42(3): 558-563, 1978.

15. Gasaway, W.C., DuBois, S.D., Harbo, S.J. and Kelleyhouse, D.G.: Preliminary report on accuracy of aerial moose surveys. Proc. N. Am. Moose Conf. 14: 32-55, 1978.

16. Gasaway, W.C., DuBois, S.D. and Brink, K.L.: Dispersal of subadult moose from a low density population in interior Alaska. Proc. N. Am. Moose Conf. 16: 314-337, 1980.

17. LaPerrier, A.J., Lent, P.C., Gasaway, W.C. and Nocle, F.A.: use of landsat data for moose habitat analysis in Alaska. J. Wildl. Manage. 44: 881-887, 1980.

18. Gasaway, W.C., Stephenson, R.C. and Davis, J.L.: Wolf-prey relationships in interior Alaska. Wildl. Tech. Bull. 6. Alaska Dept. Fish and Game. 15 pp., 1983.

19. Gasaway, W.C., Stephenson, R.C., Davis, J.L., Shepherd, P.E.K. and Burns, O.E.: Interrelationships of wolves, prey, and man in interior Alaska. Wildl. Monogr. 84. 50 pp., 1983.

20. Tankersley, N.G. and Gasaway, W.C.: Mineral lick use by moose in Alaska. Can. J. Zool. 61: 2242-2249, 1983.

21. Gasaway, W.C. and DuBois, S.D.: Initial response of moose to wildfire in interior Alaska. Can. Field-Nat. 99: 135-140, 1985.

22. Gasaway, W.C., DuBois, S.D. and Harbo, S.J.: Bias in aerial transect surveys for moose during May and June. J. Wildl. Manage. 49: 777-784, 1985.

23. Gasaway, W.C., DuBois, S.D., Harbo, S.J. and Reed, D.J.: Estimating moose population parameters from aerial surveys. Biol. Pap. No. 22. Univ. of Alaska, Fairbanks. 108pp., 1986.

24. Gasaway, W.C. and DuBois, S.D.: Estimating moose population parameters: A review. Swedish Wildl. Res. Suppl. 2: 603-617, 1987.

25. Gasaway, W.C., Preston, D.J., Reed, D.J. and Roby, D.D.: Comparative morphology and size of antlers from North American moose. Swedish Wildl. Res. Suppl. 1: 311-325, 1987.

26. Boertje, R.D., Gasaway, W.C., Grangaard, D.V. and Kelleyhouse, D.G.: Predation on moose and caribou by radio-collared grizzly bears in east central Alaska. Can. J. Zool. 66: 2472-2499, 1988.

27. Gasaway, W.C.: Management of complex predator-prey systems in Alaska. Symposium on Wolf-Prey Dynamics and Management. Pages 124-135 in Wolf-prey dynamics and management. British Columbia ministry of Environment, Wildlife Working Report No. WR-40, 1989.

28. Gasaway, W.C., DuBois, S.D., Boertje, R.D., Reed, D.J. and Simpson, D.T.: Response of radio-collared moose to a large burn in central Alaska. Can. J. Zool. 67: 325-329. 1989.

29. Gasaway, W.C., Mossestad, K.T. and Stander, P.E.: Demography of Spotted Hyaena in an arid savanna, Etosha National Park, South West Africa/Namibia. Madoqua 16(2): 121-127, 1989.

30. Gasaway, W.C., Mossestad, K.T. and Stander, P.E.: Food acquisition by spotted hyaenas in Etosha National Park, Namibia: Predation versus scavenging. Afr. J. Ecol. 29: 64-75, 1991.

31. Gasaway, W.C., Boertje, R.D., Grangaard, D.V., Kelleyhouse, D.G., Stephenson, R.O., Larsen, D.G.: Predation limiting moose at low densities in Alaska and Yukon and implications for conservation. Wildl. Monogr. In press.

Popular Articles:

1. Gasaway, W.C.: Moose antlers: How fast do they grow. Alaska Dept. Fish and Game brochure. 12pp. (revised 1975), 1974.

2. Gasaway, W.C.: One rifle, one load. Am. Riflemen. June, pp. 18-20, 1975.

3. Gasaway, W.C. Status of the Fortymile Caribou Herd. Alaska Dept. Fish and Game. Wildl. Info. Leafl. No 1. 4 pp, 1975.

Curriculum Vitae

JOHN A. PHILLIPS, PH.D.

PERSONAL INFORMATION

Date of Birth:	January 25, 1951
Place of Birth:	Santa Monica, California
Mailing Address:	Research Department San Diego Zoo P.O. Box 551 San Diego, CA 92112-0551
Business Telephone:	(619) 557-3955 (619) 557-3959 (FAX)
Home Telephone:	(619) 738-0394

EDUCATIONAL BACKGROUND

1975-79	University of California, Davis Ph.D. in Zoology, September, 1979
1969-73	University of California, Santa Cruz B.A. in Biology, June 1973

PROFESSIONAL BACKGROUND

1989-	Chairperson of Endowment Funds, Society for Conservation Biology
1987-	Adjunct Professor, Biology Department, San Diego State University, San Diego, California
1981-	Comparative Physiologist, Zoological Society of San Diego, San Diego, California
1979-81	Postdoctoral Fellow with Dr. Charles L. Ralph, Colorado State University, Fort Collins, Colorado
1977-79	Associate-in-Residence, Department of Zoology, University of California, Davis, California
1975-77	Teaching Assistant, Department of Zoology, University of California, Davis, California
1973-75	Research Assistant, NASA-Ames Research Center, Moffitt Field, Mountain View, California
1971-73	Research Assistant, Department of Biology, University of California, Santa Cruz, California

ACADEMIC HONORS

1978	Regent's Fellow, University of California
1973	Thesis Honors, University of California
1969	Honors-at-Entrance, University of California

GRANTS AND AWARDS

Field Studies:

1976-77	American Museum of Natural History ($3,125)
1982	Johnson Research Fund (American Philosophical Society: $1,700)
1984-87	Kaiser Foundation ($32,000)
1989	RJR/Land Rover Ltd. ($102,000)
1989	Macnris Fund ($18,000)
1990-91	Institute for Museum Services (IC 00348-90: $25,000)
1990-92	National Science Foundation (PI BNS 90-00100: $68,000)
1992-94	National Science Foundation ($121,488: pending)

Laboratory Studies:

1977-78	Chancellors Fund of the University of California ($2,800)
1980-82	National Science Foundation (Co-PI PCM 80-03835: $149,200)
1982	A. G. Ball (Equipment Grant: $6,500)
1983	Kaiser Foundation ($87,000)
1985	National Science Foundation (Co-PI DMB 85-21321: ($65,00)
1986-87	National Institute of Health (Admin-PI NIH RR01776-02: $163,000)
1987	Nixon Griffis Fund ($2,875)
1989-91	National Science Foundation (PI BNS 89-09207: $94,573)
1989-91	Homeland Foundation ($51,000)
1991	National Science Foundation (PI BNS 92-21211: $122,000: pending)

TEACHING EXPERIENCE

1981-	Various invited lectures to both academic and non-academic groups on the physiological aspects of captive propagation of endangered species, especially lizards.
1979-81	Guest lecturer in general biology, comparative anatomy, comparative endocrinology, and zoo animal medicine in the Zoology Department and Veterinary School of Colorado State University.
1975-79	Lecturer in comparative and functional anatomy, ecology, and the physiology section of introductory zoology at the University of California at Davis. Teaching assistant in comparative anatomy, functional anatomy, introductory zoology.
1972-73	Lecturer in advanced cone-system photography at the University of California at Santa Cruz.

SUPERVISORIAL EXPERIENCE

1981-	Comparative Physiologist, San Diego Zoo. Currently supervise two post-doctoral research fellows and a laboratory technician, keepers involved with various in-house projects, and a field staff of two in Central America and Africa.
1980-81	Postdoctoral Fellow, Colorado State University. Supervised three laboratory technicians.

1973-73 Administrative Assistant, Department of Zoology, University of California at Davis. Supervised 14 teaching assistants.

EDITORIAL SERVICE

Professional Journals:
- Science
- Herpetologica
- Journal of Herpetology
- Journal of Experimental Zoology
- Journal of Comparative Physiology
- Physiology and Behavior
- Zoo Biology

Popular Journals:
- National Wildlife
- International Wildlife
- Ranger Rick
- Zooniaz
- Junior Scholastic

PROFESSIONAL SERVICE

National Research Council (International Affairs): advisor: green and black iguana as microlivestock.
Komodo Monitor Consortium, AAZPA, 1986-88 Coordinator
Advisor, Animal Use Committee, University of California
Member, K-12 Curricula Committee, Society for Conservation Biology Chairperson of Endowment Committee, Society for Conservation Biology
Advisor, State of California, Science Curricula Framework Committee

PROFESSIONAL MEMBERSHIPS

American Society of Zoologists
Herpetologists League
Society for Conservation Biology

PATENTS

Patent #4,591,694 (1985): "A heated bed module for animals."

PROFESSIONAL REFERENCES

Dr. Werner Heuschele, Director of Research, Zoological Society of San Diego, Box 551, San Diego, CA 92112-0551; (619) 231-1515.

Dr. Kurt Benirschke, Trustee, Zoological Society of San Diego, P.O. Box 551, San Diego, CA 92112-0551; (619) 231-1515.

Dr. Charles L. Ralph, Chairperson, Department of Zoology and Entomology, Colorado State University, Fort Collins, CO 80523; (303) 491-7011.

Dr. Gary C. Packard, Professor, Department of Zoology and Entomology, Colorado State University, Fort Collins, CO 80523; (303) 491-7011.

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Scientific Articles:

1. Phillips, J.A.: Indirect body fat manipulations and its effect on hibernation in Citellus lateralis. Canadian J. Zool. 57: 976-978, 1979.

2. Phillips, J.A.: Comparative ecological physiology of the golden-mantled ground squirrel, Citellus lateralis. Ph.D. Dissertation, Univ. of California-Davis, CA, 1979.

3. Harlow, H.J., Phillips, J.A. and Raloff, C.L.: The effect of pinealectomy on hibernation in two species of seasonal hibernators, Citellus lateralis and C. richardsonii. J. Exper. Zool. 212: 301-303, 1980.

4. Phillips, J.A., Harlow, H.J. and Raloff, C.L.: The effect of pinealectomy and exogenous melatonin in two species of ground squirrels. Anatomical Rec. 196:A 148, 1980 (Abstract).

5. Harlow, H.J., Phillips, J.A. and Raloff, C.L.: Circadian rhythms in a mammal without a pineal complex, the nine-banded armadillo. Anatomical Rec. 196:A 73, 1980 (Abstract).

6. Phillips, J.A. and Jameson, E.W., Jr.: The effect of photoperiod on fat accumulation in juvenile Spermophilus lateralis born in captivity. Canadian J. Zool. 58: 2150-2153, 1980.

7. Phillips, J.A., Harlow, H.J. and Raloff, C.L.: Set point shifts in behavioral thermoregulation in horned lizards (Phrynosoma) after parietal eye manipulation. Amer. Zoologist 20:A 34, 1980 (Abstract).

8. Phillips, J.A.: Growth and its relationship to the initial annual cycle of the golden-mantled ground squirrel, Spermophilus lateralis. Canadian J. Zool. 59: 865-871, 1981.

9. Phillips, J.A. Thermal biology of Phrynosoma: Effects of shielding the parietal eye. SSAR/HL, 1981 (Abstract).

10. Harlow, H.J., Phillips, J.A. and Raloff, C.L.: Day-night rhythm in plasma melatonin in a mammal lacking a distinct pineal gland, Dasypus novemcinctus. Gen. Comp. Endocrinol. 45: 212-218, 1981.

11. Phillips, J.A. and Harlow, H.J.: Elevation of upper voluntary temperatures after shielding the parietal eye in horned lizards. Herpetologica 37: 199-206, 1981.

12. Harlow, H.J., Phillips, J.A. and Raloff, C.L.: Activity, metabolic and blood melatonin rhythms in the nine-banded armadillo, Dasypus novemcinctus, a mammal lacking a distinct pineal gland. 1981 Western Regional Conf. on Gen. and Comp. Endocrinol. (Abstract).

[illegible] Pineal effect of pinealectomy on thermoregulation of the golden-mantled ground squirrel [illegible]. Internat. J. Biometeorol. 26: [illegible] 1982.

[illegible] Phillips, J.A. and Harlow, H.J. Long term effects of pinealectomy on the annual cycle of the golden-mantled ground squirrel, Spermophilus lateralis. J. Comp. Physiol. 146: 601-605. 1982.

5. Harlow, H.J., Darnell, D.K. and Phillips, J.A.: Pinealectomy in ground squirrels: Effects on behavioral and physiological responses to heat stress. Physiol. Behavior 28: 601-604. 1982.

6. Harlow, H.J., Phillips, J.A. and Falon, C.L.: Circadian rhythms and the effects of exogenous melatonin in the nine-banded armadillo, Dasypus novemcinctus: A mammal lacking a distinct pineal gland. Physiol. Behavior 29: 307-313. 1982.

7. Phillips, J.A.: Ontogeny of thermoregulation in blue-tongued skinks, Tiliqua scincoides. Amer. Zool. 24: 916. 1983 (Abstract).

8. Phillips, J.A.: Ecological physiology of the Komodo dragon, Varanus komodoensis. Ann. Amer. Philosoph. Soc. 1984: 153-160. 1984.

9. Phillips, J.A.: Environmental influences on reproduction in golden-mantled ground squirrels. Pp. 103-125. In: Biology of the ground-dwelling squirrels. J. Murie and G. Michener, eds., Univ. Nebraska Press. 1984.

10. Phillips, J.A.: [illegible] ice as a biological optimum. Pp. 191-196. In: One Medicine. O. Ryder and M. Byrd, eds. Springer-Verlag, Heidelberg, 1984.

11. Phillips, J.A. A wholistic view of reptile physiology. In: Captive propagation of reptiles and amphibians. Pp. 51-84., R.L. Grey (ed.). NCHS-BAARS Publication, Davis, CA. 1984.

12. Phillips, J.A., N. Alexander, N.B. Karesh, R. Millar and B.L. Lasley. Stimulating male sexual behavior with repetitive pulses of GnRH in female green iguanas, Iguana iguana. J. Exp. Zool., 234: 481-484, 1985.

13. Phillips, J.A., B.L. Lasley and F. Frye. GnRH induces fertile matings in Iguana iguana during their refractory phase. Amer. Zool. 25: 134A. 1985 (Abstract).

14. Phillips, J.A.: Ontogeny of metabolic events in the blue-tongued skink, Tiliqua scincoides. Herpetologica 42: 405-412. 1986.

15. Phillips, J.A.: A biologically relevant heating module for animal enclosures. Internat. Zoo Yrbk. 25: 311-315. 1986.

16. Phillips, J.A., H. Harlow, N.H. MacArthur, and C.L. Falon. Epithalamus of the nine-banded armadillo, Dasypus novemcinctus. Comp. Biochem. Physiol. 85: 477-481. 1986.

17. Phillips, J.A., T.M. Williams and J.F. Amaca. Resting metabolism in [illegible]. Amer. Zool. 26: 87A. 1986.

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[illegible] Berkovitz, B. [illegible] and B. Lasley. Exogenous GnRH stimulates the endogenous annual reproductive rhythm in green iguanas. [illegible]. Exp. Zool. [illegible] 207. 1987.

18. Phillips, J.A. Conservation Biology Education is the word. J. Int. Assoc. Zoo Ed. [illegible] 1987.

19. Phillips, J.A. and B.L. Lasley. Modification of reproductive rhythm of lizards via GnRH therapy. Annals N.Y. Acad. Sci. 513: 123-126, 1988.

20. Phillips, J.A. and K.A. Howes. The parietal eye, aggressive behavior, and thermoregulation in curly-tailed lizards, Leiocephalus carinatus. Physiol. and Behavior 42: 103-108, 1988.

21. Phillips, J.A. Iguana iguana: An ontogenetic model of behavior/hormone interactions. J. Exp. Zool. Supp. 4: 167-169, 1990.

22. Phillips, J.A., A. Garel, G.C. Packard and M.H. Packard. Influence of moisture and temperature on eggs and embryos of green iguanas. Herpetologica 46: 238-245, 1990.

23. Phillips, J.A., T.M. Williams, M.B. Worley and D. Morspach. Relationship between growth and FPE in cheetahs. Macocua (in press).

24. Packard, M.J., J.A. Phillips and G.C. Packard. Sources of mineral for green iguanas (Iguana iguana) developing in eggs exposed to different hydric conditions. Copeia (in press).

25. Packard, G.C. and J.A. Phillips. Importance of the physical environment in incubation of reptilian eggs. SSAR/Herpetologica Suppl. (in press).

26. Alberts, A.C., N. C. Pratt, and J. A. Phillips. Seasonal productivity of lizard femoral glands: relationship to social dominance and androgen levels. Physiol. and Behavior (in press).

27. Phillips, J. A. Undisturbed feeding by female cheetahs with cubs. J. Mammal. (in review).

28. Phillips, J.A., A. C. Alberts, and N. C. Pratt. Slow behavioral and physiological maturation of subordinate iguanas: Size at hatching is not relevant. Behav. Ecol. Sociobiol. (in review)

29. Pratt, N.C., A.C. Alberts, and J.A. Phillips. Behavioral physiological, and morphological determinants of mating success in the green iguana. Zoo Biol. (in press).

30. Phillips, J.A. and J.A. Phillips. Estimating a population of Varanus albigularis, largest biomass carnivore in the arid savanna? Herpetologica (in review).

31. Phillips, J.A. and A.C. Alberts. Naive hatchling lizards identify venomous snakes by chemical cues. Science (in review).

276

[illegible] Phillips, J.A. The eyes have it. Zoonooz [illegible]: [illegible].

[illegible] Phillips, J.A. Unravelling the Phoenix's [illegible]. Zoonooz LIX (4): 16-17.

[illegible] Phillips, J.A. Just a line and hardly remote to the zoo. Zoonooz LIX (9): 5-11.

[illegible] Phillips, J.A. Hatching the bamboo chicken. Zoonooz LIX (9): 16-17.

[illegible] Phillips, J.A. and J.A. Phillips. When only a picture remains! Cats 44(5): 14-[illegible].

[illegible] Phillips, J.A. Mothers, mind your [illegible] and K's. Zoonooz LX(5): 14-16.

[illegible] Phillips, J.A. Ronnie needed oxygen: Naivete and reality. Zoonooz. LX(9): 4-[illegible].

[illegible] Phillips, J.A. Plastic reality. Zoonooz LX(9): [illegible]-17.

[illegible] Phillips, J.A. When seeing is, not necessarily, believing. Zoonooz. LX(12): 4-[illegible].

[illegible] Phillips, J.A. Cheetahs of Namibia. Cats 45(6): [illegible]4-18.

[illegible] Phillips, J.A. Namibia: Earth wind and fire. Zoonooz. LXI(6): 4-10.

[illegible]2. Phillips, J.A. Fiat Lux. Zoonooz LXI(6): 16-17.

[illegible]3. Phillips, J.A. Who'll get the last laugh. Zoonooz. LXII(5): 16-17.

[illegible]4. Phillips, J.A. The Forest. Zoonooz. LXII(9): 16-24.

[illegible]5. Phillips, J.A. Overview. Habitats Issue. Zoonooz. LXII(9): 5-8.

[illegible]6. Phillips, J.A. Conclusion. Habitats Issue. Zoonooz. LXII(9): 32-33.

[illegible] Phillips, J.A. and J.A. Phillips. The big cats last hurrah? Cats 46(1): 14-18.

[illegible]8. Phillips, J.A. and J.L. Scheepers. Etosha lion update. Cats 47(4): 16-17.

Curriculum Vitae

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Date of Birth	July 23, 1958
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Citizenship	Namibia
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EDUCATIONAL BACKGROUND

1989	University of Stellenbosch Ph.D. in Zoology
1981	University of Pretoria M.Sc. in Zoology
1979	University of Pretoria B.Sc.(Honns) Cum laude in Mammalogy
1978	University of Pretoria B.Sc. in Zoology/Geology

PROFESSIONAL BACKGROUND

1988-Present	Head of Research, Etosha Ecological Institute, Ministry of Wildlife Conservation and Tourism
1983-1988	Animal Ecologist, Etosha Ecological Institute
1981-1983	Veterinary Medic, South African Army
1979-1981	Research Assistant, Mammal Research Inst., Univ. of Pretoria
1978	Research Assistant, Dept. of Geology, Univ. of Pretoria

AWARDS

1980	Astley Maberley Memorial Scholarship for the best B.Sc.(Honns) student in Zoology in South Africa
1981-1982	CSIR Award for post graduate research
1983	Best student award: Veterinary Medic training course, Equestrian Center, South African Defence Force

SUPERVISORIAL EXPERIENCE

1988-Present	Supervise two research biologists, a wildlife veterinarian, four technicians, a clerk, and 8 laborers

PROFESSIONAL MEMBERSHIPS

Ecological Soc. of Southern Africa: Council Member 1988-89
Wildlife Management Association of Southern Africa
Botanical Society of South Africa
Wildlife Society of South Africa

PROFESSIONAL REFERENCES

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Prof. J.C. Bigalke, Dept. of Zoology, Univ. of Pretoria, South Africa 0001

Prof. J.A.J. Hall, Dept. of Zoology, Univ. of Stellenbosch, South Africa 7600

Dr M.K. Seely, Desert Ecological Research Inst., PO Box 953, Walvis Bay, Namibia

Dr M. Coe, Dept. of Zoology, Univ. of Oxford, South Parks Road, Oxford OX1 3PS, UK

BIBLIOGRAPHY

Scientific Articles:

Skinner, J.D. and Lindeque, M.: Hormones and reproduction in hyaenas. Proc. Xlth Ann. Conf. Aust. Soc. Reprod. Biol. 22, 1980 (Abstract).

2. Skinner, J.D., Lindeque, M., Van Aarde, R.J. and Bieckmann, F.C.: The prey of owls from Kolomab Pan in the southern Namib Desert. Madoqua 12: 131-132, 1980.

3. Lindeque, M. and Skinner, J.D.: Aseasonal breeding in the spotted hyaena (Crocuta crocuta Erxleben) in southern Africa. Afr. J. Ecol. 20: 271-278, 1982.

4. Lindeque, M. and Skinner, J.D.: Fetal androgens and sexual mimicry in spotted hyaenas (Crocuta crocuta). J. Reprod. Fert. 65: 405-410, 1982.

5. Lindeque, M. and Skinner, J.D.: Size frequency analysis of tooth wear in spotted hyaenas (Crocuta crocuta). S. Afr. J. Zool. 19: 291-294, 1984.

6. Lindeque, M., Skinner, J.D. and Millar, R.P.: Adrenal and gonadal contribution to circulating androgens in spotted hyaenas (Crocuta crocuta) as revealed by LHRH, HCG and ATCH stimulation. J. Reprod. Fert. 73: 211-217, 1986.

7. Lindeque, M.: Observations on mating behavior in the common slit-faced bat Nycteris hispida. Madoqua 15: 183-185, 1987.

8. Van Jaarsveld, A.S., Skinner, J.D. and Lindeque, M.: Growth, development and parental investment in the spotted hyaena, Crocuta crocuta. J. Zool., Lond. 216: 45-53, 1988.

9. Stander, P.E., Nott, T.B., Lindeque, P.M. and Lindeque, M.: Mass marking of zebras in the Etosha National Park, Namibia. Madoqua 17(1): 47-49, 1990.

10. Van Der Merwe, N.J., Lee-Thorp, J.A., Thackeray, J.F., Hall-Martin, A., Kruger, F.J., Coetzee, H., Bell, R.H.V. and Lindeque, M.: Source area determination of elephant ivory by means of isotopic analysis: 'Fingerprinting' tusks. Nature (Lond.) 346: 744-746, 1990.

11. Lindeque, M.: The case for dehorning the black rhinoceros in Namibia. S. Afr. J. Sci. 86: 226-227, 1990.

12. Lindeque, M. and Archibald, T.J.: Seasonal wetlands in Owambo and Etosha National Park. Madoqua 17: 129-133, 1991.

13. Lindeque, M.: Dentition and age estimation of elephants in Etosha National Park, Namibia. Madoqua 18 (in press).

14. Lindeque, M.: Population age structure of elephants in Etosha National Park, Namibia. Madoqua 18 (in press).

15. Van Jaarsveld, A.S. and Lindeque, M.: Changes in ovarian morphology, plasma oestradiol-17a and progesterone concentrations suggest some ovarian activity during lactation in the spotted hyaena (Crocuta crocuta). J. Zool., Lond. (in press).

16. Lindeque, M. and Lindeque, P.M.: Satellite tracking of elephants in north-western Namibia. [illegible] (in press).

17. Lindeque, M. and van Laarsveld, A.S.: Post-mata growth of elephants in Etosha National Park, Namibia. [illegible] (in press).

18. Lindeque, M. and Lindeque, P.M.: Aerial survey counts of game in northern Namibia. Madoqua (in review).

19. Lindeque, M. and Lindeque, P.M.: Sound distance estimates in aerial censuses in northern Namibia. Madoqua (in review).

20. Lindeque, M. and Lindeque, P.M.: Elephant mortality pattern in Etosha National Park, Namibia. Afr. J. Ecol. (in review).

21. Lindeque, M.: Bias in aerial censuses of elephants in Etosha National Park, Namibia. Madoqua (in review).

22. Lindeque, M.: Elephant population trends in Etosha National Park. Madoqua (in review).

23. Lindeque, M. and Scheepers, J.L.: Utilization of Datura inoxia by ungulates in the Hoanib River, Namibia. S. Afr. J. Wildl. Res. (in review).

Popular Articles:

1. Lindeque, M.: The elephant in Etosha. Directorate of Nature Conservation, SWA/Namibia. 25pp., 1984.

2. Loutit, B. & Lindeque, M.: A great step for the desert giants. Quagga 22: 26-28.

3. Van der Merwe, N.J., Lee-Thorpe, J.A., Thackeray, J.F., Hall-Martin, A., Kruger, J.F., Coetzee, H., Bell, R.H.V. & Lindeque, M.: Identifying ivory. Rhino & Elephant J. 4: 12-15.

4. Lindeque, M.: The Kaokoveld Elephants. Rossing Magazine 1991 (May): 14-17.

REPORTING SCHEDULE

Annual progress reports will be submitted to USAID three months after the close of financial years 1 through 4. A final report will be submitted 6 months after the completion of the 5-year project (approximately April 1997).

IMPLEMENTATION SCHEDULE
for each phase of the project

Phase 1: Compiling a Historical Perspective of Wildlife Population Dynamics.

Year 1: Compile historic information on wildlife populations in the Etosha region.

Phase 2: Establishing Ecological Monitoring Programs

Year 1:

- Define and/or develop methods to estimate population sizes of wildebeests, zebras, springboks, gemsboks, hyaenas, cheetahs, lions and jackals.
- Define and/or develop methods to estimate ungulate mortality rates, body condition, pregnancy rates, and food availability.
- Develop computer-based data storage and retrieval systems for animal movements, mortality, predation rates, body condition and population size.
- Begin implementing above procedures.

Year 2:

- Implement year 1 procedures.

Phase 3: Determining Factors Preventing Growth of Plains Zebra, Wildebeest, Springbok, and Gemsbok Populations

Year 1:

- Begin collecting data to test the predictions of the nutrition limiting hypothesis (Hypothesis 1).
- Complete the analysis for the test of the hypothesis that reduction in surface water played a major role in limiting wildlife populations (Hypothesis 2).
- Begin a survey to determine if diseases other that anthrax are significant mortality factors of plains ungulates.
- Conduct and complete a pilot study on the effectiveness of the anthrax vaccine in zebra.
- Purchase radio telemetry equipment and immobilization supplies needed for the experiment that will estimate the role of anthrax in limiting the zebra population size (Hypothesis 3)
- Begin compiling data to test whether a large decrease in anthrax will result in increased growth rates of plains ungulate populations (Hypothesis 4).
- Begin compiling data to test of anthrax caused mortalities become less significant as ungulate populations decline (Hypothesis 5).
- Begin compiling data to test if anthrax kills animals that are in good health and would otherwise have lived (Hypothesis 6).

- Begin collecting data to test the hypothesis that predation is a major factor maintaining ungulate populations at low densities (Hypothesis 7 and 8).
- From historic records compile the number of plains ungulates removed by humans from Etosha during 1970-91 and evaluate the effects of these removals on ungulate population dynamics.

Year 2:

- Continue work outlined in Year 1, except for three completed projects.
- Radio collar and vaccinate zebra (Dec. 93) for the zebra mortality study (Hypothesis 3); monitor zebra mortality due to anthrax.

Year 3:

- Continue work outlined in Year 2.

Year 4:

- Complete data collection on Hypothesis 1,4,5,6,7 and 8, and begin final analyses of data for tests of these hypothesis.
- Continue zebra mortality study (Hypothesis 3).

Year 5:

- Complete data collection for Hypothesis 3.
- Complete final analyses for Phase 3 and begin final report due 6 months after the end of Year 5.

Phase 4: Training Namibians

Year 1:

- Provide monetary sponsorship to 2 students in University of Namibia's (U of N) Wildlife Conservation Management Program.
- Project staff will give talks at Environmental Education Centers.
- Project staff will introduce U of N 3rd-year zoology students to field research and natural resource management in Etosha.
- Project staff will advise 1 or 2 under-graduate zoology students from the U of N during their student field projects in Etosha.
- Advise and sponsor 1 or 2 U of N honors students in their 6-month field studies, if U of N initiates it Honors program.
- Two PhD students from the University of California (U of C) will be integrated into the program and begin 2-year field research projects.

Year 2:

- Year 1 program is continued at the same level.

Year 3:

- Year 2 program is continued at the same level.

Year 4:

- Wildlife Conservation management students will complete their program.
- Project staff will give talks at Environmental Education Centers.
- Continue staff participation with the U of N's 3rd-year students and under-graduate field studies.
- All Honors student field projects will be completed.
- U of C PhD students will continue their field research.

Year 5:

- Continue staff participation with the U of N's 3rd-year students and under-graduate field studies.
- U of C PhD students will complete their field studies.

Phase 5: Assessing Attitudes Towards Conservation and Economic Development.

Year 1:

- Plan socio-economic survey.

Year 2:

- Complete socio-economic survey and provide preliminary findings.

Year 3:

- Prepare final report.

Phase 6: Developing and Implementing Conservation and Economic Strategies.

Year 1:

- Continue discussions with citizens in Etosha's buffer zones to assess the desire and potential for wildlife-based economic development and re-establishment of wildlife on communal land.
- Negotiate an agreement with specific communities, NGOs, and government that begins a pilot program to re-establish wildlife for the benefit of the communities.
- Procure materials to build a holding facility and develop water points; start construction if time allows.

- Maintain contact with wildlife-based community development programs in Africa.

Year 2:

- Continue with Year 1 activities. (If the drought persists it will be difficult to proceed; citizens may not be prepared to accept wildlife that competes with domestic stock. Also, holding camps may not support sufficient populations).
- Complete animal holding facility and water point development (contingent upon agreements) and participate in initial phases of stocking the holding facility.
- Based on preliminary research results, being formulating preliminary management options that promote growth of Etosha's plains wildlife populations to (1) maintain Etosha's tourist appeal and (2) provide a source of wildlife for widespread re-stocking of communal lands.

Year 3:

- Participate in the continued re-stocking of the holding facility.
- Continue to participate with communities, NGOs, and government to develop and implement a long-term management program for the pilot project area.
- Organize a workshop to disseminate research findings and enhance the wildlife-based economic programs in the Etosha region. Representatives from southern African countries would be invited.
- Continue formulating and refining management options that would promote growth of Etosha's plains wildlife populations.

Year 4:

- Continue the Year 3 program.

Year 5:

- Hold workshops to develop a suite of management options for Etosha and the adjacent buffer zones.
- Present management options to the policy and decision makers and help implement the selected strategies.
- Begin preparation of Final report.

ANNEX M

SCOPE OF WORK FOR PSC PROJECT MANAGER

ANNEX M

Scope of Work: Project Manager (Personal Services Contractor)

RESPONSIBILITIES:

The Project Manager, hired under a personal services contract, will be under the general supervision of the USAID Human and Natural Resources Development Officer in the Human and Natural Resources Division and will serve as the principal liaison between USAID/Namibia, the MWCT, the international or US PVO, the Zoological Society of San Diego, the Etosha Ecological Institute and the Namibian NGO community involved in the project's implementation. Responsibilities may include the following:

1. Serve as the point of contact between USAID/Namibia and the MWCT, the PVO, the Zoological Society of San Diego, Etosha Ecological Institute and local NGOs on all matters pertaining to project management, monitoring and implementation.

2. Participate in meetings of the Project Steering Committee and assist with the following:

   (a) Provision of USAID review and approval of sub-grantee proposals in accordance with eligibility criteria, outlined in the Project Paper; and

   (b) Provision of oversight technical and program direction, and impact monitoring of all LIFE project components.

3. Review and recommend approval to USAID of workplans, evaluations and other reports.

4. Visit project field sites and implementing agencies and prepare reports on the status of project implementation including any recommendations for ensuring the efficient and effective implementation of these activities.

5. Draft USAID/Namibia Project Implementation Letters (PILs), Project Implementation Orders (PIOs) and semi-annual Project Implementation Reports (PIRs). Prepare the Project Officer's approval form for signature by the Project Officer.

6. Maintain close contact with agencies implementing project activities and monitor their compliance with the project's goals and objectives and USAID rules and regulations.

7. Arrange project reviews and external project evaluations and ensure compliance by grantees and cooperative agreement recipients with USAID's financial audit requirements.

8. Ensure the collection of baseline project data for monitoring and evaluation purposes. Review impact indicators and track progress in attaining them.

9. Prepare all necessary USAID/Namibia reports on matters arising out of project activities.

10. Participate in regional meetings with other participating SADCC countries.

11. Advise the USAID Project Manager and USAID Representative of any issues likely to affect project implementation and make recommendations for appropriate actions to be undertaken by USAID.

12. Coordinate with the MWCT on the preparation of quarterly reports on host country and other contributions to the project.

TERM OF SERVICE:

This will be a full-time position. The appointment will be for five years. The individual will be located in the USAID/Namibia Mission.

QUALIFICATIONS:

Candidate must have at least a M.S. or M.A. in natural resources/environmental/management/economics, the biological or zoological sciences or one of the social sciences with a strong background in community or rural development. S/he must also have at least four years working in a developing country, preferably in Southern Africa. Experience with community based natural resources management is highly desirable.

Experience in managing A.I.D. or other donor-funded projects, preferably in environment, ecology or natural resources sectors. Experience with NGOs and PVOs is highly desirable.

Excellent analytical, written and oral communication and interpersonal skills required. Also individual is required to be computer competent in word processing and spreadsheet programs.

ANNEX O

GRAY AMENDMENT CERTIFICATION

Gray Amendment Certification

Legislative Requirement:

The Gray Amendment (Section 579 of P.L. 101-167, the Foreign Operations, Export Financing and Related Programs Appropriations Act, 1990) requires AID to ensure participation in AID projects by business concerns which are owned and controlled by socially and economically disadvantaged individuals, historically black colleges and universities, colleges and universities having a student body in which more than 40 percent of the students are Hispanic American, and private voluntary organizations which are controlled by individuals who are socially and economically disadvantaged, including women (referred to herein as Gray Amendment entities).

AIDAR Notice 90-2, implementing Section 579 of the Foreign Assistance Appropriations Act requires that for any contract in excess of $500,000 (except for a contract with a disadvantaged enterprise) not less than 10 percent of the dollar value of the contract must be subcontracted to Gray Amendment entities, unless the contracting officer certifies that there are no contracting opportunities or unless the Administrator approves an exception.

Certification:

Elements of this project may be appropriate for minority or Gray Amendment organization contracting. The procurement plan of this project has been developed with full consideration of maximally involving Gray Amendment organizations in the provision of required goods and services. The Mission will make every effort to identify disadvantaged enterprises, particularly minority-owned and women firms, which can manage certain procurements of equipment and/or provisions of technical assistance and evaluation services planned in the project.

Furthermore, the Mission will, in the case of any contract in excess of $500,000 to which the Gray Amendment is applicable, include a provision requiring that no less than 10 percent of the value of the contract be subcontracted to Gray Amendment entities unless the contracting officer certifies that there is no realistic expectation of U.S. subcontracting opportunities, or unless the prime contractor is a Gray Amendment entity.

Richard L. Shortlidge, Jr.
AID Representative

Date: July 12, 1992

Clearance: RLA: DKeene

ANNEX L

DRAFT PROJECT GRANT GRANT AGREEMENT

PROJECT

GRANT AGREEMENT

BETWEEN THE GOVERNMENTS OF

THE REPUBLIC OF NAMIBIA

AND THE

THE UNITED STATES OF AMERICA

FOR THE

LIVING IN A FINITE ENVIRONMENT (LIFE) PROJECT

THE NAMIBIAN COMPONENT OF

THE REGIONAL NATURAL RESOURCE MANAGEMENT PROJECT

Dated: September 3, 1992 ***A.I.D. Project Number 690-0251.73***

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Project Grant Agreement

Between the Governments of

The Republic of Namibia ("Grantee"),
acting through the Ministry of Wildlife, Conservation and Tourism

And

The United States of America,
acting through the Agency for International Development ("A.I.D.")

Article 1: *The Agreement*

The purpose of this Agreement is to set out the understandings of the parties named above ("Parties") with respect to the undertaking by the Grantee of the Project described below, and with respect to the financing of the Project by the Parties.

Article 2: *The Project*

SECTION 2.1 Definition of Project. The Project, which is further described in Annex 1, will provide assistance to the Grantee to improve the social and economic well-being of people in poor rural communities living in marginal agricultural areas and buffer zones to national parks and game reserves by implementing sustainable community-based wildlife and natural resources conservation and utilization. Annex 1, attached, amplifies the above definition of the Project. Within the limits of the above definition of the Project, elements of the amplified description stated in Annex 1 may be changed by written agreement of the authorized representatives of the Parties named in Section 8.2, without formal amendment of this Agreement.

SECTION 2.2 Incremental Nature of the Project.

(a) A.I.D.'s contribution to the Project, anticipated to not exceed ten million five hundred thousand United States Dollars (US$10,500,000), will be provided in increments, the initial one being made available in accordance with Section 3.1 of this Agreement. Subsequent increments, up to the maximum heretofor mentioned will be subject to availability of funds

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to A.I.D. for this purpose, and to the mutual agreement of the Parties, at the time of a subsequent increment, to proceed.

(b) Within the overall Project Assistance Completion Date stated in this Agreement, A.I.D., based upon consultation with the Grantee, may specify in Project Implementation Letters appropriate time periods for the utilization of funds granted by A.I.D. under an individual increment of assistance.

Article 3: Financing

SECTION 3.1 The Grant. To assist the Grantee to meet the costs of carrying out the Project, A.I.D, pursuant to the Foreign Assistance Act of 1961, as amended, agrees to grant the Grantee under the terms of this Agreement not to exceed three million United States ("U.S.") Dollars ($3,000,000) ("Grant"). The Grant may be used to finance foreign exchange costs, as defined in Section 6.1, and local currency costs, as defined in Section 6.2, of goods and services required for the Project.

SECTION 3.2 Grantee Resources for the Project.

(a) The Grantee agrees to provide or cause to be provided for the Project all funds, in addition to the Grant, and all other resources required to carry out the Project effectively and in a timely manner.

(b) The resources provided by the Grantee for the Project, including costs borne on an "in-kind" basis, will be (1) not less than the equivalent of U.S.$1,000,000 and (2) a minimum of twenty-five percent of the total cost of the Project. In calculating its contribution, the Grantee may include the financial and in-kind resources being contributed to the Project by Namibian nongovernmental and research organizations and the private sector.

SECTION 3.3 Project Assistance Completion Date.

(a) The "Project Assistance Completion Date" (PACD), which is August 31, 1997, or such other date as the Parties may agree to in writing, is the date by which the Parties estimate that all services financed under the Grant will have been performed and all goods financed under the Grant will have been furnished for the Project as contemplated in the Agreement.

(b) Except as A.I.D. may otherwise agree in writing, A.I.D. will not issue or approve documentation which would authorize disbursement of the Grant for services performed subsequent to the PACD or for goods furnished for the project, as contemplated in this Agreement, subsequent to the PACD.

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(c) Requests for disbursement, accompanied by necessary supporting documentation prescribed in Project Implementation Letters are to be received by A.I.D. or any bank described in Section 7.1 no later than nine (9) months following the PACD, or such other period as A.I.D. agrees to in writing. After such period, A.I.D., giving notice in writing to the Grantee, may at any time or times reduce the amount of the Grant by all or any part thereof for which requests for disbursement, accompanied by necessary supporting documentation prescribed in Project Implementation Letters, were not received before the expiration of said period.

Article 4: Conditions Precedent to Disbursement.

SECTION 4.1 First Disbursement. Prior to the first disbursement under the Grant, or to the issuance by A.I.D. of documentation pursuant to which disbursement will be made, the Grantee will, except as the Parties may otherwise agree in writing, furnish to A.I.D. in form and substance satisfactory to A.I.D.:

(a) A written opinion from the Office of the Attorney General, acceptable to A.I.D., that this Agreement has been duly authorized and/or ratified by, and executed on behalf of, the Grantee, and that it constitutes a valid and legally binding obligation of the Grantee in accordance with all of its terms; and

(b) A statement of the names of the persons holding or acting in the office of the Grantee specified in Section 8.2, and of any additional representatives, together with a specimen signature of each person specified in such statement.

SECTION 4.2 Condition Precedent to Disbursement of Funds to the Nongovernmental Cooperating Recipient for Sub-Agreements to Finance Community Based Wildlife Utilization Activities where Retention of such Income by the Community is Impermissible under Namibian Law.
Prior to the disbursement of funds by A.I.D. through the planned Cooperative Agreement between A.I.D. and a nongovernmental Cooperating Recipient, or the issuance by A.I.D. of documentation pursuant to which disbursement may be made, to finance income generating community based activities involving the utilization of wildlife or other resources where retention of such income by the community is contrary to or otherwise impermissible under Namibian law, the Government of the Republic of Namibia, except as the Parties to this Project Agreement otherwise agree in writing, shall furnish to A.I.D., in form and substance satisfactory to A.I.D., evidence that legislation, regulations, procedures or other authority necessary to permit and authorize communities to manage, utilize and retain income from such natural resources has been enacted or executed and may be implemented.

SECTION 4.3 Notification. When A.I.D. has determined that the

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conditions precedent specified in Section 4.1 and 4.2 have been met, it will promptly notify the Grantee in writing.

SECTION 4.4: Terminal Dates for Conditions Precedent.

(a) If all of the conditions specified in Section 4.1 have not been met within 60 days from the date of this Agreement, or such later date as A.I.D. may agree to in writing, A.I.D., at its option, may terminate this Agreement by written notice to Grantee.

Article 5: Special Covenants.

SECTION 5.1 The Grantee agrees to use its best efforts to ensure that trainees under the Project are selected from among historically, socially and economically disadvantaged Namibians to the maximum extent practical and feasible.

SECTION 5.2 The Grantee agrees that no A.I.D. funds shall be disbursed or otherwise utilized under this Project to provide financial support directly to law enforcement or military forces for purposes of the protection of natural resources, including anti-poaching activities, until such time as the Parties hereto agree otherwise in writing and existing authority under United States law is expanded to clearly authorize such financial support.

SECTION 5.3 Project Evaluation. The Parties agree to establish an evaluation program as part of the Project. Except as the parties otherwise agree in writing, the program will include, during the implementation of the Project and at one or more points thereafter:

(a) evaluation of progress toward attainment of the objectives of the Project;

(b) identification and evaluation of problem areas or constraints which may inhibit such attainment;

(c) assessment of how such information may be used to help overcome such problems; and

(d) evaluation, to the degree feasible, of the overall development impact of the Project.

Article 6: Procurement Source.

SECTION 6.1 Foreign Exchange Costs. Disbursements pursuant to Section 7.1 will be used exclusively to finance the costs of goods and services required for the Project having, with respect to goods, their source and origin, and with respect to services their nationality in the United States (Code 000 of the AID Geographic Code Book) as in effect at the time orders

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are placed or contracts entered into for such goods or services), or other countries included in AID Geographic Code 935 ("Foreign Exchange Costs"), except as AID may otherwise agree in writing, and except as provided in the Project Grant Standard Provisions Annex, Section C.1 (b) with respect to marine insurance. To the maximum extent practicable, goods and services, with the exception of those procured in Namibia and the Rand Monetary Area will have their source and origin in the United States. Ocean transportation costs will be financed under the grant only on vessels under flag registry of the United States or countries included in A.I.D. Geographic Code 941.

SECTION 6.2 Local Currency Costs. Disbursements pursuant to Section 7.2 will be used exclusively to finance the costs of goods and services required for the Project having their source and, except as A.I.D. may otherwise agree in writing, their origin in the Republic of Namibia or the Rand Monetary Area ("Local Currency Costs").

Article 7: Disbursement.

SECTION 7.1 Disbursement for Foreign Exchange Costs.

(a) After satisfaction of conditions precedent in Section 4.1, the Grantee may obtain disbursements of funds under the Grant for the Foreign Exchange Costs of goods or services required for the Project in accordance with the terms of this Agreement, by such of the following methods as may be mutually agreed upon:

(1) by submitting to A.I.D., with necessary supporting documentation as prescribed in Project Implementation Letters, (A) requests for reimbursement for such goods or services, or, (B) requests for A.I.D. to procure commodities or services in Grantee's behalf for the Project; or,

(2) by requesting A.I.D. to issue Letters of Commitment for specified amounts (A) to one or more U.S. banks, satisfactory to A.I.D., committing A.I.D. to reimburse such bank or banks for payments made by them to contractors or suppliers, under Letters of Credit or otherwise, for such goods or services, or (B) directly to one or more contractors or suppliers, committing A.I.D. to pay such contractors or suppliers for such goods or services.

(b) Banking charges incurred by Grantee in connection with Letters of Commitment and Letters of Credit will be financed under the Grant unless the Grantee instructs A.I.D. to the contrary. Such other charges as the Parties may agree to may also be financed under the Grant.

SECTION 7.2 Disbursement for Local Currency Costs.

(a) After satisfaction of conditions precedent in Section 4.1, the

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Grantee may obtain disbursements of funds under the Grant for Local Currency Costs required for the Project in accordance with the terms of this Agreement, by submitting to A.I.D., with necessary supporting documentation as prescribed in Project Implementation Letters, requests to finance such costs.

(b) The local currency needed for such disbursements may be obtained:

(1) by acquisition by A.I.D. with U.S. Dollars by purchase; or

(2) by A.I.D. (A) requesting the Grantee to make available the local currency for such costs, and (B) thereafter making available to the Grantee, through the opening or amendment by A.I.D. of Special Letters of Credit in favor of the Grantee or its designee, an amount of U.S. Dollars equivalent to the amount of local currency made available by the Grantee, which dollars will be utilized for procurement from the United States under appropriate procedures described in Project Implementation Letters.

The U.S. dollar equivalent of the local currency made available hereunder will be, in the case of subsection (b) (1) above, the amount of U.S. dollars required by A.I.D. to obtain the local currency, and in the case of subsection (b) (2) above, an amount calculated at the rate of exchange specified in the applicable Special Letter of Credit Implementation Memorandum hereunder as of the date of the opening or amendment of the applicable Special Letter of Credit.

SECTION 7.3 Other Forms of Disbursement. Disbursements of the Grant may also be made through such other means as the Parties may agree to in writing including, but not limited to, grants or cooperative agreements between A.I.D. and indigenous, U.S. or international nongovernmental organizations.

SECTION 7.4 Rate of Exchange. Except as may be more specifically provided under Section 7.2, if funds provided under the Grant are introduced into the Republic of Namibia by A.I.D. or any public or private agency for purposes of carrying out obligations of A.I.D. hereunder, the Grantee will make such arrangements as may be necessary so that such funds may be converted into currency of the Republic of Namibia at the highest rate of exchange which, at the time the conversion is made, is not unlawful in the Republic of Namibia.

Article 8: Miscellaneous.

SECTION 8.1 Communications. Any notice, request, document or other communication submitted by either Party to the other under this

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Agreement will be in writing or by telegram or cable, and will be deemed duly given or sent when delivered to such party at the following addresses:

To the Grantee:

Mail Address:	*Permanent Secretary, Ministry of Wildlife, Conservation & Tourism, Private Bag 13346 Windhoek, Namibia*
Alternate Street Address:	*Fifth Floor, Government Building, Windhoek, Namibia*
Phone:	*264-61-2849111*
Fax:	*264-61-229936*

To A.I.D.:

Mail Address:	*Resident Representative, U.S. Agency for International Development, Private Bag 12028, Ausspannplatz, Windhoek, Namibia*
Alternate Street Address:	*Southern Life Towers, 6th Floor, 39 Post Mall Street, Windhoek, Namibia*
Phone:	*264-61-225935*
Fax:	*264-61-227006*

All such communications will be in English, unless the Parties otherwise agree in writing. Other addresses may be substituted for the above upon the giving of notice.

SECTION 8.2 Representatives. For all purposes relevant to this Agreement, the Grantee will be represented by the individual holding or acting in the office of the Permanent Secretary of the Ministry of Wildlife, Conservation and Tourism and A.I.D. will be represented by the individual holding or acting in the office of the Resident A.I.D. Representative, each of whom, by written notice, may designate additional representatives for all purposes other than exercising the power under Section 2.1 to revise elements of the amplified description in Annex 1. The names of the representatives of the Grantee and A.I.D., with specimen signatures, will be provided to A.I.D. and the Grantee, which may accept as duly authorized any instrument signed by such representatives in implementation of this Agreement, until receipt of written notice of revocation of their authority.

SECTION 8.3 *Standard Provisions Annex*. *A "Project Grant Standard Provisions Annex" (Annex 2) is attached to and forms part of this Agreement.*

IN WITNESS WHEREOF, the Republic of Namibia and the United States of America, each acting through its respective Government's duly authorized representative, have caused this Agreement to be signed in their names and delivered as of the third day of September in the year one thousand nine hundred and ninety-two.

REPUBLIC OF NAMIBIA	UNITED STATES OF AMERICA
BY:	BY:
DR. ZEDEKIA NGAVIRUE	MRS. GENTA HAWKINS HOLMES
TITLE: DIRECTOR GENERAL NATIONAL PLANNING COMMISSION	TITLE: AMBASSADOR UNITED STATES OF AMERICA
BY:	BY:
MR. NIKO BESSINGER	DR. RICHARD L. SHORTLIDGE JR.
TITLE: HON. MINISTER MINISTRY OF WILDLIFE, CONSERVATION AND TOURISM	TITLE: RESIDENT REPRESENTATIVE USAID MISSION TO NAMIBIA

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Program Grant Agreement for LIFE (690-0251.73) dated September 3, 1992.

Project Number: *690-0251.73*
Appropriation: *72-112/31014*
Allowance: *281-60-673-01-69-21*
Budget Plan Code: *GSS2-92-21673-IG12*

Funds Obligated by this Agreement: *$3,000,000*
Funds Obligated to Date: *$3,000,000*

Authority: *Funds 92 STATE 274291*
CN Expiration 92 STATE 277221
Delegation of Authority 92 STATE 280948
RLA Clearance: FAX August 18, 1992

Funds Available: *USAID Controller, Carl L. Lewis*

Date: 9/2/92

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ANNEX 1

AMPLIFIED PROJECT DESCRIPTION

ARTICLE 1:

Project Description

Section 1.1 Goal and Purpose

The goal of the Life Project is to enhance the capabilities of poor, rural communities living on marginal lands to meet their basic human needs by broadening Namibia's resource base and managing its natural resources in a sustainable manner. As part of the Regional Natural Resources Management Project, the general purpose is to improve the social and economic well-being of residents of targeted rural communities (defined as marginal and buffer zones in Namibia) by implementing sustainable community-based wildlife conservation and utilization programs. The marginal and buffer areas of the country to be included in the LIFE project are Caprivi (both East and West), Bushmanland and the Etosha National Park catchment area.

The specific purposes of the Namibia component in these three geographic regions are to:

(1) increase the social and economic well-being of poor rural communities living in marginal agricultural areas or in buffer zones to national parks and protected areas, through sustainable and economically viable community-based natural resource management;

(2) improve community-based groups capabilities to manage natural resources in a sustainable manner, through strengthening local, regional, and national organizations and institutions which provide services to these communities;

(3) develop appropriate and relevant natural resource management strategies and approaches for community management of natural resources which have wider applicability in Namibia's diverse and marginal areas; and

(4) establish closer ties and linkages with similar activities in the Southern Africa region and elsewhere in Africa and the world.

Section 1.2 End of Project Status

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While the Project is expected to improve directly bio- diversity, planning and general resource management in the affected marginal areas, it will contribute to the attainment of overall improved resource management in Namibia. There will be greater awareness and sensitivity to the environment and better management of natural resources. Participating communities will be empowered to control the benefits derived from the land they live on and interaction with the government is expected to improve. As specific measures of basic human needs, the Project is expected to result in increased household incomes, improved nutrition, more employment opportunities and more environmental awareness and skills at the community level.

By the end of the Project, an institutional framework will exist that is characterized by decentralized decision-making and a stronger partnership among the GRN, NGOs, the private sector and rural communities. There will be an increased number of established community based decision-making bodies related to natural resource management, with representation from community sub-groups on related committees. NGOs that are involved in natural resource management and community development will have improved administrative and organizational structures and more disadvantaged Namibians will be trained for employment by the GRN and the private sector. By the end of the Project, NGOs will have improved their chances of operating independent of external assistance through expanded funding from the private sector and widen donor community. As indicated, there will be a stronger involvement of Namibia's private sector in supporting natural resource management. Additional strategies for natural resource management will also have been developed and disseminated to appropriate government agencies and NGOs.

Baseline data for assessing the project's impact will be compiled during the first year of the project. These data will consist of three profiles:

Profile 1:
Characteristics Of The Area Covered By The Specific Activity. This will include information on physical and environmental characteristics such as climate, soil types, vegetation and land use patterns.

Profile 2:
Socio-Economic And Demographic Features of the population residing in the area. This will encompass variables such as numbers of people, their location and living patterns, sources of income and employment, community leadership and decision-making.

Profile 3:
Natural Resource Base. This will include estimates of wildlife populations by species and the availability of other natural resources for sustainable exploitation, how these resources are being presently

used, their current/potential economic value to various stakeholders, and knowledge/attitudes/practices of communities towards these resources. Data will be collected on the community's attitudes and perceptions about conservation authorities working in their areas and how responsive these authorities have been to problems associated with wildlife or other resources .

With these profiles in place, the project will analyze and evaluate how these various factors are affected during the course of the project's implementation. At the end of the project, it is expected that the following closely linked objectives will have been achieved:

1. Natural Resource Empowerment Of Local Communities Legislation will be in place which empowers local communities with the right to manage and economically benefit from the sustainable management of resources on their lands.

2. Changes In Revenue Streams To Communities From Sport Hunting. There will be changes in the hunting license distribution system so that a large portion of the money derived from sport hunting (e.g., trophy fees) return directly to the concerned community for the purpose of resource management and community development. Similar changes should be considered for legislation involving forestry and other valuable resources that may be found.

3. Increased Community Revenue From Natural Resource Management. Significant increases will occur in the community's income being derived directly and indirectly from wildlife and other natural resource utilization;

4. Decreased Human/Wildlife Conflicts. There will be significant decreases in the number and incidences of conflicts between wildlife and human populations;

5. Improved Wildlife Habitat And Populations. There will be significant increase in improvement of wildlife habitat and gains in wildlife populations;

6. Improved Wildlife And Natural Resources Management. There will be significant increases in sustainable wildlife and natural resource utilization and management practices being observed by the community;

7. Increased Environmental Awareness. There will be significant increases in community's awareness of environmental issues;

8. Active Collaboration With Conservation Authorities. There will be significant increases in communities' ability to effectively interface and

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interact with conservation authorities; and

9. Improved Community Land and Resource Use Planning. There will be significant increases in communities' capacity to plan, develop and implement community based initiatives in sustainable natural resource utilization.

10. Community Ties To Private Sector. There will be closer links to the private sector which may begin collaborating directly with the local community to market and sustainably exploit their resources (tour operators, professional hunters, logging concerns, meat processing companies, handicraft marketing, etc.).

Section 1.3 Project Components

The LIFE project has four complementary, interrelated components that all support community-based natural resource management: (1) Community-based natural resource management activities themselves; (2) planning and applied research support; (3) environmental education; and (4) regional coordination and exchange of information.

The four project components support the core concept of the sustainable management of Namibia's natural resources by rural communities. The first component will support specific community-based pilot activities, which will start in Caprivi, Bushmanland and possibly expand into the communal areas surrounding the Etosha National Park upon completion of the comprehensive research program for the Etosha catchment area being conducted by the Etosha Ecological Institute and the Zoological Society of San Diego. These activities will be selected based on their relevance to the ecological, economic and social needs of the people in these regions. The second component will support planning and applied research that is relevant to community-based resource management project activities in these three regions. Research on socio-economic conditions will be done before the start of new pilot initiatives to ensure that benefits will accrue to the local communities; and, monitoring and evaluation of ongoing activities in Caprivi and Bushmanland will provide valuable information that can be used to adapt those projects, develop new ones and share lessons learned within Namibia and with other countries in the SADCC region. The third component will finance environmental education activities, that, in turn will strengthen the community-based initiatives by providing training for community decision makers, teachers, community liaison officers and game guards. The fourth component links the Namibian experience to similar regional programs in Zimbabwe, Malawi, Zambia, and Botswana through regional research, conferences, workshops and seminars coordinated by Malawi as well as other countries in the East and Southern Africa regions.

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Component 1: *Community-based Natural Resource Management:*

The Community-based natural resource management component will strengthen and expand the on-going community-based conservation and development activities initiated by NGOs and the GRN in Caprivi and Bushmanland and possibly the Etosha area. This component has two aspects which will be funded through subgrants from the International or US PVO: (a) Pilot activities that will be implemented as part of on-going or planned NGO conservation and development programs; and (b) the institutional strengthening of NGOs and community-based organizations working in these regions. Most activities under this component are adaptive or experimental and maximum use will be made of local NGOs for implementation.

The pilot activities supported will take into account the following criteria:

o Proposed activities must be directly linked to at least one of the three geographic and one of the four programmatic areas of the project. These are community-based resource utilization, institutional capacity building, applied research, or environmental education in Bushmanland, Caprivi or the Etosha catchment area;

o Technical, economic, social and environmental feasibility studies must accompany the proposal and indicate that it is socio-economically and ecologically justified;

o Proposals must indicate which specific communities or resource users are targeted for subgrant activities; proposals must provide clear evidence that these groups have been involved in proposal development and that they will participate fully in their implementation;

o Proposals must explain what steps have been, or will be, taken to strengthen the local communities' long term capacities to sustainably use and manage their natural resources;

o Proposals must provide achievable and realistic targets and objectives within the time frame of the project;

o A plan for monitoring, evaluating and reporting on the project's progress and impacts must be presented;

o Proposals should ensure that planned activities will not adversely affect women or other disadvantaged groups, as well as outline constraints to their full participation and detail strategies to ensure their participation in and benefits from sound resource use;

o Proposals should demonstrate innovative and creative wants to

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promote growth in income and employment which encourages maximum community involvement and participation;

o Proposals which, present the possibility for replication or adaption elsewhere are encouraged;

o Proposals that incorporate collaboration among two or more organizations, including government services where appropriate, are encouraged;

o For proposed activities that are meant to continue after the period of the subgrant, proposals must demonstrate the sustainability of the activities, i.e., how recurrent cost will be borne in the long run, how post-intervention activities will be managed, etc.; and

o Proposals should indicate the extent to which the community is committing its own resources, both in-kind and in cash.

Applying these criteria, the following illustrative activities have been scheduled for LIFE project funding through the Cooperative Agreement with the PVO:

(a) Caprivi: Building on experience in Damaraland/Kaokoland and in East Caprivi, two Namibian NGOs, Integrated Rural Development and Nature Conservation (IRDNC) and the Namibia Nature Foundation, in close collaboration with the MWCT, are carrying out a community game guard program in Damaraland, Kaokoland and Caprivi and will receive subgrants for their Caprivi activities. West Caprivi is bounded to the west and east by the Okavango and Kwando Rivers respectively, to the north by Angola and the south by Botswana. The IRDNC/MWCT/NNF activity links the economic development of rural communities to wildlife and their environment and involves local communities in the management and utilization of their natural resources. Its objective is to enable the approximately 14,000 people living within the project area (which includes a proclaimed game reserve and the east bank of Kwando river from Singalamwe to Malengalenga) to coexist with wildlife. The region is also important for its biodiversity because it includes the only two examples of riverine floodplains in Namibia, some of the only remaining intact riverine vegetation and habitat for rare water birds and mammals, including sable, buffalo, hippopotamus, elephants, wild dogs, etc.

The Mbukushu, Khoe, !Kung, Yei, and the so-called "River Bushmen" groups reside in the project region. The areas have been extensively surveyed by the MWCT and IRDNC with full community participation to determine socio-ecological conditions and how to best resolve conflicts between people and wildlife. A key problem experienced by the people of the West Caprivi with wild animals, mainly elephants, is damage to crops.

The IRDNC/MWCT/NNF activity includes a community game guard

program, the placement of Community Liaison Officers, and the development of income/employment-generating, resource use schemes. Community game guards are individuals selected by the communities themselves. They are employed and trained by IRDNC to monitor animal populations and poaching. Official anti-poaching activities will continue to be the responsibility of the MWCT under its anti-poaching units. Illegal hunting activities uncovered by the guards will be reported to community leaders for discussion and resolution, including, if necessary, the involvement of government officials. In cases where serious conflicts recur, the "problem" animal is destroyed only after the local chief and conservation officer have approved of this action. The meat, by-products, and revenue from wild animal culling are distributed to the community or held in a community trust fund to compensate the community for losses. Local communities are being empowered to be fully involved in regional planning and have authority to make decisions about the sustainable use of their resources and to derive benefits from these resources to meet their needs.

Two Community Liaison Officers (one for East and the other West Caprivi) will be recruited to undertake extension work and to support community-based organizations in the management of their resources. The position of Community Liaison Officer is not a government post, but an ombudsperson and facilitator (accountable to the local NGO and communities served) who is the community's advocate and planner for local management and utilization of the resources. One of the primary responsibilities of the Community Liaison Officer will be to develop, with the full participation of the community and facilitated by the game guards, resource management initiatives that generate benefit to the community. These benefits may be social (i.e. increased confidence, awareness, knowledge, empowerment, increased status) or economic (i.e. meat, financial revenues, employment) or other positive outcomes for the community. Examples of benefit-generating activities include: community managed tourism, hunting safaris, traditional hunting schemes, trophy hunting, handicraft production and sales and veld food schemes. Illustrative tasks of the Community Liaison Officer and game guards include:

- *increase local awareness of the surrounding environmental conditions and systems, both in the present and in the future, in which residents live;*
- *determine specific needs and resource issues, as well as propose options for the community to consider;*
- *facilitate the establishment of appropriate and representational institutions for management of the resources;*
- *assist communities plan, design and implement specific*

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income or employment schemes involving sustainable utilization of the community's natural resources.

- *provide technical assistance for resource utilization schemes;*
- *facilitate communication and act as a broker for the community among the private sector, the government, donors and others;*
- *training activities for community-based organization members, and*
- *support activities for community game guards.*

The LIFE project will initially finance the Community Liaison positions, community game guards (non-paramilitary), vehicles and maintenance costs as part of the subgrants to the Namibian NGOs. Payment of these recurrent costs by USAID under the project will gradually diminish as community and other resources became available. The mid-term project evaluation will focus on sustainability and will assist participating NGOs and communities to develop plans for shifting the financing of recurrent cost to the income generated by the community based activities. A plan for the phasing out of USAID funded recurrent costs will be in place by the end of the project's third year. The MWCT plans to incorporate the western bank of the Kwando River into the West Caprivi game reserve. It is anticipated that this will be done during the second year of the project.

(b) ***Bushmanland:*** *The Ju/'hoan Bushman Development Foundation, now called the Nyae Nyae Development Foundation of Namibia (NNDFN), in collaboration with the MWCT, is implementing a series of activities in Bushmanland which will be supported through LIFE subgrants. These activities are designed to enable local people (approximately 2,500) to benefit from wildlife utilization through a range of activities from trophy hunting to low impact ecotourism which is socially acceptable, locally managed and stimulates income and employment growth for the local community. The Bushmanland region has also been surveyed extensively by the MWCT and NNDFN who consulted widely with the local community before beginning project activities.*

Eastern Bushmanland is of particular significance for biodiversity conservation in Namibia. The region is part of the Kalahari sandveld system, but the eastern part, which is the focus of this project, is characterized by a series of seasonal water pans which serve as a focal point for people and wildlife alike. During the wet season, the area is prone to extensive flooding and the inundated areas attract large numbers of pelicans, flamingoes and other water birds. The area also attracts significant numbers of rare or

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endangered birds such as the Wattled Crane, Ethiopian Snipe, and Slaty Egret. The region supports, seasonally, a population of 300-400 elephants and is one of the few regions of Namibia where the endangered wild dog occurs. Other significant game species include the roan antelope, a remnant population of buffalo, eland, giraffe, and wildebeest. Predators include lion, leopard and cheetah.

Eastern Bushmanland has a population of about 2,500 who consist of the Ju/'hoan San people who are traditional hunters and gatherers. Communities have a small number of cattle for milk and slaughter and most villages are engaged in dryland gardening. Like the West Caprivi region, there have been tensions surrounding the use of land and wildlife between the local people and outsiders such as the government, tour operators and other ethnic communities. In the past, the conservation authorities tried to establish a game reserve in the region, but the effort was resisted by the local community as a threat to their land rights. The game reserve was never proclaimed. The biodiversity of the region has been threatened by the settlement of people at water points, especially boreholes, localized overgrazing and resulting bush encroachment, incursion of cattle herders into the region from Hereroland, and poaching from within and outside the area. Game numbers (ungulates) have declined significantly over the past decade and will soon reach critically low numbers if the trend is not reversed.

The local community has organized itself into the Nyae Nyae Farmer's Cooperative and has in turn formed the Bushmanland Environmental Planning Committee. The Committee consists of local representatives from:

- *The Nyae Nyae Farmer's Cooperative,*
- *The Nyae Nyae Development Foundation,*
- *The Ministry of Wildlife, Conservation and Tourism*
- *The Ministry of Agriculture*
- *The Ministry of Lands and Resettlement*
- *The Private Sector (professional hunters)*

It has been decided that this group will work to produce an integrated landuse plan for Eastern and Western Bushmanland. Eastern Bushmanland will be established as a Wildlife Management Area in which a mixed landuse will be based upon wildlife, some livestock and dryland farming, and forestry.

The communities are very much aware of the overgrazing that has occurred in neighboring areas and believe that their future is still tied to the survival of large game species. The local communities would

like to develop their own low impact tourism industry and explore how the wildlife of the area can become a key resource for the development of Eastern Bushmanland.

Currently, wildlife populations are very low in Eastern Bushmanland due to the drought, a change of pattern in veld fires, termite pasture destruction, veterinary fencing, and animal and human predation. The main factor, however, is believed to be the lack of strategically located water points so wildlife can take advantage of the excellent veld food:

Species	Estimated #'s 1990	Estimated #'s 1982
Roan	100	160
Wildebeest	250	530
Buffalo	12	70
Eland	3	500
Oryx (Gemsbok)	250	340
Giraffe	250	940
Kudu	500	850
Elephant	250	210
Hartebeest	100	200
Sassaby	0	7
Duiker	600+	600
Reedbuck	0	30
Steenbok	800+	870
Warthog	60	370
Ostrich	100	280

Predators	Estimated #'s 1990	Estimated #'s 1982
Brown Hyena	20	50
Spotted Hyena	100	150
Cheetah	25	20
Lion	50	170
Leopard	100	80
Serval Cat	10	7
Wild Dog	37	110
Caracal	80	50

Source: Grellmann, Volker. 1991. The Bushman, What does the future hold? ANVO Hunting Safaris, Windhoek. 28p.

The residents of Eastern Bushmanland are interested in reintroducing the now locally extinct zebra, springbok, sable and reedbuck, while building up and sustainably managing the existing population of wildlife.

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With appropriate MWCT policies, the current annual offtake of only 6 elephant, 4-5 leopards and 5-6 antelope, sport hunting has the potential to return as much as R 250.000/year to Eastern Bushmanland with a great potential of increasing revenue to the community if the wildlife population can be increased from reintroduction programs and improved wildlife management.

Similar to the IRDNC/MWCT activity in West Caprivi, the NNDFN/MWCT is implementing a community game guards program and will have Community Liaison Officers who will assist with the development of income and employment benefit generating activities. The aim of project's activities is to conserve the biodiversity and life-supporting ecological balance of Eastern Bushmanland, while empowering the local people to manage and benefit from the direct use of natural resources such as wildlife, wild plants and timber.

Alternative forms of supply driven tourism which have been discussed include:

- *Craft marketing,*
- *Demonstration Villages for tourists,*
- *Training Bushmen to become professional trophy hunting guides,*
- *Developing pay-to-use camping facilities,*
- *Providing a Bushman Guide Service for tourists coming into the area; both foot and vehicle safaris.*
- *Conducting ornithological tours when the local pans are seasonally inundated and serve as important waterbird habitat.*

More traditional use of natural resources, that are likely to be part of the NNDFN/MWCT project, for sustainable economic development include hunting of dangerous game, forest management, sustainable exploitation of veld products for income-generation (e.g., beekeeping), marketing of vegetables, livestock marketing.

In addition to the activities described above, fuel-efficient stoves (to lessen the demand for forest wood) and charcoal makers (as a potential source of income generation), as well as, water conservation technologies may be introduced which will help local communities better conserve and benefit from these precious resources.

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The LIFE project will assist the NNDFN/MWCT by providing community liaison officers, funding community game guards, vehicles and equipment to carry out project activities. As in the case of Caprivi, the recurrent cost components will increasingly be financed by non-USAID sources over the life of the Project. A plan for this reduced reliance on LIFE Project financial resources will be developed by the third year of the project.

Within Caprivi and Bushmanland, subgrants will be made to those NGOs already working and to others for community-based resource management projects. Given women's key roles in using these resources to meet household needs, many of the subgrants are expected to support activities and organizations involving women.

(c) Institutional Strengthening for Resource Management

Institutions, appropriate to the resource management tasks and acceptable to the communities involved, need to be established and strengthened in order for local participants to exercise control of local resources and their benefits. The functions of local level institutions that will qualify for assistance under this project element include:

- *o Technical wildlife management*
- *o Generation, intake and administration of financial and other resources,*
- *o Allocation of responsibilities and benefits within the community,*
- *o Promotion of the development of local enterprises,*
- *o Representation to the higher levels of administration,*
- *o Environmental education, formal and non-formal,*
- *o Natural resource accounting,*
- *o Natural resource marketing,*
- *o Low impact ecotourism, and*
- *o Craft production and marketing.*

Community-based organizations operating in the targeted geographic areas will receive support for services, material and equipment that are used directly for management activities and for organizational skills development, such as training and technical assistance in planning, accounting and financial management, administration, and evaluation. This assistance to community organizations will be carried out through subgrants to NGOs by the PVO.

USAID is in the process of conducting financial management assessments of potential NGO subgrant recipients to identify their strengths and weakness to plan and implement projects. Training will be provided to NGO subgrantees as required to ensure the proper financial management of subgrant activities. The result of the financial assessments are expected to be completed by September 1992 and will be incorporated into the incountry training program of the PVO.

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To strengthen Namibian NGO capacity, subgrants will be provided to local NGOs, especially those already involved in the administration of umbrella subgrants in the two regions. The most important of these NGOs is the Namibia Nature Foundation. The NNF is likely to receive one of the initial institutional strengthening grants under LIFE because it already serves as an "umbrella" local NGO that handles small grants from donors such as GTZ, WWF, NORAD and the EEC and has a well established structure for evaluating, selecting and managing donor funds. It presently manages a project portfolio of around US$1.0 million. Support will be required, however, if the NNF is to assume additional project management responsibilities in the LIFE Project areas and to raise funds from private and other donors to sustain the community based initiative in Bushmanland, Caprivi and the Etosha catchment area.

(d) Training

Both long and short-term training of Namibians is an important part of the LIFE project and will be incorporated into each project component. Special attention will be given to Namibians from Caprivi, Bushmanland and the Etosha area who in the past have not had access to preservice and inservice training. The training component will also provide support to the MWCT's Affirmative Action plan. The MWCT and several NGOs have identified preliminary training needs in a number of fields, including program administration, natural resource economics, finance, management, communication, environmental education and ecotourism including alternative tourism, as well as in specific technical skill areas such as basic building/construction, craft production and wood working skills and first aid.

The LIFE project will assist the MWCT and NGOs with training programs for the Community Liaison Officers, MWCT and NGO personnel, community groups and community leaders. However, long-term degree training outside Namibia will be limited to GRN personnel. The incountry diploma training will be open to Namibians from the communities and private and pubic sectors who are working in or serving the needs of the three geographic regions. Illustrative training areas include the following:

MWCT

- *Community-based conservation theory and skills, communications and facilitation skills*
- *Management skills*
- *Accounting and finance*
- *Leadership*
- *Natural resources management (e.g. wildlife, range, forestry)*
- *Environmental impact assessment*
- *Socio-economic impact assessment*
- *Environmental natural resources economics*
- *Gender planning*

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o *Community based environmental education*

NGOs

o *English conversation training*
o *First Aid*
o *Driving skills*
o *Vehicle maintenance*
o *Camp management*
o *Small Business management/Finance*
o *Ecotourism/Tourist operation and management*
o *Animal and plant identification*
o *Basic building/construction skills*
o *Construction of wetland systems from grey water*
o *Erection and maintenance of water installations*
o *Public relations and communications skills*
o *Basic bookkeeping*
o *Computer literacy*
o *Personnel Management*
o *Community Development*
o *Social marketing for natural resource management*
o *Gender planning and evaluation*
o *Woodworking/Carpentry skills*
o *Low impact ecotourism*

Component 2: *Planning and Applied Research*

(a) Overview

Given the adaptive and experimental nature of community-based resource management projects and the need to develop viable lessons learned that can be applied on a broad scale, the applied research component of the Life Project will pay specific attention to the intended and unintended impacts of project and sub-project interventions. All activities will need to include the collection and analysis of base-line data for selected indicators and periodic monitoring of these indicators over the life of the project. Also there is the need to broaden and deepen Namibia's existing private and public research capacities.

Generally, the "adaptive management" concept is most useful in ongoing project planning as it provides a means for taking into account short-term changes. The basic principle of the adaptive management theme is that there is monitoring and feedback between research and management, and that management approaches should be used as experimental tests of our understanding of the ecological systems and what is required for their sustainability. The approach thus stresses the importance of feedback into decision-making. The adaptive management approach is relevant to both

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ecological and social systems. When it has been applied in the development field, it has been referred to as a "rolling" or "flexible" design. Examples of planning and applied research activities that focus on community-based sustainable management of natural resources and directly relate to the project's community based initiatives in the geographic areas of Caprivi, Bushmanland and Owambo are:

o ***Study of Declining Large Mammal Populations by the Etosha Ecological Institute and the Zoological Society of San Diego***

The GRN is working to develop self-sufficiency through a wildlife and tourist-based economy. Etosha National Park, Namibia's primary international tourist attraction, is the home of five conspicuously endangered species, i.e., the black rhino, elephant, Hartmann's zebra, black-faced impala, and cheetah. The preservation of Etosha as a large intact ecosystem which includes the buffer communal and commercial areas surrounding the National Park is critically important for maintaining international tourism and biological diversity. Unfortunately, there has been a steady decline in most major wildlife populations on Etosha's plains and, to date, no comprehensive, systematic study of factors causing the decline of ungulates has been done. The LIFE project will finance a research grant to the Zoological Society of San Diego in collaboration with the Etosha Ecological Institute to support a study of what factors have caused the decline in wildlife in Etosha and how managers can alter these factors so that the ecosystem promotes a wildlife-based economy in Northern Namibia. Adapting this information and applying it to potential restocking of rural lands could provide a model system for wildlife conservation and management throughout the Etosha ecosystem, particularly in southern and western Ovambo, Damaraland and Kaokoland. This study is considered to be an essential element for the planning for the community based initiatives in the communal areas along the park's borders which may be initiated in the latter years of the project.

o ***Fire Ecology In The Northern Kalahari Woodlands.*** *Fire is used extensively by the communities in Owambo, Kavango, Caprivi and Bushmanland and may alter the environment to a less productive level endangering sustainability of current management practices. Fire may contribute to a loss in variety of grasses and promote bush encroachment, or vice versa depending on when and how often it is applied.*

o ***Community Development And Low Impact Ecotourism***

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Potential In Caprivi, Bushmanland and Etosha Catchment Area. *This feasibility study would investigate the economic, cultural, institutional and environmental potential of low impact and socially acceptable eco-tourism (e.g., marketing of handicrafts, village based tourism, foot safaris) in these unique, fragile and difficult to access regions of Namibia.*

o ***Ovambo Ethnobotany Project.*** *Of all regions in Namibia, it is in Ovambo where depletion of favored plant resources (e.g., Colophospermum mopane for poles) is most apparent with implications for core conservation areas such as Etosha National Park. There is increasing pressure on commercially important wild plant resources (e.g., fuelwood, palm fibre, traditional dyes as Berchemia discolor), and wood for carving (e.g., Commiphora africana) since they provide a buffer against extreme poverty as people fall back on wild plant use as a source of income. Little is known of traditional conservation and resource management practices in the region, nor the sustainability of current extractive practices. In conjunction with the resource users and managers, appropriate solutions will be identified and developed to assure sustainable use of Ovambo's major plant resources.*

o ***Changing Patterns Of Wild Plant Use By Women In The Caprivi Area.*** *Throughout Africa, women are the main wild plant resource users, and the first group to suffer if craftwork, fuelwood, veld food, thatch-grass and other resources are depleted. The Caprivi is one of the most culturally and botanically diverse parts of Namibia, which is of great interest to development and conservation planners. Although human densities in the West Caprivi are low, the same does not apply to East Caprivi, due to the influx of people from southern Angola and Zambia. Starting with a broad-based survey documenting plant names and uses in both the West and East Caprivi, this study will focus on the role of women as plant gatherers, comparing plant use in the peri-urban Katima Mulilo to that in the two selected rural villages in two different vegetation types.*

o ***Affirmative Action "People's Botany Projects In Bushmanland, Caprivi and The Etosha Catchment Area.*** *In order to stimulate the involvement of Namibian graduates, during vacation periods, employ 20 graduate students at the University of Namibia to undertake ethnobotanical surveys in their home villages over a three year period. Many graduates come from remote rural villages, are familiar with local vegetation and are aware of over-exploitation or scarcities of favored plant species. The students will act as rural facilitators during vacations and would carry out surveys of exploitation rates, traditional uses and management of these plants, as well as the current status (common, rare, extinct) and reasons for the status of important wild plants.*

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Within the context of community-based resource management projects, the biological sciences are used for monitoring the impact of project activities on the resources, including changes in populations and their structures among key species; rates of deforestation; and loss of species diversity, among other indicators. Applied social science can play an important role in providing the necessary analyses of the dynamics (motivational, technical, and administrative) involved and suggesting management options that are accessible and feasible to both central planners and local communities.

The socioeconomic topics to be investigated and integrated into monitoring and evaluation of community based initiatives include the following:

- *identification and analysis of culturally determined tenure, rights, responsibilities, and practices relating to environmental, social/institutional, and economic resources;*
- *identification and analysis, by gender, of micro-level individual, household, and community motivational and decision-making factors, including the domestic economy, and the range of economic options individuals perceive;*
- *impact of project interventions on leadership structures and decision-making processes;*
- *investigation of center-periphery relationships in bureaucratic, legal, and administrative structures, with the inherent conflicts over resource control these relationships involve; and*
- *the current role of women in natural resources management and their perceived needs, constraints, and opportunities within their primary role as household managers.*

(b) <u>Strengthening of the MWCT in Analysis and Application of Results to Policy and Legislation</u>

The Environmental Planning Unit in the MWCT currently has only two employed professionals, a biologist and community-based conservation specialist. Given the importance of analyzing the economic dimensions of management decisions and environmental policies, it is critical that a natural resource economist also be placed in the unit. Under this component of the LIFE project which will be handled through the Cooperative Agreement with the PVO, a Namibian economist from one of Namibia's disadvantage communities will be recruited and long-term post-graduate training provided in natural resource economics. Replacement personnel for this economist will

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be provided by the PVO while he is receiving training (expected to be between two and three years). An overlap of at least six months is planned to allow for a transition period and on-the-job counterpart training. Once training is completed, it is expected that the MWCT will assume all costs associated with the resource economist position in the Environmental Planning Unit.

The Environmental Planning Unit has received a grant from the AID Biological Support Program administered by World Wildlife Fund, for a Coordinator for community-based resource management for one year beginning in 1992. The LIFE project is expected to fund this position for three years, starting in the second year of the Project. The position will be filled by the PVO

(c) Training for Namibians Working in Natural Resource Management

Both GRN and NGOs cite the lack of trained personnel as a major constraint facing the development of effective natural resource management programs. While there is a need for providing short-term training to field practitioners as described above, there is also a need for long-term and short-term and technical training in the social and natural sciences, environmental education and interpretation, and in administration. Funds will be available under this component of the LIFE Project to support training of disadvantaged Namibians in the natural resource areas from the three geographic areas and NGOs working in these areas. The emphasis will be on specific training programs to enhance the research and analytical skills of those working in the environmental natural resources and social sciences to promote their involvement in community based applied research. This may involve strengthening the staff capacity of NISER, NEPRU, DERU and other local research organization to service the three geographic areas.

Component 3: Environmental Education

Environmental education (EE) will enable people in the communities affected by the project to understand the environment in which they live, to identify and analyze environmental problems facing their communities and to find the solutions which will enable them to sustainably utilize and benefit from natural resources. Sustainable management of Namibia's unique and ecologically diverse natural resources, including wildlife, will require the understanding and active involvement of Namibians, particularly those residing in the marginal communal areas and buffer zones involved in this project. People must become more aware of how rapidly Namibia's natural resources of land, soil, water and wildlife are diminishing, as well as the potential economic value of these resources. These people need to understand that it is within their ability to preserve their natural resources while simultaneously improving their economic position.

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Government officials and certain educational institutions are aware of the need for community-level environmental education and have begun to consider ways to incorporate EE activities in their programs. The MEC has appointed an EE coordinator in the curriculum planning unit and the subjects of Environmental Studies, Life Science and Natural Economy are being added to the curriculum at the primary, secondary and senior levels, respectively.

The MWCT has an Environmental Education co-ordinator based in Windhoek who is part of the Environmental Education and Extension Section. The primary aim of this section is to develop a national awareness of the diversity within, and fragile nature of, the Namibian environment, and to encourage and promote the sustainable utilization of Namibia's natural resources. The objectives of the section are to develop a national, interactive communications network, and to facilitate natural environmental experiences and learning opportunities.

The MWCT has taken the initiative to draft an EE policy and views EE as an important part of its work. The development of an Environmental Education Center in the Etosha National Park at Namutoni is an important part of the MWCT's 1992 program and will be done in collaboration with the Rossing Foundation through a grant financed under the USAID financed READ project. The primary objective of the center is to establish environmental awareness among the public, particularly among neighboring rural communities and to promote this awareness of practical conservation and sustainable utilization of natural resources.

The MWCT is developing an extension program that will increase the people's understanding of the benefits that conservation and tourism bring to the nation. Groups from the LIFE pilot project areas of Caprivi and Bushmanland including primary and secondary school children, local teachers, community leaders, community game scouts, and policy makers are expected to directly benefit from the Namutoni Center and its outreach program.

There may be a need for small community based EE centers in the Kwando area to support work in Caprivi and the Tsumkwe area of Bushmanland. These facilities may be financed by subgrants from either the LIFE or READ projects to those NGOs implementing the community based initiatives and directly integrated into their community level activities. Support services such as curriculum materials, staff, training, etc., would be provided through the READ Project's grant to the Rossing Foundation.

While the project recognizes the importance of EE initiatives in GRN and community programs and provides for such education directly and indirectly in each project component, the major EE program in Namibia will be supported through the USAID grant to the Rossing Foundation financed under the READ project (673-0004).

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Component 4: *Regional Communications and Exchange of Information*

The regional Natural Resources Management Project (NRMP) is being carried out in a variety of differing political, cultural, economic, and environmental settings in SADCC member countries. Since the LIFE project is similar to the country programs in Botswana, Zimbabwe and Zambia, there exist valuable opportunities for sharing experiences. Each participating SADCC country can benefit from the others, successes and mistakes by sharing information and lessons learned.

While each national program has its own focus and stage of development, there are numerous opportunities for networking and information exchanges. Each participating country, for example, is either addressing or planning a community game guard program. The sharing of information on on-going Namibian programs implemented will offer other approaches to regional projects for study and comparison. At the same time, information on the established programs in Zambia and Zimbabwe can allow Namibia to assess possible expansion of its national programs. Cross-border census and monitoring of wildlife populations would also be facilitated. In addition, specific research on topics common to regional projects can be shared. Topics might include: evaluations of resource management activities; community dynamics; empowerment of women; decentralization of authority; greater involvement of private sector; or pilot ecotourism activities. Regional or bilateral cooperative activities could include the development of regional environmental educational materials.

Both Botswana and Namibia have a common focus on the sustainable utilization of veld products, and re-establishment of indigenous veld plants. Namibia can benefit from the experience of Botswana's utilization and re-establishment of veld products as project activities. Involuntary resettlement of human populations and the effect on resource activities is common to Zimbabwe, Botswana, and Namibia. The sharing of research on this topic among Southern Africa countries will help create a broader knowledge base and understanding of a shared situation and has reliance to the pending political and economic changes in South Africa. Namibia's scientific research and results of specific activities such as the de-horning of rhino are significant on a regional basis. Results from the Namibian and Zimbabwean de-horning programs will assist other SADCC and African countries in deciding whether to utilize this approach.

The office of the SADCC Sector Coordinator in Malawi will serve as the facilitator for regional communications and exchange of information. Regional research, conferences, workshops and seminars are coordinated through the Malawi component of the NRM. Each national participant is represented on the regional Project Coordinating Committee (PCC) which is chaired by Malawi. The body meets at least once a year in Malawi to discuss

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and analyze progress and constraints on overall project implementation; propose and approve regional activities and meetings; and review the terms of reference for the mid-term evaluation.

A reference center for publications, articles, and conference proceedings relating to community-based resource management, wildlife utilization, community development and other topics relevant to NRMP activities has been established in Malawi. Each participating country forwards relevant reports to the coordinating unit in Malawi. A list of holdings is distributed periodically from Malawi to all project participants, and articles are sent to participants upon request. A regional data base established in Malawi maintains records of baseline information on wildlife populations and habitat, socio-economic variables, and environmental conditions. Each participating country forwards baseline data to Malawi for inclusion in the data base. Information stored in the data base is available to all participants for analysis and review. Through the monitoring and evaluation process and the comparison of results, a unique opportunity is provided for formulation of theories regarding necessary conditions and policy environment for success, viability of different approaches, and implementation constraints. The lessons learned provide a valuable knowledge base for the design of future community-based resource utilization programs.

ARTICLE 2:

Cost Estimates and Financial Plan

Section 2.1 *The Budget*

The budget for the LIFE project is presented in Annex P, Tables I through VII. The estimated overall cost of the five year project is $10.5 million.

The project will be implemented through a Cooperative Agreement with a U.S. or International PVO and a Research Grant to the Zoological Society of San Diego and USAID/Namibia. None of the funds under the project will actually be disbursed to or through the Government of Namibia. If the Project's budget is broken down by these various modes of implementation the funds will be allocated as follows:

	Total	%
US PVO	$ 8,028,404	76
San Diego	916,145	9
Inflation/ Contingency	503,420	5
USAID	1,052,031	10

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TOTAL	*$ 10,500,000*	*100%*

The Cooperative Agreement with the US or International PVO will provide management support to the project, long-term and short-term technical assistance, workshops, conferences, regional networking, in-country and external participant training and subgrants to Namibian NGOs and other organizations for the community based activities, applied research, institutional support and environmental education. Of the $8,028,404 in this Cooperative Agreement, $2,515,614 or 31 percent will cover the management support functions. This represents 24 percent of the LOP funding. When the USAID management component is added, the proportion of the project going to cover management activities rises to 34 percent. Therefore, the bulk or approximately two-thirds of the financial resources will be used in direct support of the project's goals and objectives. The subgrants to Namibia NGOs totaling $2,496,100 amount to 31 percent of funds in the Cooperative Agreement. The remaining 44 percent of the funds covers technical assistance, training, workshops and regional coordination/networking.

The three year research project being carried out jointly by the Zoological Society of San Diego and the Etosha Ecological Research Institute of Namibia is estimated to cost $1,860,670. However, only $916,170 or 49 percent of the funds is being requested under the LIFE project. The balance of the funding will come from donations and contributions raised by the Zoological Society of San Diego.

It is planned that the $10.5 million project will be obligated in three tranches of $3.0 million in FY 92 and $4.5 million in FY 93 and $3.0 million FY 94.

Section 2.2 *Host Country Contributions*

In support of the community development activities, the MWCT will make the following contributions. First, the MWCT will contribute the equivalent of $1,386,504 for activities related to the LIFE project in the Caprivi region. This includes involvement of anti-poaching personnel in protecting wildlife resources, park management staff in protecting resources and interacting with surrounding communities in problem animal control and project related meetings. Second, in Bushmanland, the MWCT will contribute the equivalent of $263,020 for project related activities. These activities include the involvement of personnel in protecting wildlife resources through law enforcement and maintenance of water points for wildlife, attendance at Bushmanland environmental planning committee meetings and other project related meetings with the communities, NGOs and other Ministries.

Third, in Owamboland and Kaokoland, the MWCT will contribute the equivalent of $655,713 for conservation management. Their activities include

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the control of problem animals such as elephants which leave Etosha, law enforcement, protection and maintenance of resources, extension activities, and servicing of the game guard system in Kaokoland.

For the direct and indirect support of the research activities in the Etosha catchment area, the MWCT will allocate the equivalent of $1,449,741 for conservation management in the Etosha National Park. The project related activities include the salaries and work of the Etosha anti-poaching unit, as well as the salaries and work of rangers and conservators involved in maintaining and protecting the park's wildlife and infrastructure. Etosha conservation staff will also interact with the local communities bordering the park for problem animal control and the development of better relations between the park and its neighbors. This is in terms of the policy of integrating the park into surrounding economies and land-use patterns which will be implemented under LIFE funding.

Overall project management will be provided by the MWCT's Environmental Planning Unit. It is estimated that 50% of their budget will be allocated to the LIFE project. This contribution represents the equivalent of $343,426. The unit coordinates community-based conservation at the national level, representing the MWCT on the LIFE project and field work in LIFE project areas. The ministry will also backstop the technical experts furnished by the PVO.

The GRN's contribution is summarized as follows:

	GOVERNMENT OF NAMIBIA (U.S. Dollar equivalent)	
	Amount (US$)	Percent (%)
Planning and Applied Research	1,449,741	35.4%
Community Development	2,305,237	56.2%
Project Management	343,426	8.4%
TOTAL	4,098,404	100%

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Section 2.3 *Audits/Evaluations*

Audits will be conducted each fiscal year in accordance with the standard provisions of OMB Circular A133 for grants or cooperative agreements. Under new audit requirements. all non-U.S. and non governmental grantees and subgrantees receiving $25,000 per year or more of AID funds in any one calendar year under a grant, are required to have an independent audit performed of the grant in order to determine whether the receipt and expenditure of the funds provided under the grant are presented in accordance with generally accepted accounting principles and whether the grantee has complied with the terms of the agreement. The independent auditor must be selected in accordance with the "guidelines for financial audits contracted by foreign recipients" issued by the AID Inspector General and the audit must be performed in accordance with the "guidelines." Copies of guidelines have been sent to local CPA firms and will be sent to all participating NGOs. Local firms will be identified by USAID and certified by RIG/A in Nairobi. It is expected that the US PVO will conduct a single audit, encompassing subgrants funded each year in compliance with this requirement. Two Non-Federal Audits will be funded under the Project for the San Diego Zoological Society and will be through or under a direct contract awarded by REDSO/ESA. The audits will be during year three and five. The USAID/Namibia Controller will coordinate the audit activities for USAID.

Two evaluations will be funded under the Project. The evaluations will be during years three and five. The USAID/Namibia Project Manager will coordinate evaluation activities for USAID. The evaluations will be conducted under a direct contract or indefinite quantity contract work order arranged by USAID Namibia.

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Implementation Strategy: Given the diversity and complexity of the problems being addressed by the LIFE project, the project implementation strategy is presented in the form of two tables. Table 3 gives an overview by r problems, their causes and potential solutions. In Table 4, the strategy for addressing these problem is outlined by region and by year.

TABLE 3: Outline of Major Problems and Possible Solutions in the Regions Covered by the Project.

PROJECT AREA	PROBLEMS	CAUSES	POTENTIAL SOLUTIONS TO PROBLEMS FROM A COMMUNITY BASED STRATEGY OF SUSTAINABLE NATURAL RESOURCES MANAGEMENT
1. Caprivi	(1) Displaced persons/families (2) No employment opportunities (3) Poor support services and high incidence of disease and malnutrition among children (4) Declining wild life resources (5) Loss of domestic food crops (6) Juxtaposition of population to protected game areas	(1) Artificial peri-urban areas established by South African Defence Force. Families attracted to areas in search of work. (2) With the coming of independence, most people lost their jobs as South African Defence Force pulled out. (3) Health and educational infrastructure dismantled after the war. Loss of South African personnel not replaced by Namibians. (4) Poaching and war activities contributed to decline in wildlife. (5) Wild animals, particularly elephants, responsible for devastating crops. Made worse this year by drought. (6) Original park boundary failed to include the South Western side of Kwando River. Not done for political reasons because area was used by South African politicians as a personal hunting area.	(1) Locally recruited Game Scouts to monitor wildlife population and control poaching and to facilitate the identification and implementation of community based natural resource income generation schemes. (2) The rich and diverse forests combined with the vast Kwando River delta is home to a wide selection of wildlife and plants. Area offers a variety of opportunities for ecotourism involving communities and private tour operators. (3) Income from community based wild life management could be used to upgrade social services such as health care and education. (4) Legislation is needed to incorporate the western side of the Kwando into the park land. (5) Environmental education outreach program and establishment of a satellite Environment Education center in Kwando area. (6) Establishment of a Landuse Planning Process as basis for decision making in development of area (7) Enhanced coordination among various GRN ministries, local organizations and private sector.
2. Bushmanland	(1) Loss of traditional migration patterns and ways of living created a dependency on the government among people who historically have been independent and self-supporting. (2) Degradation of a once staple ecological system. (3) Unemployment (4) Resettlement of non-Bushman in the area. (5) Decreased wildlife populations. (6) Increased use of domestic livestock.	(1) Decision by former administrative authorities to encourage the Bushman to concentrate around peri-urban areas. (2) Emphasis in agricultural extension on cattle ranching at expense of wildlife and habitat contributed to marked decreases in wildlife populations. (3) Change from a pastoral economy to settled agricultural one. (4) Political pressure to open up Bushman for cattle grazing by Herero and other groups. (5) Veterinary Fencing (6) Poaching (7) Human Settlement at designated water points (8) Drought (9) Veld Fires (9) Terminal pasture destruction (10) Human Pop. Increase from 650 in 1960 to 4,500 in 1992.	(1) Decentralization of populations by re-establishing traditional settlements. (2) Reintroduction of once common game such as zebra, springbok, sable and reedbok. (3)Waterpoint management for wildlife. (4)Quotas based on annual wildlife counts and trends in trophy size. (5)Establishment of a Landuse Planning Process as basis for decision making in development of area. (6) Eco tourism with emphasis on the Bushman's unique culture and the wildlife and plantlife of the area. (7) Establishment of community, conservancies to manage natural resources and allow benefits to flow into the community. (8) Environmental education directed at community leaders and decision makers. (9)Establish game scout program.

PROJECT AREA	PROBLEMS	CAUSES	POTENTIAL SOLUTIONS TO PROBLEMS FROM A COMMUNITY BASED STRATEGY OF SUSTAINABLE NATURAL RESOURCES MANAGEMENT
3. Etosha Catchment Area	(1) Degradation of pasture land spread of bush and toxic plants. (2) Loss of forest resources - desertification (3) Declining water table and increased salinity of underground fresh water sources. (4) Concentration of people along pipeline in a few artificial peri-urban areas. (5) Increase in female headed households. (6) Loss of migratory routes for wild animals. (7) Declining numbers of large mammals.	(1) Decrease in transhumance and pastoralism. (2) Uncontrolled growth in cattle, donkeys and small stock. (3) Construction of pipeline and establishment of artificial urban centers by South African Defence Force encouraged people to congregate at these centers. Loss of wage income with their departure. (4) Rapid increase in population. (5) Departure of males to Windhoek and other areas in search of work. (6) Unauthorized fencing of communal grazing areas by richer farmers. (7) Poaching of wildlife and indiscriminate cutting of trees. (8) Destruction of the makalani palm for basket making. (9) Narrowing of Etosha park boundaries.	(1) Cultivation and conservation of wild plants/fruits affords a measure of protection during times of drought and poor rainfall. (2) A complementary balance of game and domestic stock affords a better use of pasture and grasslands. (3) Decentralization and managed growth. (4) Ecotourism in the sparsely populated areas to the north and west of the Etosha Park. (5) Introduction of community game scouts to control poaching and work with communities on sustainable natural resources initiatives. (6) Formation of conservation conservancies. (7) Environmental education directed at key members of the community. Program operated out of Etosha and satellite centers in region. (8) Sustainable resource management of the makalani palm and identification of alternate plants for basket making. (9) Research on the factors causing deadlines in large mammal populations. (10) Region wide landuse plans (11) Enhanced coordination among various GRN ministries, local organizations and the private sector.

TABLE 4. Implementation Strategy for the Project by Region and Year

REGION	YEAR 1 FY92/93	YEAR 2 FY93/94	YEAR 3 FY95/96	YEAR 4 FY95/96	YEAR 5 FY96/97
1. Overall Program Implementing Agents 1. US PVO 2. Namibia NGOs 3. Community Stakeholders 4. GRN 5. USAID 6. Namibian Private Sector	Selection of International PVO and setup of management Unit in Windhoek. (2) Award of grant to Zoological Society of San Diego. (3) Passage of legislation to permit communities to benefit from natural resources management. (4) Subgrant to Namibia Nature Foundation for institutional strengthening. (5) MWCT established coordinating organizational structures in Caprivi and Bushmanland.	(1) National workshop on community based initiatives. Feedback to Steering Group. (2) First group of longterm participants enter training. (3) Baseline data collected and targets set. (4) Subgrants awarded for applied research in support of project. (5) Quarterly progress review held. (6) Technical Assistance arrives. (7) Landuse plans reviewed and modified.	(1) National workshop on community based initiatives. (2) Quarterly progress reviews held. (3)Mid-term evaluation by outside group (4) Modification of project made based on evaluation (5) Second group of LT participants enter training first group returns (6) Landuse plans reviewed and modified.	(1) National workshop on community based initiatives (2) Quarterly progress reviews held (3) Third and final group of participants enter training second group returns (4) Landuse plans reviewed and modified.	(1) Final National workshop on community based initiatives (2) Quarterly progress reviews (3) Final evaluation held (4) All participants return (5) Landuse plans reviewed and modified. (6) Follow on project for SARP funding prepared.
2. Caprivi Implementing Agents 1. IRDNC 2. NNF 3. MWCT 4. Private Sector Tourist firms 5. NewVeld Ventures 6. The community	(1) Subgrants to Integrated Rural Development and Nature Conservation and NNF (2) Study/Plan for expanding Caprivi Game Reserve to include west bank of Kwando. (3) Analysis of low impact ecotourism potential (4) Study of employment/income opportunities (5) Natural resource based handicraft potential study (6) Baseline data collected analyzed. Impact indicators established. (7) Coordination mechanism established.	(1) Implementation continues with emphasis on landuse planning and developing community based income activities (2) Data collected on program impact. (3) Local Environmental education program initiated. (4) Marketing of handicrafts and other veld products initiated (5) Schemes for low impact tourism initiated (6) Training of community liaison officer and game guards. (7) Caprivi Game Reserve expanded to include west bank of Kwando.	(1) Implementation of phase I program continues. (2) Mid-project evaluation undertaken (3) Plans developed to begin shifting recurrent cost from USAID grant to other sources (e.g. Joint ventures with private sector revenue from natural resource exploitation or ecotourism). (4) Training of community liaison officer and game scouts.	(1) Program modified to take into account evaluation results. (2) Training continues (3) Emphasis on sustainability of availability of project activities emphasized.	(1) Program ends. (2) Final evaluation (3) Training ends.

TABLE 4: Implementation Strategy for the Project by Region and Year

REGION	YEAR 1 FY92/93	YEAR 2 FY93/94	YEAR 3 FY95/96	YEAR 4 FY95/96	YEAR 5 FY96/97
3. Bushman-land Implementing Agents 1. Nyae Nyae 2. NNF 3. MWCT 4. The private sector 5. New Veld Ventures/ Rossing 6. The community	(1) Subgrant to Nyae Nyae Foundation to initiate program. (2) Restrictions on tour operators in area. Emphasis on low impact tourism to allow gains in wildlife population and community-based management. (3) Emphasis on staff development such as hiring and training of camp scouts. (4) Analyses of natural resources based income / employment opportunities (5) Baseline data collected and analyzed program impact indicators selected. (6) Coordination mechanism established.	(1) Implementation of program continues. (2) Data on program's impact collected. (3) Schemes for income and employment expanded (4) Training of community based staff. (5) Training of Bushmen as professional hunting guides.	(1) Implementation of program continues. (2) Mid-project evaluation. (3) Plans developed to begin shifting recurrent cost from USAID grant to other source (e.g. Joint ventures with private sector revenue from natural resource exploitation or ecotourism). (4) Training community based staff continues.	(1) Program modified to take into account results of evaluation. (2) Training continues. (3) Emphasis on sustainability of project activities emphasized.	(1) Program ends and final evaluation (2) Training ends.
4. Etosha Catchment Area Implementing Agents 1. MWCT 2. ZSSD / EEI 3. The community 4. NGOs 5. Research organizations	(1) Research on the decline of large ungulates initiated in Etosha Area by Etosha Ecological Institute and Zoological Society of San Diego.	(1) Research continues. (2) Environmental assessment undertaken (3) Socio-economic research on options for community based. Initiates undertaken with local research organizations	(1) Research continues and results incorporated into landuse plans for community based initiatives (2) First phase plan development with limited and selected communities. (3) NGO/CBO identified and selected to implement program. (4) Subgrant for pilot community based activities awarded.	(1) Program implemented (2) Community level staff trained.	(1) First phase program evaluated.

Section 3.2 *Implementation Arrangements*

Various options for project management and implementation have been considered. One option was to use a national NGO in view of the GRN's positive relationship with NGOs as implementing agencies for Namibia's numerous new development programs. Such an NGO would have to have a range of skills and the mandated interest to take on the multi-faceted implementation tasks required by the LIFE project. The ability to recruit and manage long and short-term international and Namibian technical advisors as well as participant training and to manage AID procedures and regulations are critical to the smooth implementation of Project activities. Also the implementing organization would need to be regarded by the MWCT and the NGO community as neutral and be impartial in considering subgrant requests from applicants without conflict of interest. Also the organization would need to assist in the development of institutional capacity among the NGOs and Namibian organizations. The local organizations that come closest to being able to meet these criteria are the Namibia Nature Foundation and the Rossing Foundation.

USAID and the MWCT have decided that the best strategy is to use an international or U.S. PVO to implement the LIFE project. The PVO, once selected, will be encouraged to form a partnership with a local NGO to provide local staff, expertise and office space for its incountry operation and to bring local experience and knowledge to strengthen project implementation. As the PVO would bring particular advantages to project implementation, including familiarity with AID regulations and procedures, experience managing similar projects elsewhere in Africa, and networks of contacts with projects and agencies working in natural resource management issues in the Southern Africa region and beyond. These skills coupled with the local experience and capacity of a Namibian partner is considered the preferred option for project management.

A bilateral grant agreement between the Government of Namibia (GRN) and USAID will be executed. The grant agreement will authorize USAID to negotiate and sign a Cooperative Agreement with a PVO to provide management support and fund subgrants, technical assistance and training. The grant agreement will also authorize USAID to make a research grant to the Zoological Society of San Diego for the research study in Etosha to be done jointly with the Etosha Ecological Institute. Under the Cooperative Agreement with the PVO, a technical support staff of two persons for overall project management will be selected. In addition, the PVO will provide a project manager, and a locally hired accountant. The responsibilities of the PVO will include the provision of short-term technical assistance to the subgrantees, long and short-term technical assistance to the NGOs and GRN,

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and all necessary long and short-term training. The PVO will also manage the various subgrants for community-based activities, institutional strengthening and research.

The preferred methods of financing are direct payment or reimbursement, although a letter of credit may be authorized. These procedures are approved methods of financing. To the extent required, periodic advances may be provided to the grantees/recipients. Advances will be limited to the amount required for immediate disbursing needs in accordance with U.S. Treasury cash management guidelines.

In accordance with A.I.D. requirements, USAID/Namibia will have ultimate responsibility for LIFE project management, monitoring and financial management. USAID/Zimbabwe will retain responsibility for consolidating and coordinating overall assessments of the impact of the regional project and will act as the official accounting station for the project's accounts. USAID/Namibia will hire a Personal Services Contractor (USPSC) who will be assigned to the Human and Natural Resources Division to assist with project management, monitoring and implementation. The PSC will be responsible for project management, reporting, ABS preparation, Congressional reporting, PILs and PIOs as required by AID. Also USAID/Namibia will hire a FSN program specialist and a FSN project accountant who will be splitfunded between the LIFE and READ Projects. The accountant and program specialist will be located in the Human and Natural Resources Division and assist the Project Manager and US PSC in handling the management and financial aspects of the project.

Overall project management and oversight will be provided by a Project Steering Committee (SC) composed of six senior representatives drawn from the MWCT, USAID, the Integrated Rural Development and Nature Conservation, the Nyae Nyae Foundation, a Namibian training institution and the United Chambers of Commerce. Both IRDNC and Nyae Nyae will represent the Caprivi and Bushman communities on the committee. It is anticipated that by the second year of the project these NGOs will be replaced on the committee by elected representatives from the communities themselves. The private business community will be represented by the Chairman of the United Chambers of Commerce. Given the emphasis placed on human resources development in the project, a representative from one of the major public or private training organizations will be chosen to serve on the committee. Other participating organizations in the project may be represented on the committee in an advisory or non-voting status.

The PVO will review and recommend proposals to the SC for approval and participate as technical advisor and secretariat to the SC. The SC will be responsible for reviewing annual workplans and budgets and will provide policy guidance as required. The PVO will be responsible for submitting quarterly operational and financial status reports including host country

contributions to the SC, USAID and MWCT.

The PVO will have responsibility for reviewing and recommending approval to the SC of subgrants to NGOs and other groups which will implement activities in community-based resource utilization, institution building, environmental education and planning and applied research. Subgrants or contracts of $50,000 or less do not require prior approval of the SC provided the activity is covered in the annual work plan. The PVO will ensure that recipient organizations have adequate management and accounting systems in place to safeguard U.S. Government funds. The PVO will hold ultimate responsibility for overall financial accounting and be responsible for ensuring the technical, social and economic viability of each of the subgrants and other activities, as well as their compliance with the guidelines established by the SC and consistent with AID and GRN procedures.

In addition, the PVO will identify, recruit and field short and long term technical assistance needs in support of community-based resource use, baseline research studies, institutional strengthening, etc., including the technical personnel that would be seconded to the MWCT. The MWCT and the PVO will work out an agreement of understanding that specifies to whom seconded technical experts are to report. It is expected that every effort will be made to select indigenous, disadvantaged Namibians for technical posts. In cases where this is not possible, disadvantaged Namibians will be selected for training immediately upon selection of the technical advisor so that they are able to assume substantive project management positions prior to the departure of the technical experts.

All project commodities will be procured by the PVO with the exception of those project commodities such as a computer and vehicle which will used by the project funded staff working in the USAID mission. Commodities purchased under the subgrants will be the responsibility of the subgrantees. The PVO will procure from U.S. source and origin to the maximum extent possible. Gray Amendment entities will be used to the maximum extent possible for the procurement of commodities and services. Every effort will be made to ensure that Gray Amendment organizations receive copies of the Invitation for Application for the Cooperative Agreement.

The US Peace Corps has also indicated its interest and willingness to participate in the implementation of project activities. Beginning in FY 94 (October 1993), Peace Corps Volunteers (PCVs) will be recruited to provide technical assistance to the local NGO grantees and community groups and to assist the Ministry of Wildlife Conservation and Tourism with natural resource management and conservation. The provision of PCVs will be based on the technical assistance needs as identified by the MWCT and NGOs themselves and will be determined by their respective capacity to provide adequate work and support for each PCV requested.

(a) Description of Process

1. Role of AID

USAID/Namibia will have responsibility for project monitoring, assessing the program's impact, and financial accountability and for ensuring ultimate conformity of the project to USAID and US Government rules, regulations and procedures. Funds control will be shifted from USAID/Zimbabwe to USAID/Namibia. USAID/Zimbabwe will serve as accounting station making payments and maintaining financial records. The Chief of the USAID/Namibia's Human and Natural Resources Division will be designated as the USAID Project Officer and will be responsible for overseeing all project implementation activities, and represent USAID on the SC. He/She will be assisted by a project manager, hired under a US PSC financed half under this Project, and half under the READ Project. A FSN project specialist splitfunded with the READ Project will also be recruited.

The US PSC will report to the Human and Natural Resource Division Chief on all aspects of project implementation and will supervise the FSN staff on a day-to-day basis. The PSC's responsibilities will include continuous monitoring of all project activities, drafting of Project Implementation Letters (PILs) and Project Implementation Orders (PIOs) and semi-annual Project Implementation Reports. The PSC, in consultation with the USAID Project Officer, will maintain close contact with the international PVO and the Zoological Society of San Diego and will monitor their compliance with the terms of the Cooperative Agreement or grant, respectively. The PSC's scope of work is contained in Annex M.

The PSC and Namibian project specialist will also arrange external project evaluations in years 3 and 5. She/He, in conjunction with USAID, MWCT and the SC, will be responsible for recommending corrective action as necessary, based on the findings of evaluations and audits.

2. Role of MWCT

The MWCT will be responsible for interpreting the GRN's national policy, establishing policy and guidance for the LIFE project, and assuring that all Project activities fit within the GRN national policy framework. The MWCT will also be responsible for coordinating activities with the Government. Regarding pilot activities, the Environmental Planning Unit of MWCT, on behalf of the GRN, will establish baseline project data and monitor, and evaluate all pilot activities in the three geographic areas.

In addition, the MWCT will be a member of the SC which will establish policy and guidance for the LIFE Project. The MWCT may also provide, through the subgrantees, scopes of work, annual work plans and performance

reviews for the Community Liaison Officers, Natural Resource Economist, and Coordinator for Community-based Resource Management that would be recruited by the PVO and seconded to MWCT. The MWCT will also be responsible for preparing quarterly reports on its in-kind contribution to the project. They will be assisted in this through a contract with a local CPA firm to establish the system for reporting of the contribution.

3. Responsibilities of the US/International PVO Cooperative Agreement Recipient

Under the Cooperative Agreement, the PVO will have primary responsibilities to: undertake day-to-day management of the project and the financial resources made available by USAID through the Cooperative Agreement; review and recommend approval of subgrants; document and monitor subgrant activities; and provide long and short term technical assistance and training to the MWCT and Namibian NGOs/CBOs participating in the Project. Specific tasks are as follows:

- *Report quarterly to the GRN and USAID on project activities, project progress and expenditures;*
- *Prepare an annual workplan and budget to be submitted and approved at the first of each calendar year by the Steering Committee with GRN and USAID concurrence;*
- *Provide a funding mechanism for activities implemented by NGOs, and other agencies in the three geographic areas involving community-based resource utilization, environmental education, planning and applied research and institutional capacity building; execute subgrants and disburse funds;*
- *Ensure that potential subgrantees have adequate accounting, procurement and financial management capabilities and report quarterly on their in-kind contributions to the project;*
- *Provide long-term technical assistance including a project coordinator and Subgrant Manager for project management; a resource economist for the MWCT; and a coordinator for community-based resource management who will also be provided in the second year of the project;*
- *Strengthen NGOs by providing support, upon request, in defining and planning projects, proposal preparation, organizational development, and activities management;*
- *Provide short-term technical assistance, including experts, as required;*

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- *Support the Steering Committee's work in terms of convening meetings, communications and other secretariat services as requested by the Committee;*

- *Identify issues in natural resource use and suggest, as requested, revisions in national policy and practices for consideration by the MWCT;*

- *In collaboration with the Steering Committee, monitor and evaluate subgrants activities;*

- *Collaborate with the managers of other related projects in the design and provision of training relevant to community participation in and benefit from use of resources;*

- *Identify training requirements and make recommendations to the Steering Committee;*

- *Carry out and implement participant training plans, prepare non-funded PIO/Ps for USAID and MWCT approval;*

- *Procure project commodities, including vehicles;*

- *Facilitate the building of an effective project implementation team; and*

- *Suggest to USAID and the MWCT how the Steering Committee can become more representative of the communities benefitting from the project.*

4. *Role of the Steering Committee*

All project activities will be coordinated and monitored by the Steering Committee, composed of six representatives as described earlier in the paper. The Chairperson of the Steering Committee will be the MWCT. The SC will make decisions by consensus. Although the Steering Committee will operate on consensus, USAID and MWCT regulations require that USAID and the MWCT retain final right of approval on all project activities and expenditures to ensure conformity with their respective and applicable policies, regulations and statutes. Specific tasks of the Committee include:

- *Advise the MWCT and USAID on all project activities;*

- *Oversight of PVO support staff through reports at Committee meetings and written quarterly reports, annual workplans/budgets and evaluations;*

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- *Establishment of procedures for all categories of subgrants, including community-based resource utilization, environmental education, and applied research and institution capacity building;*

- *Review and approve subgrant applications in accordance with criteria and priorities set by the project;*

- *Review of annual audits and two external evaluations during the life of the project; and implement actions to correct problems identified during the audits and evaluations;*

- *Monitor impact of government policies and legislation concerning community resource utilizations in the three geographic areas, and make recommendations as appropriate; and*

- *Develop a plan during the life of the project for Namibian NGOs to maintain the key functions of LIFE on a sustainable basis at the conclusion of the project.*

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ANNEX 2

PROJECT GRANT STANDARD PROVISIONS

Definitions: As used in this Annex, the "Agreement" refers to the Project Grant Agreement to which this Annex is attached and of which this Annex forms a part. Terms used in this Annex have the same meaning or reference as in the Agreement.

Article A: Project Implementation Letters

To assist Grantee in the implementation of the Project, A.I.D., from time to time, will issue Project Implementation Letters that will furnish additional information about matters stated in the Agreement. The parties may also use jointly agreed-upon project Implementation Letters to confirm and record their mutual understanding on aspects of the implementation of this Agreement. Project Implementation Letters will not be used to amend the text of the Agreement, but can be used to record revisions or exceptions which are permitted by the Agreement, including the revision of elements of the amplified description of the Project in Annex 1.

Article B: General Covenants

SECTION B.1.

The Parties will cooperate to assure that the purpose of this Agreement will be accomplished. To this end, the Parties, at the request of either, will exchange views on the progress of the Project, the performance of obligations under this Agreement, the performance of any consultants, contractors, or suppliers engaged on the Project, and other matters relating to the Project.

SECTION B.2. Execution of Project

The Grantee will:

(a) carry out the Project or cause it to be carried out with due diligence and efficiency, in conformity with sound technical, financial, and management practices, and in conformity with those documents, plans, specifications, contracts, schedules or other arrangements, and with any modifications therein, approved by A.I.D. pursuant to this Agreement; and

(b) provide qualified and experienced management for, and train such staff as may be appropriate for the maintenance and operation of the Project,

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and, as applicable for continuing activities, cause the Project to be operated and maintained in such manner as to assure the continuing and successful achievement of the purposes of the Project.

SECTION B.3. Utilization of Goods and Services

(a) Any resources financed under the Grant will, unless otherwise agreed in writing by A.I.D., be devoted to the Project until the completion of the Project, and thereafter will be used so as to further the objectives of the Project.

(b) Goods or services financed under the Grant, except as A.I.D. may otherwise agree in writing, will not be used to promote or assist a foreign aid project or activity associated with or financed by a country not included in Code 935 of the A.I.D. Geographic Code Book as in effect at the time of such use.

SECTION B.4. Taxation

(a) This Grant Agreement will be free from any taxation or fees imposed under laws in effect in the territory of the Grantee.

(b) To the extent that (1) any contractor, including any consulting firm, any personnel of such contractor financed under the Grant, and any property or transaction relating to such contracts and (2) any commodity procurement transaction financed under the Grant, are not exempt from identifiable taxes, tariffs, duties or other levies imposed under laws in effect in the territory of the Grantee, the Grantee will, as and to the extent provided in and pursuant to Project Implementation Letters, pay or reimburse the same with funds other than those provided under the Grant.

SECTION B.5 Reports, Accounting Records, Audits, Inspections

(a) The Grantee shall furnish A.I.D. such information and reports relating to the Project and to this Agreement as A.I.D. may reasonably request.

(b) The Grantee shall maintain accounting books, records, documents, and other evidence relating to the Project and to this Agreement, adequate to show, without limitation, all costs incurred under the Grant, the receipt and use of goods and services acquired under the Grant, the costs of the Project supplied from other sources, the Nature and extent of solicitations of prospective suppliers of goods and services acquired, the basis of award of contracts and orders, and the overall progress of the Project toward completion ("Project books and records"). At the Grantee's option, with

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approval by A.I.D., Project books and records shall be maintained in accordance with one of the following methods: (1) generally accepted accounting principles prevailing in the United States, (2) generally accepted accounting principles prevailing in the country of the Grantee, (3) accounting principles prescribed by the International Accounting Principles Committee (an affiliate of the International Federation of Accountants), or (4) such other accounting principles as the Parties may agree to in writing. Project books and records shall be maintained for at least three years after the date of last disbursement by A.I.D.

(c) If $25,000 or more is disbursed directly to the Grantee in any one calendar year under the Grant, the Grantee, except as the parties may otherwise agree in writing, shall have financial audits made of the funds disbursed to the Grantee under the Grant in accordance with the following terms:

(1) The Grantee shall select an independent auditor in accordance with the "Guidelines for Financial Audits contracted by Foreign Recipients" issued by the A.I.D. Inspector General ("Guidelines"), and the audits shall be performed in accordance with the "Guidelines".

(2) An audit of the funds provided under the Grant shall be conducted for each fiscal year of the Grantee. The audit shall determine whether the receipt and expenditure of the funds provided under the Grant are presented in accordance with generally accepted accounting principles agreed to in section (b) above and whether the Grantee has complied with the terms of the Agreement. Each audit shall be completed no later than one year after the close of the Grantee's fiscal year.

(d) The Grantee shall submit an audit report to A.I.D. within 30 days after completion of such audit arranged for by the Grantee in accordance with this section. The A.I.D. Inspector General will review each report to determine whether it complies with the audit requirements of the Agreement. Subject to A.I.D. approval, costs of audits performed in accordance with the terms of this section may be charged to the Grant. In cases of continued inability or unwillingness to have an audit performed in accordance with the terms of this section, A.I.D. will consider appropriate sanctions which include suspension of all or a portion of disbursements until the audit is satisfactorily completed or A.I.D. performs its own audit.

(e) The Grantee shall submit to A.I.D., in form and substance satisfactory to A.I.D., a plan by which the Grantee will ensure that funds made available to subrecipients that receive $25,000 or more in any one calendar year under the Grant are audited in accordance with this Agreement. The plan should describe the methodology to be used by the Grantee to satisfy

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its audit responsibilities with respect to any subrecipient to which this section applies. Such audit responsibilities with respect to subrecipients may be satisfied by relying on independent audits of the subrecipients or on appropriate procedures performed by the internal audit or program staff of the Grantee, by expanding the scope of the independent financial audit of the Grantee to encompass testing of subrecipients' accounts, or by a combination of tests procedures. The plan should identify the funds made available to subrecipients that will be covered by audits conducted in accordance with other audit provisions that would satisfy the Grantee's audit responsibilities. (A nonprofit organization organized in the United States is required to arrange for its own audits; a private voluntary organization organized outside the United States with a direct Grant from A.I.D. is required to arrange for its own audits; and a host-country contractor should be audited by the cognizant Grantee contracting agency). The Grantee shall ensure that appropriate corrective actions are taken on the recommendations contained in the subrecipients' audit reports; consider whether subrecipients' audits necessitate adjustment of its own records; and require each subrecipeint to permit independent auditors to have access to records and financial statements as necessary.

(f) A.I.D. may, at its discretion, perform the audits required under this Agreement on behalf of the Grantee by utilizing funds under the Grant or other resources available to A.I.D. for this purpose. The Grantee shall afford authorized representatives of A.I.D. the opportunity at all reasonable times to audit or inspect the project, the utilization of goods and services financed by A.I.D., and books, records and other documents relating to the project and the Grant.

SECTION B.6. Completeness of Information

The Grantee confirms:

(a) that the facts and circumstances of which it has informed A.I.D., or caused A.I.D. to be informed, in the course of reaching agreement with A.I.D. on the Grant, are accurate and complete, and include all facts and circumstances that might materially affect the Project and the discharge of responsibilities under this Agreement;

(b) that it will inform A.I.D. in timely fashion of any subsequent facts and circumstances that might materially affect, or that it is reasonable to believe might so affect, the Project or the discharge of responsibilities under this Agreement.

SECTION B.7. Other Payments

Grantee affirms that no payments have been or will be received by any official of the Grantee in connection with the procurement of goods or services

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financed under the Grant, except fees, taxes, or similar payments legally established in the country of the Grantee.

SECTION B.8. Information and Marking

The Grantee will give appropriate publicity to the Grant and the Project as a program to which the United States has contributed, identify the Project site and mark goods financed by A.I.D., as described in Project Implementation Letters.

Article C: Procurement Provisions

SECTION C.1. Special Rules

(a) The source and origin of ocean and air shipping will be deemed to be the ocean vessel's or aircraft's country of registry at the time of shipment.

(b) Premiums for marine insurance placed in the territory of the Grantee will be deemed an eligible Foreign Exchange Cost, if otherwise eligible under Section C.7(a).

(c) Any motor vehicles financed under the Grant will be of United States manufacture, except as A.I.D. may otherwise agree in writing.

(d) Transportation by air, financed under the Grant, of property or persons, will be on carriers holding United States certification, to the extent service by such carriers is available. Details on the requirement will be described in a Project Implementation Letter.

SECTION C.2. Eligibility Date

No goods or services may be financed under the Grant which are procured pursuant to orders or contracts firmly placed or entered into prior to the date of this Agreement, except as the Parties may otherwise agree in writing.

SECTION C.3. Plans, Specifications and Contracts

In order for there to be mutual agreement on the following matters, and except as the Parties may otherwise agree in writing:

(a) The Grantee will furnish to A.I.D. upon preparation,

(1) any plans, specifications, procurement or construction schedules, contracts, or other documentation relating to goods or services to be financed under the grant, including documentation

relating to the prequalification and selection of contractors and to the solicitation of bids and proposals. Material modifications in such documentation will likewise be furnished to A.I.D. on preparation;

(2) such documentation will also be furnished to A.I.D., upon preparation, relating to any goods or services, which, though not financed under the Grant, are deemed by A.I.D. to be of major importance to the Project. Aspects of the Project involving matters under this subsection (a) (2) will be identified in Project Implementation Letters;

(b) Documents related to the prequalification of contractors, and to the solicitation of bids or proposals for goods and services financed under the Grant will be approved by A.I.D. in writing prior to their issuance, and their terms will include United States standards and measurement;

(c) Contracts and contractors financed under the Grant for engineering and other professional services, for construction services, and for such other services, equipment or materials as may be specified in Project Implementation Letters, will be approved by A.I.D. in writing prior to execution of the contract. Material modifications in such contracts will also be approved in writing by A.I.D. prior to execution; and

(d) Consulting firms used by the Grantee for the Project but not financed under the Grant, the scope of their services and such of their personnel assigned to the Project as A.I.D. may specify, and construction contractors used by the Grantee for the Project but not financed under the Grant, shall be acceptable to A.I.D.

SECTION C.4. Reasonable Price

No more than reasonable prices will be paid for any goods or services financed, in whole or in part, under the Gant. Such items will be procured on a fair and, to the maximum extent practicable, on a competitive basis.

SECTION C.5. Notification to Potential Suppliers

To permit all Unites States firms to have the opportunity to participate in furnishing goods and services to be financed under the Grant, the Grantee will furnish A.I.D. such information with regard thereto, and at such times, as A.I.D. may request in Project Implementation Letters.

SECTION C.6 Shipping

(a) Goods which are to be transported to the territory of the Grantee may not be financed under the Grant if transported either: (1) on an ocean

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vessel or aircraft under the flag of a country which is not included in A.I.D. Geographic Code 935 as in effect at the time of shipment, or (2) on an ocean vessel which A.I.D., by written notice to the Grantee has designated as ineligible; or (3) under an ocean or air charter which has not received prior A.I.D. approval.

(b) Costs of ocean or air transportation (of goods or persons) and related delivery services may not be financed under the Grant, if such goods or persons are carried: (1) on an ocean vessel under the flag of a country not, at the time of shipment, identified under the paragraph of the Agreement entitled "Procurement Source: Foreign Exchange Costs", without prior written A.I.D. approval or on a non-U.S. flag air carrier if a U.S. flag carrier is available (in accordance with criteria which may be contained in Project Implementation Letters) without prior A.I.D. approval or (2) on an ocean vessel which A.I.D., by written notice to the Grantee, has designated as ineligible; or (3) under an ocean vessel or air charter which has not received prior A.I.D. approval.

(c) Unless A.I.D. determines that privately owned United States-flag commercial ocean vessels are not available at fair and reasonable rates for such vessels, (1) at least fifty percent (50%) of the gross tonnage of all goods (computed separately for dry bulk carriers, dry cargo liners and tankers) financed by A.I.D. which may be transported on ocean vessels will be transported on privately owned United States-flag commercial vessels, and (2) at least fifty percent (50%) of the gross freight revenue generated by all shipments financed by A.I.D. and transported to the territory of the Grantee on dry cargo liners shall be paid to or for the benefit of privately owned United States-flag commercial vessels. Compliance with the requirements of (1) and (2) of this sub-section must be achieved with respect to both any cargo transported from U.S. ports and any cargo transported from non-U.S. ports, computed separately.

SECTION C.7. Insurance

(a) Marine insurance on goods financed by A.I.D. which are to be transported to the territory of the Grantee may be financed as a Foreign Exchange Cost under this Agreement provided (1) such insurance is placed at the lowest available competitive rate, and (2) claims thereunder are payable in U.S. dollars or, as A.I.D. may agree in writing, in the currency in which such goods were financed or in any freely convertible currency. If the Grantee (or government of Grantee), by statute, decree, rule, regulation, or practice discriminates with respect to A.I.D.-financed procurement against any marine insurance company authorized to do business in any State of the United States, then all goods shipped to the territory of the Grantee financed by A.I.D. hereunder will be insured against marine risks and such insurance will be placed in the United States with a company or companies authorized to do a marine insurance business in a State of the United States.

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(b) Except as A.I.D. may otherwise agree in writing, the Grantee will insure, or cause to be insured, goods financed under the Grant imported for the Project against risks incident to their transit to the point of their use in the Project; such insurance will be issued on terms and conditions consistent with sound commercial practice and will insure the full value of the goods. Any indemnification received by the Grantee under such insurance will be used to replace or repair any material damage or loss of the goods insured or will be used to reimburse the Grantee for the replacement or repair of such goods. Any such replacements will be of source and origin of countries listed in A.I.D. Geographic Code 935 as in effect at the time of replacement, and, except as the Parties may agree in writing, will be otherwise subject to the provision of the Agreement.

SECTION C.8. U.S. Government-Owned Excess Property

The Grantee agrees that wherever practicable, United States Government-owned excess personal property, in lieu of new items financed under the Grant, should be utilized. Funds under the Grant may be used to finance the costs of obtaining such property for the Project.

SECTION D.1. Termination

Either Party may terminate this Agreement by giving the other Party 30 days written notice. Termination of the Agreement will terminate any obligations of the Parties to provide financial or other resources to the Project pursuant to this Agreement, except for payments which they are committed to make pursuant to noncancellable commitments entered into with third parties prior to the termination of this Agreement. In addition, upon such termination A.I.D. may, at A.I.D.'s expense, direct that title to goods financed under the Grant be transferred to A.I.D. if the goods are from a source outside Grantee's country, are in a deliverable state and have not been offloaded in ports of entry of Grantee's country.

SECTION D.2. Refunds

(a) In the case of any disbursement which is not supported by valid documentation in accordance with this Agreement, or which is not made or used in accordance with this Agreement, or which was for goods or services not used in accordance with this Agreement, A.I.D., notwithstanding the availability or exercise of any other remedies under this Agreement, may require the Grantee to refund the amount of such disbursement in U.S. Dollars to A.I.D. within sixty (60) days after receipt of a request therefor.

(b) If the failure of Grantee to comply with any of its obligations under this Agreement has the result that goods or services financed under the Grant are not used effectively in accordance with this Agreement, A.I.D. may require the Grantee to refund all or any part of the amount of the disbursements under

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this Agreement for such goods or services in U.S. Dollars to A.I.D. within sixty days after receipt of a request therefor.

(c) The right under subsection (a) or (b) to require a refund of a disbursement will continue, notwithstanding any other provision of this Agreement, for three years from the date of the last disbursement under this Agreement.

(d) (1) Any refund under subsection (a) or (b), or (2) any refund to A.I.D. from a contractor, supplier, bank or other third party with respect to goods or services financed under the Grant, which refund relates to an unreasonable price for or erroneous invoicing of goods or services, or to goods that did not conform to specifications, or to services that were inadequate, will (A) be made available first for the cost of goods and services required for the Project, to the extent justified, and (B) the remainder, if any, will be applied to reduce the amount of the Grant.

(e) Any interest or other earnings on Grant funds disbursed by A.I.D. to the Grantee under this Agreement prior to the authorized use of such funds for the Project will be returned to A.I.D. in U.S. Dollars by the Grantee.

SECTION D.3. Nonwaiver or Remedies

No delay in exercising any right or remedy accruing to a Party in connection with its financing under this Agreement will be construed as a waiver of such right or remedy.

SECTION D.4. Assignment

The Grantee agrees, upon request, to execute an assignment to A.I.D. of any cause of action which may accrue to the Grantee in connection with or arising out of the contractual performance or breach of performance by a party to a direct U.S. Dollar contract with A.I.D. financed in whole or in part out of funds granted by A.I.D. under this Agreement.

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ANNEX M

SCOPE OF WORK FOR PSC PROJECT MANAGER

ANNEX M

Scope of Work: Project Manager (Personal Services Contractor)

RESPONSIBILITIES:

The Project Manager, hired under a personal services contract, will be under the general supervision of the USAID Human and Natural Resources Development Officer in the Human and Natural Resources Division and will serve as the principal liaison between USAID/Namibia, the MWCT, the international or US PVO, the Zoological Society of San Diego, the Etosha Ecological Institute and the Namibian NGO community involved in the project's implementation. Responsibilities may include the following:

1. Serve as the point of contact between USAID/Namibia and the MWCT, the PVO, the Zoological Society of San Diego, Etosha Ecological Institute and local NGOs on all matters pertaining to project management, monitoring and implementation.

2. Participate in meetings of the Project Steering Committee and assist with the following:

   (a) Provision of USAID review and approval of sub-grantee proposals in accordance with eligibility criteria, outlined in the Project Paper; and

   (b) Provision of oversight technical and program direction, and impact monitoring of all LIFE project components.

3. Review and recommend approval to USAID of workplans, evaluations and other reports.

4. Visit project field sites and implementing agencies and prepare reports on the status of project implementation including any recommendations for ensuring the efficient and effective implementation of these activities.

5. Draft USAID/Namibia Project Implementation Letters (PILs), Project Implementation Orders (PIOs) and semi-annual Project Implementation Reports (PIRs). Prepare the Project Officer's approval form for signature by the Project Officer.

6. Maintain close contact with agencies implementing project activities and monitor their compliance with the project's goals and objectives and USAID rules and regulations.

7. Arrange project reviews and external project evaluations and ensure compliance by grantees and cooperative agreement recipients with USAID's financial audit requirements.

8. Ensure the collection of baseline project data for monitoring and evaluation purposes. Review impact indicators and track progress in attaining them.

9. Prepare all necessary USAID/Namibia reports on matters arising out of project activities.

10. Participate in regional meetings with other participating SADCC countries.

11. Advise the USAID Project Manager and USAID Representative of any issues likely to affect project implementation and make recommendations for appropriate actions to be undertaken by USAID.

12. Coordinate with the MWCT on the preparation of quarterly reports on host country and other contributions to the project.

TERM OF SERVICE:

This will be a full-time position. The appointment will be for five years. The individual will be located in the USAID/Namibia Mission.

QUALIFICATIONS:

Candidate must have at least a M.S. or M.A. in natural resources/environmental/management/economics, the biological or zoological sciences or one of the social sciences with a strong background in community or rural development. S/he must also have at least four years working in a developing country, preferably in Southern Africa. Experience with community based natural resources management is highly desirable.

Experience in managing A.I.D. or other donor-funded projects, preferably in environment, ecology or natural resources sectors. Experience with NGOs and PVOs is highly desirable.

Excellent analytical, written and oral communication and interpersonal skills required. Also individual is required to be computer competent in word processing and spreadsheet programs.

ANNEX N

ILLUSTRATIVE SET OF BASELINE DATA AND PROJECT INDICATORS

ILLUSTRATIVE SET OF BASELINE DATA

AND

PROJECT INDICATORS

Baseline Data

I. Project Area (Profile)

1. Physical properties
   a. climate
      1. Rainfall pattern & distribution
      2. temperature
   b. soil types
   c. vegetation
   d. forest type and cover
   e. wetlands/available water
   f. predominant land use
      1. agricultural practices
      2. area under cultivation
      3. crops grown
      4. yield (bags/hectare ...)
      5. type of livestock owned
      6. size/distribution of livestock populations
      7. surface area wildlife habitat
      8. km boundary with national park/GMA/WMA

2. Population/demographics
   a. # of people in project area/density
   b. # of households
   c. household size
   d. origin of household (immigrant)
   e. head of household (gender)

3. Household economy
   A. Income
      a. income from crops sold
      b. labor patterns
      c. income from wages
      d. other sources of income
      e. type of assistance or relief?
      f. non-cash income
   B. Expense/cost
      a. use of income
      b. cost/availability-income generating inputs
         1. seed cost
         2. fertilizer
         3. fees/sale permits/licenses ....
         4. transportation

4. Community Profile
   1. social services available
   2. # small enterprises
      a. ownership by gender
   3. proximity to market centers
   4. availability of transportation

5. leadership structure
6. perceived community needs/problems
7. community institutions/organizations
   a. # of organizations
   b. membership by gender
   c. focus/purpose of organization

5. Community/Wildlife Interface
   a. type of natural resource/resources harvested
   b. purpose of harvest (scale/consumption)
   c. # crop damage incidents from wildlife
   d. wildlife species responsible
   e. crop damaged
   f. #/type livestock losses from wildlife
   g. #/type human injury or death from wildlife
   h. perceived benefits of wildlife
   i. perception of resource base (wildlife/forest ...) decreasing? no change? concern?

6. Natural Resource Base
   a. wildlife species and numbers present
   b. population composition (age, sex, distribution)
   c. vegetational analysis and utilization

II. Conservation Authority Profile
1. # hectares administered (as % of total land area)
2. % staff to area
3. % expenditure to area
4. interface with community
   a. # PAC animals killed
   b. # response to crop damage incident
   c. # response to human injury/death
   d. # arrests of illegal hunters
   e. # illegal offtake by species

Overall Project Indicators

Wildlife:

-- Decrease in the number of conflicts between human and wildlife populations
    1. decreased crop damage
    2. decreased human injury
    3. decreased PAC actions
-- Increase in wildlife habitat
-- Increase in wildlife population or population at sustainable level
-- Decreased level of illegal hunting

Socio-economic improvement and/or change

-- Increase in community social services
-- Increase in incomes
-- Increase in community small enterprises
-- Increased stature of women through:
    1. Increase in women owned businesses
    2. Increased incomes to women
    3. Increased training for women
    4. Increased participation in decision making
-- Population increase from immigration (with evaluation of negative/positive aspects)

Sustainable community based management

-- introduced sustainable practices adopted by community residents (wildlife management/utilization schemes initiated)
-- length of time new management approach is practiced
-- sq km covered by new practice
-- if community has substantially increased proprietorship of resource is it capturing it's resource AND state of resource base itself
-- workings of project itself: full staff? Perceptions of implementor's funding available
-- conflict as measure of raised awareness/monitoring process of charge
-- problem of raised expectations in Community

ANNEX O

GRAY AMENDMENT CERTIFICATION

Gray Amendment Certification

Legislative Requirement:

The Gray Amendment (Section 579 of P.L. 101-167, the Foreign Operations, Export Financing and Related Programs Appropriations Act, 1990) requires AID to ensure participation in AID projects by business concerns which are owned and controlled by socially and economically disadvantaged individuals, historically black colleges and universities, colleges and universities having a student body in which more than 40 percent of the students are Hispanic American, and private voluntary organizations which are controlled by individuals who are socially and economically disadvantaged, including women (referred to herein as Gray Amendment entities).

AIDAR Notice 90-2, implementing Section 579 of the Foreign Assistance Appropriations Act requires that for any contract in excess of $500,000 (except for a contract with a disadvantaged enterprise) not less than 10 percent of the dollar value of the contract must be subcontracted to Gray Amendment entities, unless the contracting officer certifies that there are no contracting opportunities or unless the Administrator approves an exception.

Certification:

Elements of this project may be appropriate for minority or Gray Amendment organization contracting. The procurement plan of this project has been developed with full consideration of maximally involving Gray Amendment organizations in the provision of required goods and services. The Mission will make every effort to identify disadvantaged enterprises, particularly minority-owned and women firms, which can manage certain procurements of equipment and/or provisions of technical assistance and evaluation services planned in the project.

Furthermore, the Mission will, in the case of any contract in excess of $500,000 to which the Gray Amendment is applicable, include a provision requiring that no less than 10 percent of the value of the contract be subcontracted to Gray Amendment entities unless the contracting officer certifies that there is no realistic expectation of U.S. subcontracting opportunities, or unless the prime contractor is a Gray Amendment entity.

Richard L. Shortlidge, Jr.
AID Representative

Date: July 12, 1992

Clearance: RLA: DKeene

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ANNEX P

BUDGET TABLES

USAID/NAMIBIA
NATURAL RESOURCES MANAGEMENT--NAMIBIA
TABLE I
SOURCES AND USES OF FUNDS

ELEMENT	USAID FX	USAID LC	HOST GOVT. FX	HOST GOVT. LC	OTHER DONORS FX	OTHER DONORS LC	SUB-TOTAL FX	SUB-TOTAL LC	TOTAL
I. TECHNICAL ASSISTANCE	3193852.82	1143451.25					3193852.82	1143451.25	4337304.07
II. PARTICIPANT TRAINING	360000.00	710000.00					360000.00	710000.00	1070000.00
III PLANNING & APPLIED RESEARCH	965494.90	550650.10		1449741.00	661150.00	283350.00	1626644.90	2283741.10	3910386.00
IV. COMMUNITY DEVELOPMENT		1896100.00		2305237.00				4201337.00	4201337.00
V. PROJECT MANAGEMENT	716630.98	135400.01		343426.00			716630.98	478826.01	1195456.99
VI. REGIONAL COMMUNICATION	125000.00						125000.00		125000.00
VII. EVALUATION	200000.00						200000.00		200000.00
VIII. INFLATION/CONTINGENCY	503419.94						503419.94		503419.94
TOTAL	6064398.64	4435601.36	0.00	4098404.00	661150.00	283350.00	6725548.64	8817355.36	15542904.00

USAID/NAMIBIA
NATURAL RESOURCES MANAGEMENT--NAMIBIA
TABLE II
SUMMARY EXPENDITURES BY PROJECT ELEMENT

ELEMENT	FY 1992/3	FY 1994	FY 1995	FY 1996	FY 1997	TOTAL
I. TECHNICAL ASSISTANCE	1174859.71	1033853.70	1201589.48	448576.75	478424.43	4337304.07
II. PARTICIPANT TRAINING	280000.00	280000.00	280000.00	120000.00	110000.00	1070000.00
III. PLANNING & APPLIED RESEARCH	453500.00	448010.00	439635.00	100000.00	75000.00	1516145.00
IV. COMMUNITY DEVELOPMENT	391000.00	315400.00	357900.00	401800.00	430000.00	1896100.00
V. PROJECT MANAGEMENT	195162.78	131963.42	179500.84	150291.54	195112.40	852030.99
VI. REGIONAL COMMUNICATION	25000.00	25000.00	25000.00	25000.00	25000.00	125000.00
VII. EVALUATION			100000.00		100000.00	200000.00
VIII. INFLATION/CONTINGENCY	125976.12	111711.36	129181.27	62283.41	74267.78	503419.94
TOTALS	2645498.62	2345938.48	2712806.59	1307951.70	1487804.61	10500000.00

USAID/NAMIBIA
NATURAL RESOURCES MANAGEMENT--NAMBIA
TABLE III(A)
DETAILED EXPENDITURES BY PROJECT ELEMENT
TECHNICAL ASSISTANCE--U.S.PVO

	FY 1992/3	FY 1994	FY 1995	FY 1996	FY 1997	TOTAL
CHIEF OF PARTY - SEE TABLE IV	211925.57	186686.85	212037.69			610650.10
FSN PROJECT MANAGER-SEE TABLE IV	35200.00	38720.00	42592.00	46851.20	51536.32	214899.52
FSN ACCOUNTANT " "	35200.00	38720.00	42592.00	46851.20	51536.32	214899.52
OFFICE OPERATIONS	109100.00	75810.00	87191.00	91310.10	100241.11	463652.21
VEHICLES (1)	25000.00					25000.00
HOME OFFICE SUPPORT	35000.00	38500.00	42350.00	46585.00	51243.50	213678.50
OVERHEAD-U.S.PVO	135427.67	113531.05	128028.81	69479.25	76367.18	522833.96
AUDIT	50000.00	50000.00	50000.00	50000.00	50000.00	250000.00
TOTAL	636853.24	541967.90	604791.49	351076.75	380924.43	2515613.81

USAID/NAMBIA
NATURAL RESOURCES MANAGEMENT--NAMIBIA
TABLE III(B)
DETAILED EXPENDITURE BY PROJECT ELEMENT
TECHNICAL ASSISTANCE

	FY1992/3	FY1994	FY1995	FY1996	FY1997	TOTAL	
RESOURCE MGT ECONOMIST-SEE TABLE IV	191925.57	166686.85	192037.69			550650.10	ASSUMES LOWER SALARY BY $20000.00.
RESOURCE MGT COORDINATOR " "	191925.57	166686.85	192037.69			550650.10	ASSUMES LOWER SALARY BY $20000.00.
SHORT TERM TECHNICAL ASSISTANCE	30000.00	45000.00	75000.00	75000.00	75000.00	300000.00	
OVERHEAD -U.S. PVO	124155.34	113512.11	137722.61	22500.00	22500.00	420390.06	
TOTAL	538006.48	491885.80	596797.99	97500.00	97500.00	1821690.26	

USAID/NAMIBIA
NATURAL RESOURCES MANAGEMENT--NAMIBIA
TABLE III(C)
DETAILED EXPENDITURES BY PROJECT ELEMENT
PARTICIPANT TRAINING

	FY 1992/3	FY 1994	FY 1995	FY 1996	FY 1997	TOTAL	
LONG-TERM TRAINING	120000.00	120000.00	120000.00			360000.00	ASSUMES $30,000 PER PERSON PER YEAR.
SHORT-TERM DIPLOMA TRAINING	100000.00	100000.00	100000.00	60000.00	50000.00	410000.00	ASSUMES $10,000 PER COURSE.
WORKSHOPS	60000.00	60000.00	60000.00	60000.00	60000.00	300000.00	ASSUMES ONE WORKSHOP PER MONTH @$5,000 PER WORKSHOP (EXCLUDES EXTERNAL SHORT-TERM TA COSTS.
TOTAL	280000.00	280000.00	280000.00	120000.00	110000.00	1070000.00	

USAID/NAMIBIA
NATURAL RESOURCES MANAGEMENT--NAMIBIA
TABLE III(D)
DETAILED EXPENDITURES BY PROJECT ELEMENT
COMMUNITY DEVELOPMENT

	FY 1992/3	FY 1994	FY 1995	FY 1996	FY 1997	TOTAL
SUB-GRANTS TO NGO BY REGION						
BUSHMANLAND--SEE TABLE V	80800.00	96700.00	109200.00	121800.00	131400.00	539900.00
CAPRIVI--SEE TABLE V	310200.00	218700.00	248700.00	280000.00	298600.00	1356200.00
TOTAL	391000.00	315400.00	357900.00	401800.00	430000.00	1896100.00

USAID/NAMBIA
NATURAL RESOURCES MANAGEMENT--NAMBIA
TABLE III(E)
DETAILED EXPENDITURE BY PROJECT ELEMENT
PLANNING & APPLIED RESEARCH

	FY 1992/3	FY 1994	FY 1995	FY 1996	FY 1997	TOTAL	
RESEARCH SUB-GRANTS TO NGOS	125000.00	150000.00	150000.00	100000.00	75000.00	600000.00	ASSUMES $25000.00 PER PROPOSAL.
SAN DIEGO ZOOLOGICAL SOCIETY							
PERSONNEL COSTS	80500.00	88550.00	97405.00			266455.00	
TRACKING/OPERATIONAL SUPPLIES	215000.00	180660.00	174330.00			569990.00	
CAMPING EQUIPMENT	19000.00	13000.00				32000.00	
TRAVEL	14000.00	15800.00	17900.00			47700.00	
SUB-TOTAL	328500.00	298010.00	289635.00			916145.00	
TOTAL	453500.00	448010.00	439635.00	100000.00	75000.00	1516145.00	

USAID/NAMIBIA
NATURAL RESOURCES MANAGEMENT--NAMIBIA
TABLE III(F)
DETAILED EXPENDITURES BY PROJECT ELEMENT
PROJECT MANAGEMENT--USAID

	FY 1992/3	FY 1994	FY 1995	FY 1996	FY 1997	TOTAL	
PROJECT MANAGER - SEE TABLE IV	95962.78	83343.42	96018.84	81461.34	95962.78	452749.17	ASSUMES PART TIME POSITION, 50%.
PROJECT ACCOUNTANT (FSN)	17600.00	19360.00	21296.00	23425.60	28718.41	110400.01	ASSUMES PART TIME POSITION, 50%.
PROJECT ASSISTANT (FSN)	18600.00	20460.00	22506.00	24756.60	28718.41	115041.01	ASSUMES PART TIME POSITION, 50%.
SECRETARY	8000.00	8800.00	9680.00	10648.00	11712.80	48840.80	ASSUMES PART TIME POSITION, 50%.
COMPUTER	10000.00			10000.00		20000.00	
VEHICLE	25000.00					25000.00	
OFFICE EQUIPMENT AND FURNITURE	20000.00					20000.00	
AUDIT			30000.00		30000.00	60000.00	
TOTAL	195162.78	131963.42	179500.84	150291.54	195112.40	852030.99	

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TABLE IV
TECHNICAL ASSISTANCE BUDGET
CHIEF OF PARTY

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
A. PERSONAL COMPENSATION						
1. BASIC PAY	72295.00	75909.75	79705.24			227909.99
2. POST DIFFERENTIAL						
B. PERSONAL BENEFITS						
1. FICA (EMPLOYER'S PORTION)	5530.57	5807.10	6097.45			17435.11
2. EDUCATION ALLOWANCE	27000.00	28350.00	29767.50			85117.50
3. HEALTH, LIFE & SOS INSURANCE	2500.00	2500.00	2500.00			7500.00
4. RETIREMENT	1000.00	1000.00	1000.00			3000.00
C. TRAVEL AND TRANSPORTATION						
1. INTERNATIONAL TRAVEL	8000.00		12000.00			20000.00
2. EXCESS BAGGAGE	1000.00		1500.00			2500.00
3. PER DIEM (POST ASSIGN/RETURN)	1000.00		1500.00			2500.00
4. REGIONAL TRAVEL	12000.00	12600.00	13230.00			37830.00
5. UAB	4200.00		6000.00			10200.00
6. HOUSEHOLD EFFECTS	15000.00		18000.00			33000.00
7. POV	3500.00		3500.00			7000.00
8. STORAGE	1800.00	1890.00	1984.50			5674.50
9. R&R		12000.00				12000.00
10. HOME LEAVE		17000.00				17000.00
D. RENT & UTILITIES						
1. RESIDENTIAL RENT	24000.00	25200.00	26460.00			75660.00
2. UTILITIES	1800.00	1980.00	2178.00			5958.00
3. FURNISHINGS	20000.00		2500.00			22500.00
4. APPLIANCES	4000.00		1500.00			5500.00
5. SECURITY UPGRADE	5000.00					5000.00
6. MAINTENANCE	1500.00	1650.00	1815.00			4965.00

E OTHER DIRECT COSTS						
1. PHYSICAL EXAMINATION	500.00	500.00	500.00			1500.00
2 MISCELLANEOUS	300.00	300.00	300.00			900.00
	211925.57	186686.85	212037.69			610650.10
LOCAL HIRE BUDGET-PROJECT MANAGER						
SALARY	26000.00	28600.00	31460.00	34606.00	38066.60	158732.60
BENEFITS	5200.00	5720.00	6292.00	6921.20	7613.32	31746.52
TRAVEL/PER DIEM	4000.00	4400.00	4840.00	5324.00	5856.40	24420.40
	35200.00	38720.00	42592.00	46851.20	51536.32	214899.52
LOCAL HIRE BUDGET-PROJECT ACCOUNTANT						
SALARY	26000.00	28600.00	31460.00	34606.00	38066.60	158732.60
BENEFITS	5200.00	5720.00	6292.00	6921.20	7613.32	31746.52
TRAVEL/PER DIEM	4000.00	4400.00	4840.00	5324.00	5856.40	24420.40
	35200.00	38720.00	42592.00	46851.20	51536.32	214899.52
OFFICE OPERATIONS						
SECRETARY	16000.00	17600.00	19360.00	21296.00	23425.60	97681.60
DRIVER	10400.00	11440.00	12584.00	13842.40	15226.64	63493.04
CLEANER	4700.00	5170.00	5687.00	6255.70	6881.27	28693.97
OFFICE FURNITURE (3 DESKS, CHAIRS, ETC)	10000.00		2000.00			12000.00
OFFICE EQUIPMENT	10000.00		2000.00			12000.00
COMPUTERS	20000.00					20000.00
SUPPLIES	2000.00	2000.00	2000.00	2000.00	2000.00	10000.00
OFFICE RENT/UTILITIES	24000.00	26400.00	29040.00	31944.00	35138.40	146522.40
COMMUNICATIONS	12000.00	13200.00	14520.00	15972.00	17569.20	73261.20
	109100.00	75810.00	87191.00	91310.10	100241.11	463652.21

USAID/NAMBIA
NATURAL RESOURCES MANAGEMENT--NAMIBIA
TABLE V
DETAILED EXPENDITURE FOR NGOS
COMMUNITY DEVELOPMENT

	FY1992/3	FY1994	FY1995	FY1996	FY1997	TOTAL
BUSHMANLAND-NYAE NYAE FOUNDATION						
1. PERSONNEL COSTS	39000.00	55000.00	62000.00	72000.00	81000.00	309000.00
2. TRAINING	3000.00	2600.00	1800.00	1400.00	1400.00	10200.00
3. OFFICE EQUIPMENT/SUPPLIES	2000.00	400.00	400.00	3000.00	600.00	6400.00
4. CAMPING EQUIPMENT/TOOLS	1000.00			700.00		1700.00
5. VEHICLES						
6. VEHICLE RUNNING COSTS	9000.00	10000.00	12000.00	14000.00	16000.00	61000.00
7. RESEARCH/EVALUATION	800.00	700.00	4000.00	700.00	1400.00	7600.00
8. COMMINITY DEVELOPMENT	19000.00	19000.00	19000.00	19000.00	19000.00	95000.00
9. OVERHEAD	7000.00	9000.00	10000.00	11000.00	12000.00	49000.00
SUB-TOTAL	80800.00	96700.00	109200.00	121800.00	131400.00	539900.00
CAPRIVI-INTERGRATED NAT.FOUNDATION						
1. PERSONNEL COSTS	122000.00	110000.00	127000.00	147000.00	168000.00	674000.00
2. TRAINING	7000.00	9000.00	6000.00	6000.00	2600.00	30600.00
3. OFFICE EQUIPMENT/SUPPLIES	4000.00	700.00	700.00	1000.00		6400.00
4. CAMPING EQUIPMENT/TOOLS	8000.00			8000.00		16000.00
5. VEHICLES (2)	59000.00					59000.00
6. VEHICLE OPERATING COSTS	18000.00	20000.00	24000.00	27000.00	31000.00	120000.00
7. RESEARCH/EVALUATION	13000.00	4000.00	9000.00	4000.00	5000.00	35000.00
8. COMMUNITY DEVELOPMENT	51000.00	55000.00	59000.00	61000.00	65000.00	291000.00
9. OVERHEAD	28200.00	20000.00	23000.00	26000.00	27000.00	124200.00
SUB-TOTAL	310200.00	218700.00	248700.00	280000.00	298600.00	1356200.00
GRAND TOTAL	391000.00	315400.00	357900.00	401800.00	430000.00	1896100.00

METHODS OF FINANCING & IMPLEMENTATION--NAMIBIA

TABLE VI

ELEMENT	METHOD OF IMPLEMENTATION	METHOD OF FINANCING	TOTAL
TECHNICAL ASSISTANCE	COOPERATIVE AGREEMENT WITH U.S. PVO	DIRECT PAYMENT OR LETTER OF CREDIT	4337304.07
PARTICIPANT TRAINING	COOPERATIVE AGREEMENT	DIRECT PAYMENT OR	1070000.00
(i) LONG TERM TRAINING	WITH U.S. PVO	LETTER OF CREDIT	<360000.00>
(ii) SHORT TERM TRAINING	" "	" "	<410000.00>
(iii) WORKSHOPS	" "	DIRECT REIMBURSEMENT OR ADVANCE	<300000.00>
PLANNING & APPLIED RESEARCH	SPECIFIC SUPPORT GRANT	DIRECT PAYMENT OR	1516145.00
(i) SAN DIEGO ZOOLOGICAL SOCIETY	WITH SAN DIEGO ZOOLOGICAL SOCIETY	LETTER OF CREDIT	<916145.00>
(ii) RESEARCH SUB-GRANTS	COOPERATIVE AGREEMENT WITH U.S. PVO	DIRECT PAYMENT OR LETTER OF CREDIT	<600000.00>
COMMUNITY DEVELOPMENT	COOPERATIVE AGREEMENT WITH U.S. PVO	DIRECT PAYMENT OR LETTER OF CREDIT	1896100.00
PROJECT MANAGEMENT--USAID	PERSONAL SERVICE CONTRACTS	DIRECT PAYMENT	852030.99
(i) COMMODITIES	PURCHASE ORDER FOR EQUIPMENT	DIRECT REIMBURSEMENT	<727030.99>
(ii) AUDIT	IQC OR DIRECT CONTRACT	DIRECT PAYMENT	<65000.00>
REGIONAL COMMUNICATION	COOPERATIVE AGREEMENT WITH U.S. PVO	DIRECT PAYMENT OR LETTER OF CREDIT	<60000.00>
			125000.00
EVALUATION	IQC BUY-IN WITH WORK ORDER OR DIRECT CONTRACT	DIRECT REIMBURSEMENT OR DIRECT PAYMENT	200000.00

TABLE VII
GOVERMENT OF NAMIBIA
HOST COUNTRY CONTRIBUTION
(RAND EQUIVALENT)

ITEM	1	2	3	4	5	TOTAL
I. PLANNING + APPLIED RESURCH (ETOSHA NATIONAL PARK)						
A. SALARIES	460,000	460,000	460,000	460,000	460,000	2,300,000
B. TRAVEL / SUBSISTENCE	36,000	36,000	36,000	36,000	36,000	180,000
C. MATERIAL / SUPPLIES	25,060	25,060	25,060	25,060	25,060	125,300
D. EQUIPMENT MAINTENANCE	9,800	9,800	9,800	9,800	9,800	49,000
E. TRANSPORT	172,000	172,000	172,000	172,000	172,000	860,000
F. CAPITAL ASSETS	400,000					400,000
SUBTOTAL	1,102,860	702,860	702,860	702,860	702,860	3,914,300
II. COMMUNITY DEVELOPMENT						
A. CAPRIVI (EAST AND WEST)						
1. SALARIES	504,000	504,000	504,000	504,000	504,000	2,520,000
2. TRAVEL SUBSISTENCE	65,000	65,000	65,000	65,000	65,000	325,000
3. MATERIALS / SUPPLIES	79,300	79,300	79,300	79,300	79,300	396,500
4. EQUIPMENT MAINTENANCE	1,625	1,625	1,625	1,625	1,625	8,125
5. TRANSPORT	97,500	97,500	97,500	97,500	97,500	487,500
6. CAPITAL ASSETS	6,435					6,435
SUBTOTAL	753,860	747,425	747,425	747,425	747,425	3,743,560
B. BUSHMANLAND						
A. SALARIES	78,000	78,000	78,000	78,000	78,000	390,000
B. TRAVEL / SUBSISTENCE	12,038	12,038	12,038	12,038	12,038	60,190
C. MATERIAL / SUPPLIES	14,943	14,943	14,943	14,943	14,943	74,715
D. EQUIPMENT MAINTENANCE	0	0	0	0	0	0
E. TRANSPORT	37,050	37,050	37,050	37,050	37,050	185,250
F. CAPITAL ASSETS	0	0	0	0	0	0
SUBTOTAL	142,031	142,031	142,031	142,031	142,031	710,155
C. ETOSHA CATCHMENT AREA (OVAMBO AND KAOKOLAND)						
1. SALARIES	240,000	240,000	240,000	240,000	240,000	1,200,000
2. TRAVEL SUBSISTENCE	20,000	20,000	20,000	20,000	20,000	100,000
3. MATERIALS / SUPPLIES	18,835	18,835	18,835	18,835	18,835	94,175
4. EQUIPMENT MAINTENANCE	250	250	250	250	250	1,250
5. TRANSPORT	75,000	75,000	75,000	75,000	75,000	375,000
6. CAPITAL ASSETS	0	0	0	0	0	0
SUBTOTAL	354,085	354,085	354,085	354,085	354,085	1,770,425
SUBTOTAL (A, B, +C)	1,249,976	1,243,541	1,243,541	1,243,541	1,243,541	6,224,140
III. PROJECT MANAGEMENT (ENVIRONMENTAL PLANNING UNIT)						
1. SALARIES	142,600	142,600	142,600	142,600	142,600	713,000
2. TRAVEL SUBSISTENCE	5,750	5,750	5,750	5,750	5,750	28,750
3. MATERIALS / SUPPLIES	5,800	5,800	5,800	5,800	5,800	29,000
4. EQUIPMENT MAINTENANCE	0	0	0	0	0	0
5. TRANSPORT	25,000	25,000	25,000	25,000	25,000	125,000
6. CAPITAL ASSETS	31,500	0	0	0	0	31,500
SUBTOTAL	210,650	179,150	179,150	179,150	179,150	927,250
TOTAL (I + II)	2,563,486	2,125,551	2,125,551	2,125,551	2,125,551	11,065,690

TABLE VII
GOVERMENT OF NAMIBIA
HOST COUNTRY CONTRIBUTION
(US DOLLAR EQUIVALENT)

ITEM	1	2	3	4	5	TOTAL
I. PLANNING + APPLIED RESURCH (ETOSHA NATIONAL PARK)						
A. SALARIES	170,370	170,370	170,370	170,370	170,370	851,852
B. TRAVEL / SUBSISTENCE	13,333	13,333	13,333	13,333	13,333	66,667
C. MATERIAL / SUPPLIES	9,281	9,281	9,281	9,281	9,281	46,407
D. EQUIPMENT MAINTENANCE	3,630	3,630	3,630	3,630	3,630	18,148
E. TRANSPORT	63,704	63,704	63,704	63,704	63,704	318,519
F. CAPITAL ASSETS	148,148	0	0	0	0	148,148
SUBTOTAL	408,467	260,319	260,319	260,319	260,319	1,449,741
II. COMMUNITY DEVELOPMENT						
A. CAPRIVI (EAST AND WEST)						
1. SALARIES	186,667	186,667	186,667	186,667	186,667	933,333
2. TRAVEL SUBSISTENCE	24,074	24,074	24,074	24,074	24,074	120,370
3. MATERIALS / SUPPLIES	29,370	29,370	29,370	29,370	29,370	146,852
4. EQUIPMENT MAINTENANCE	602	602	602	602	602	3,009
5. TRANSPORT	36,111	36,111	36,111	36,111	36,111	180,556
6. CAPITAL ASSETS	2,383	0	0	0	0	2,383
SUBTOTAL	279,207	276,824	276,824	276,824	276,824	1,386,504
B. BUSHMANLAND						
A. SALARIES	28,889	28,889	28,889	28,889	28,889	144,444
B. TRAVEL / SUBSISTENCE	4,459	4,459	4,459	4,459	4,459	22,293
C. MATERIAL / SUPPLIES	5,534	5,534	5,534	5,534	5,534	27,672
D. EQUIPMENT MAINTENANCE	0	0	0	0	0	0
E. TRANSPORT	13,722	13,722	13,722	13,722	13,722	68,611
F. CAPITAL ASSETS	0	0	0	0	0	0
SUBTOTAL	52,604	52,604	52,604	52,604	52,604	263,020
C. ETOSHA CATCHMENT AREA (OVAMBO AND KAOKOLAND)						
1. SALARIES	88,889	88,889	88,889	88,889	88,889	444,444
2. TRAVEL SUBSISTENCE	7,407	7,407	7,407	7,407	7,407	37,037
3. MATERIALS / SUPPLIES	6,976	6,976	6,976	6,976	6,976	34,880
4. EQUIPMENT MAINTENANCE	93	93	93	93	93	463
5. TRANSPORT	27,778	27,778	27,778	27,778	27,778	138,889
6. CAPITAL ASSETS	0	0	0	0	0	0
SUBTOTAL	131,143	131,143	131,143	131,143	131,143	655,713
SUBTOTAL (A, B, +C)	462,954	460,571	460,571	460,571	460,571	2,305,237
III. PROJECT MANAGEMENT (ENVIRONMENTAL PLANNING UNIT)						
1. SALARIES	52,815	52,815	52,815	52,815	52,815	264,074
2. TRAVEL SUBSISTENCE	2,130	2,130	2,130	2,130	2,130	10,648
3. MATERIALS / SUPPLIES	2,148	2,148	2,148	2,148	2,148	10,741
4. EQUIPMENT MAINTENANCE	0	0	0	0	0	0
5. TRANSPORT	9,259	9,259	9,259	9,259	9,259	46,296
6. CAPITAL ASSETS	11,667	0	0	0	0	11,667
SUBTOTAL	78,019	66,352	66,352	66,352	66,352	343,426
TOTAL (I, II + III)	949,439	787,241	787,241	787,241	787,241	4,098,404

ANNEX R

MONITORING PROCEDURES FOR HOST COUNTRY CONTRIBUTIONS

ANNEX R

Monitoring Procedures for Host Country Contributions

In the early stages of implementation, the Project Officer will determine if there is a sound basis to conclude that host country contributions, by categories and in necessary numbers, will be forthcoming when needed to ensure the project can be implemented on a timely basis. To assist with this, USAID will contract with a local CPA firm to work with the MWCT to establish a budget, reporting format and procedures for monitoring expenditures. As soon as the host country contributions become known in greater detail, the Project Officer will issue a Project Implementation Letter (PIL) outlining the full extent of the counterpart agency's responsibility, including the manner in which these contributions will be made available. This PIL will also specify that the implementing agency should keep a separate accounting of all host country contributions to the project and report it to USAID quarterly. (See attached suggested reporting format). To lessen the accounting burden on the MWCT, a local CPA firm will be hired to prepare and verify these quarterly reports.

The Controller, with the assistance of the Project Officer, will maintain the official USAID accounting records for host country contributions. The Project Officer should, in the implementing PIL, require that the Host Government report on contributions within thirty days at the end of each quarter. Agency policy now requires "auditable" evidence that such contributions have been made as mutually agreed to between A.I.D. and the Host Government. Such evidence will be provided by the quarterly reports submitted to the Project Officer. These reports will be audited at least annually.

The Project Officer will be responsible for ensuring that the contributions are in accordance with the project agreement. If the Project Officer becomes aware that contributions are not being made as agreed to, or the implementing agency is not tracking or reporting required contributions, the Controller should be notified. The Controller will then bring the problem to the attention of the Mission Director with recommendations for appropriate actions.

TABLE VII
GOVERMENT OF NAMIBIA
HOST COUNTRY CONTRIBUTION
(RAND EQUIVALENT)

ITEM	1	2	3	4	5	TOTAL
I. PLANNING + APPLIED RESURCH (ETOSHA NATIONAL PARK)						
A. SALARIES	460,000	460,000	460,000	460,000	460,000	2,300,000
B. TRAVEL / SUBSISTENCE	36,000	36,000	36,000	36,000	36,000	180,000
C. MATERIAL / SUPPLIES	25,060	25,060	25,060	25,060	25,060	125,300
D. EQUIPMENT MAINTENANCE	9,800	9,800	9,800	9,800	9,800	49,000
E. TRANSPORT	172,000	172,000	172,000	172,000	172,000	860,000
F. CAPITAL ASSETS	400,000					400,000
SUBTOTAL	1,102,860	702,860	702,860	702,860	702,860	3,914,300
II. COMMUNITY DEVELOPMENT						
A. CAPRIVI (EAST AND WEST)						
1. SALARIES	504,000	504,000	504,000	504,000	504,000	2,520,000
2. TRAVEL SUBSISTENCE	65,000	65,000	65,000	65,000	65,000	325,000
3. MATERIALS / SUPPLIES	79,300	79,300	79,300	79,300	79,300	396,500
4. EQUIPMENT MAINTENANCE	1,625	1,625	1,625	1,625	1,625	8,125
5. TRANSPORT	97,500	97,500	97,500	97,500	97,500	487,500
6. CAPITAL ASSETS	6,435					6,435
SUBTOTAL	753,860	747,425	747,425	747,425	747,425	3,743,560
B. BUSHMANLAND						
A. SALARIES	78,000	78,000	78,000	78,000	78,000	390,000
B. TRAVEL / SUBSISTENCE	12,038	12,038	12,038	12,038	12,038	60,190
C. MATERIAL / SUPPLIES	14,943	14,943	14,943	14,943	14,943	74,715
D. EQUIPMENT MAINTENANCE	0	0	0	0	0	0
E. TRANSPORT	37,050	37,050	37,050	37,050	37,050	185,250
F. CAPITAL ASSETS	0	0	0	0	0	0
SUBTOTAL	142,031	142,031	142,031	142,031	142,031	710,155
C. ETOSHA CATCHMENT AREA (OVAMBO AND KAOKOLAND)						
1. SALARIES	240,000	240,000	240,000	240,000	240,000	1,200,000
2. TRAVEL SUBSISTENCE	20,000	20,000	20,000	20,000	20,000	100,000
3. MATERIALS / SUPPLIES	18,835	18,835	18,835	18,835	18,835	94,175
4. EQUIPMENT MAINTENANCE	250	250	250	250	250	1,250
5. TRANSPORT	75,000	75,000	75,000	75,000	75,000	375,000
6. CAPITAL ASSETS	0	0	0	0	0	0
SUBTOTAL	354,085	354,085	354,085	354,085	354,085	1,770,425
SUBTOTAL (A, B, +C)	1,249,976	1,243,541	1,243,541	1,243,541	1,243,541	6,224,140
III. PROJECT MANAGEMENT (ENVIRONMENTAL PLANNING UNIT)						
1. SALARIES	142,600	142,600	142,600	142,600	142,600	713,000
2. TRAVEL SUBSISTENCE	5,750	5,750	5,750	5,750	5,750	28,750
3. MATERIALS / SUPPLIES	5,800	5,800	5,800	5,800	5,800	29,000
4. EQUIPMENT MAINTENANCE	0	0	0	0	0	0
5. TRANSPORT	25,000	25,000	25,000	25,000	25,000	125,000
6. CAPITAL ASSETS	31,500	0	0	0	0	31,500
SUBTOTAL	210,650	179,150	179,150	179,150	179,150	927,250
TOTAL (I + II)	2,563,486	2,125,551	2,125,551	2,125,551	2,125,551	11,065,690

TABLE VII
GOVERMENT OF NAMIBIA
HOST COUNTRY CONTRIBUTION
(US DOLLAR EQUIVALENT)

ITEM	1	2	3	4	5	TOTAL
I. PLANNING + APPLIED RESURCH (ETOSHA NATIONAL PARK)						
A. SALARIES	170,370	170,370	170,370	170,370	170,370	851,852
B. TRAVEL / SUBSISTENCE	13,333	13,333	13,333	13,333	13,333	66,667
C. MATERIAL / SUPPLIES	9,281	9,281	9,281	9,281	9,281	46,407
D. EQUIPMENT MAINTENANCE	3,630	3,630	3,630	3,630	3,630	18,148
E. TRANSPORT	63,704	63,704	63,704	63,704	63,704	318,519
F. CAPITAL ASSETS	148,148	0	0	0	0	148,148
SUBTOTAL	408,467	260,319	260,319	260,319	260,319	1,449,741
II. COMMUNITY DEVELOPMENT						
A. CAPRIVI (EAST AND WEST)						
1. SALARIES	186,667	186,667	186,667	186,667	186,667	933,333
2. TRAVEL SUBSISTENCE	24,074	24,074	24,074	24,074	24,074	120,370
3. MATERIALS / SUPPLIES	29,370	29,370	29,370	29,370	29,370	146,852
4. EQUIPMENT MAINTENANCE	602	602	602	602	602	3,009
5. TRANSPORT	36,111	36,111	36,111	36,111	36,111	180,556
6. CAPITAL ASSETS	2,383	0	0	0	0	2,383
SUBTOTAL	279,207	276,824	276,824	276,824	276,824	1,386,504
B. BUSHMANLAND						
A. SALARIES	28,889	28,889	28,889	28,889	28,889	144,444
B. TRAVEL / SUBSISTENCE	4,459	4,459	4,459	4,459	4,459	22,293
C. MATERIAL / SUPPLIES	5,534	5,534	5,534	5,534	5,534	27,672
D. EQUIPMENT MAINTENANCE	0	0	0	0	0	0
E. TRANSPORT	13,722	13,722	13,722	13,722	13,722	68,611
F. CAPITAL ASSETS	0	0	0	0	0	0
SUBTOTAL	52,604	52,604	52,604	52,604	52,604	263,020
C. ETOSHA CATCHMENT AREA (OVAMBO AND KAOKOLAND)						
1. SALARIES	88,889	88,889	88,889	88,889	88,889	444,444
2. TRAVEL SUBSISTENCE	7,407	7,407	7,407	7,407	7,407	37,037
3. MATERIALS / SUPPLIES	6,976	6,976	6,976	6,976	6,976	34,880
4. EQUIPMENT MAINTENANCE	93	93	93	93	93	463
5. TRANSPORT	27,778	27,778	27,778	27,778	27,778	138,889
6. CAPITAL ASSETS	0	0	0	0	0	0
SUBTOTAL	131,143	131,143	131,143	131,143	131,143	655,713
SUBTOTAL (A, B, +C)	462,954	460,571	460,571	460,571	460,571	2,305,237
III. PROJECT MANAGEMENT (ENVIRONMENTAL PLANNING UNIT)						
1. SALARIES	52,815	52,815	52,815	52,815	52,815	264,074
2. TRAVEL SUBSISTENCE	2,130	2,130	2,130	2,130	2,130	10,648
3. MATERIALS / SUPPLIES	2,148	2,148	2,148	2,148	2,148	10,741
4. EQUIPMENT MAINTENANCE	0	0	0	0	0	0
5. TRANSPORT	9,259	9,259	9,259	9,259	9,259	46,296
6. CAPITAL ASSETS	11,667	0	0	0	0	11,667
SUBTOTAL	78,019	66,352	66,352	66,352	66,352	343,426
TOTAL (I, II + III)	949,439	787,241	787,241	787,241	787,241	4,098,404

HOST COUNTRY CONTRIBUTION
QUARTERLY EXPENDITURE REPORT

PROJECT: 690-0251.73

Budget Line-Item	Host Country	Expenditure to Date	Current Quarter Expenditures	Balance
Salaries				
Travel/Subsistance				
Material/Supplies				
Equipment maintenance				
Transport				
Capital Assets				

ANNEX Q

DISBURSEMENT AND ACCOUNTING PROCEDURES

ANNEX Q

DISBURSEMENT AND ACCOUNTING PROCEDURES

The following procedures for disbursement and accounting will apply to the grantee/recipient in order to (1) request disbursements under the grant and cooperative agreements, (2) account for funds received, and (3) comply with the financial requirement of the agreements.

This guidance does not cover all the details and possible situations which may arise. Therefore, additional consultation between the recipient and USAID should be initiated, as necessary, during the period of the Agreement. These guidelines, supplemented by consultations, will enable the recipient and A.I.D. to effectively monitor the financial management of this Agreement.

Establishment of Bank Accounts

A separate bank account to deposit all A.I.D. funds received under this Agreement must be established, in a commercial bank. A.I.D. funds shall not be commingled with any other funds. Any interest earned on these funds shall be reported to the USAID Controller. All interest earned must be returned to USAID and will be collected by USAID through a deduction in the quarterly Disbursement Report. The recipient and sub-recipients must advise, in writing, USAID of the establishment of the account and the account number.

Approved Budget

The approved budget of the Agreement is shown in Section IV of the Agreement, entitled "Financial Plan".

Initial Advance

An initial advance of up to 90 days disbursing requirements under the approved budget may be requested by submitting a cost estimate of cash requirements by budget line item.

Subsequent Advances & Accounting of Funds Received

Reporting to USAID of expenditures generally will be performed on a quarterly basis and, in any case, not less frequently than quarterly. Reporting of expenditures and subsequent requests for Agreement funds will be accomplished by submitting the following to the USPSC and project funded accountant for review before submission to the USAID/Controller:

(1) a completed SF 1034 Voucher (sample copy attached); and

(2) a completed Disbursement Report (sample copy attached).

For the first two quarterly Disbursement Reports, photocopies must be forwarded of all paid invoices, receipts, checks, or other documentary evidence supporting each expenditure being claimed in the Disbursement Report. Unless otherwise notified by USAID, submission of this supporting documentation is only required for the first two quarterly Disbursement Reports.

Requests for payments not submitted in the above manner may be delayed. To ensure that the recipient has sufficient funds prior to obtaining the next advance, the Disbursement Report should be submitted to the USAID Controller four to six weeks prior to the end of the quarter.

In the event cash requirements have been underestimated, interim advances may be requested.

The Disbursement Report

The attached format will be used for requesting subsequent advances and reporting expenditures of Agreement funds.

NAME OF RECIPIENT: _____

AGREEMENT NUMBER: _____

PERIOD COVERED BY THIS REPORT _____ TO _____

1.	BEGINNING ADVANCE BALANCE		R
2.	PLUS:	AID FUNDS REC'D DURING THE PERIOD	R
3.	PLUS:	INTEREST EARNED DURING THE PERIOD	R
4.	LESS:	EXPENDITURES DURING THE PERIOD	R _____
5.	ENDING ADVANCE BALANCE		R

LINE ITEM	APPROVE BUDGET (R)	EXPENDITUES THIS PERIOD (R)	EXPENDITUES TO DATE (R)	ADVANCE FOR NEXT PERIOD (R)
TOTALS				

LESS: ENDING BALANCE (NO. 5 ABOVE)
LESS: AID FUNDS REQUESTED AND NOT YET RECEIVED (IN TRANSIT)
LESS: EXPENDITURES THIS PERIOD (NO. 4 ABOVE)
PLUS: INTEREST EARNED THIS PERIOD (NO. 3 ABOVE)
ADVANCE ADJUSTMENT R _____

NET AMOUNT REQUESTED BY RECIPIENT:

EXPENDITURES FOR PERIOD: R
PLUS: ADVANCE ADJUSTMENT
LESS: INTEREST EARNED (_____)
NET AMOUNT REQUESTED R

SUMMARY OF INTEREST EARNED:

PREVIOUSLY REPORTED: R
PLUS: REPORTED THIS PERIOD _____
INTEREST EARNED TO DATE: R

The undersigned hereby certifies that the payment of the sum claimed is proper and that appropriate refund to AID will be made promptly upon request in the event of disallowance of costs not reimbursable under the terms of the Agreement.

_____
(Recipient Representative

Date: _____

U.S. GPO 1988-0-212-114 60377

Standard Form 1034
Revised October 1987
Department of the Treasury
I TFM 4-2000
1034-121

PUBLIC VOUCHER FOR PURCHASES AND SERVICES OTHER THAN PERSONAL

VOUCHER NO.

U.S. DEPARTMENT, BUREAU, OR ESTABLISHMENT AND LOCATION
Agency for International Development
USAID/Windhoek
Windhoek, Namibia

DATE VOUCHER PREPARED
XXXXXXXX XX, 1992

CONTRACT NUMBER AND DATE
Grant No. 690-XXXX-X-XX XXXX

REQUISITION NUMBER AND DATE

SCHEDULE NO.

PAID BY

PAYEE'S NAME AND ADDRESS
Name and mailing address of payee
(the check will be mailed directly to this address unless otherwise specified)

DATE INVOICE RECEIVED

DISCOUNT TERMS

PAYEE'S ACCOUNT NUMBER

SHIPPED FROM | TO | WEIGHT | GOVERNMENT B/L NUMBER

NUMBER AND DATE OF ORDER	DATE OF DELIVERY OR SERVICE	ARTICLES OR SERVICES (Enter description, item number of contract or Federal supply schedule, and other information deemed necessary)	QUANTITY	UNIT PRICE COST	UNIT PRICE PER	AMOUNT (1)
		Expenditures for the period _____ through _____				SAR X,XXX,XXX
		Advance Adjustment				SAR X,XXX,XXX
		PER ATTACHED DISBURSEMENT REPORT				
		_____ Recipient Representative				

(Use continuation sheet(s) if necessary) (Payee must NOT use the space below) TOTAL

PAYMENT:
- ☐ PROVISIONAL
- ☐ COMPLETE
- ☐ PARTIAL
- ☐ FINAL
- ☐ PROGRESS
- ☐ ADVANCE

APPROVED FOR =$

EXCHANGE RATE =$1.00

DIFFERENCES

BY [2]

Amount verified; correct for

TITLE

(Signature or initials)

Pursuant to authority vested in me, I certify that this voucher is correct and proper for payment.

(Date) (Authorized Certifying Officer) [3] (Title)

ACCOUNTING CLASSIFICATION

PAID BY

CHECK NUMBER ON ACCOUNT OF U.S. TREASURY

CHECK NUMBER ON (Name of bank)

CASH $ DATE

PAYEE [5]

[1] When stated in foreign currency, insert name of currency.
[2] If the ability to certify and authority to approve are combined in one person, one signature only is necessary; otherwise the approving officer will sign in the space provided, over his official title.
[3] When a voucher is receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary", or "Treasurer", as the case may be.

PER

TITLE

Previous edition usable

NSN 7540-00-800-2234

PRIVACY ACT STATEMENT

The information requested on this form is required under the provisions of 31 U.S.C. 82b and 82c, for the purpose of disbursing Federal money. The information requested is to identify the particular creditor and the amounts to be paid. Failure to furnish this information will hinder discharge

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In between, there is a large settled area which will be established as a multiple-use "buffer zone" with sport hunting, of wildlife overflows from the core areas, being the key economic resource.

All three of these zones comprise the West Caprivi Game Reserve.

3.2.1 Consumptive Use Of Wildlife. The only current information about the Caprivi area were provided on wildlife to a USAID consultant on March 30, 1992 by MWCT for West Caprivi. This area is also dominated by Bushmen communities. Water is not a major problem, this area receiving more rainfall than 95% of the country. However, the area has very poor soils for agriculture.

The area has excellent potential for both game management and nature tourism. The estimated value of wildlife for consumptive use of wildlife in West Caprivi Game Reserve is:

Category	Present Value		Optimal Value At Carrying Capacity	
	Rands	$US	Rands	$US
Trophy Hunting Trophy Fee Only	191,690	70,996	690,000	255,556
Game Cropping Sale of Meat	187,000	69,259	443,000	164,074
Live Game Sale	8,000	2,963	1,809,000	670,000
Total	386,690	143,218	2,942,000	1,089,630

It is believed that these are gross and not net values. For instance the live animal sale value does not deduct the cost of capture and transport for each animal, nor the cost of shipping and marketing meat from culled game. The trophy hunting statistic is only the trophy fee. It does not include daily rates paid by the sports hunter, license fees, or other innovative ways of generating income from the sports hunters.

What is not evident, is how much of this money might go to local communities for development, employment of community game guards, management and to the private sectors. Net profits and revenue streams are not clearly understood and need to be defined.

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3.2.2 Ecotourism, Planned By MWCT In The West Caprivi Game Reserve. Wildlife Viewing Lodge Development will provide high economic return on investment, high returns per unit area, moderate profitability and high job creation in limited, high quality areas. However, it requires dense and diverse wildlife populations and vast scenic beauty. Normally, such areas were set aside long ago during the colonial era as national parks. Compared to the communal areas, national parks normally contain critical dry season grazing areas where wildlife concentrates during the dry season making these areas excellent for game viewing tourism, while the surrounding communal lands contain rainy season dispersal areas and little wildlife during the accessible dry season. An example of this is the development of the Lianshulu Safari Lodge along the Kwando River in Caprivi within a communal area but bordering a national park.

Plans exist to build two tourist lodges in the park:

*East Bank of the Okavango River, possibly near Popa Falls

*Kwando River, possibly near St. Michelle

Each site will consist of 20 camp sites and 10 rustic huts catering for 120 people each. New Fees be charged of R 5/person/day for Namibians and R 25/person/day for foreigners. Assuming 75 % of the visitors are Namibian, the park would generate R 1.24 Million/yr if 100% full and R 0.74 million/yr if 60% full.

It is estimated that R 0.73 million/yr if fully booked or R 0.44 million/yr if 60 % full could be generated from the state run rustic lodges and camp sites.

In 4 Private lodges, it is estimated that annual revenues will amount to R 9.1 million/yr at 100% occupancy and R 2.3 million/yr if 25% full.

MWCT proposes that a levy of 10% be imposed on these earnings. Assuming 60% occupancy of state accommodations and 25% occupancy of private lodges, R 0.27 million (R 270,000) could be provided each year to the community for development.

MWCT estimates that 12 local people could be employed at each state run facility and at each lodge, or a total of about 72 people earning R 0.39 million/yr.

Additionally, 40 people could be employed as park staff including laborers, game guides and game guards, drawing R 0.22 million/yr in salaries.

Six to 8 auxiliary rangers would also be employed earning a total of R 38,400/year.

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Thus if properly integrated into tourism, 120 community residents could be employed drawing total annual salaries of R 648,400, in addition to the R 270,000 that would be available for general community development.

3.3 Comparison Of Ecotourism Potentials Between Target Areas. It should not be forgotten that the economics of nature tourism in West Caprivi can not be compared necessarily with those of areas without game parks such as Bushmanland, unless similar schemes are envisioned with Kaudom Park. The core areas in the West Caprivi Game Reserve, as with most parks, tend to be established in critical dry season grazing areas where wildlife concentrates during the dry season, the major season of tourism. Thus they are excellent places for game viewing and photography. Most peripheral areas such as communal lands, are rainy season dispersal areas and may not support the necessary numbers of dry season wildlife to support classical photographic safaris. This is often the reason that sport hunting, which yields high returns for low volumes of tourists is the most economically viable use of the resources.

In the case of Eastern Bushmanland, sport hunting as the major revenue generator, can likely be combined with anthropological safaris to visit the Bushman in one of their last natural settings and to undertake ornithological (The local pans fill with water during the rainy season and for some time into the dry season, these pans filled with migratory water birds) or foot safaris with the Bushmen to observe their tracking and stalking abilities.

4.0 ROLE OF KEY STAKEHOLDERS IN ECONOMIC DEVELOPMENT LINKED TO NATURAL RESOURCE MANAGEMENT IN THE COMMUNAL AREAS

If the LIFE Project is to be successful the relevant stakeholders must be may be equated to a football team. All of the players have been identified, are on the field, but they have not begun to play as a team, their ultimate goal being rural development linked to sustainable natural resources management.

It is the "Human and Personality Factor," not the economic or technical aspects of the LIFE Project that will make or break what the LIFE Project is attempting to accomplish.

Currently, there appears to be too much "Guarding of Turf" by various players; a tendency to belittle certain of the stakeholders, and to want complete control of what is happening at the field level by certain groups. There seems to be a special antagonism towards the private sector who will make or break the long term sustainability of all of these projects.

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Some people feel that the private sector's driving force is only to make money, that they are insensitive or patronizing to the local people, and have no interest in sustainable natural resource management. While the first may be true, and if the project is wise it will take advantage of this trait, since none of the key stakeholders are capable of generating rural wealth. It is believed that the latter attributes are untrue.

The one hopeful ray of light, has been the establishment of the Bushmanland Environmental Planning Committee. This organization is important because it brings together the key stakeholders who are currently not communicating as well as they should, and it obliges them to begin negotiations and to compromise, and to be confronted with hearing the views of the other parties. Hopefully, all stakeholders will see that they have a lot in common with regard to development goals, than differences. Although, it should not be seen as a prescriptive solution, the formation of similar committees in East and West Caprivi would appear to be critical to the long term success of achieving the development philosophy that is being preached.

The following are brief descriptions of the key stakeholders and the role they will have to play if economic development from sustainable natural resources management on the communal lands is to become a reality.

4.1 The Ministry of Wildlife Conservation and Tourism (MWCT) should be seen as the national body empowered by the country of Namibia to safeguard its parks and wildlife resources. It's planning and management divisions consist of an elite body of technicians who will be primarily involved in:

*Serving as the ultimate wildlife management authority for Namibia,

*Providing technical assistance and training to the communal areas on matters such as undertaking wildlife censuses, determining quotas, locating and establishing water points,

*Directing policy reform as it involves parks and wildlife,

*Integrated landuse planning,

*Overseeing monitoring and data collection,

*Problem animal control,

*Linking to the Village Game Guard Program

4.2 Ministry Of Lands And Resettlement has the key role of overseeing integrated landuse planning in the country. They will be the umbrella body working with all stakeholders to coordinate the first pilot landuse planning exercise on a communal land, which is taking place through the Bushmanland Environmental Planning Committee.

They will be critical in setting policies that will determine the degree of sovereignty within the communal areas. This has major land tenure, land use and thus economic implications.

Currently, due to the new Government's politics, "One Namibia One Nation," there is tremendous political pressure to move people from the more populated and thus environmentally degraded communal areas, as well as, Herero refugees from Botswana (Approximately 4,000 Herero refugees with 50,000 head of cattle) without considering the landuse potential/economics, and the human/livestock carrying capacity of Bushmanland.

The recent July 1992 Bushmanland Environmental Planning Committee meeting has requested that no such resettlement decisions be made until the completion of the above mentioned landuse planning exercise which will be undertaken under coordination by the Ministry of Lands and Resettlement.

Privately, many people feel that the future of Bushmanland will only be assured by pressure from the international donor community to have the area accorded special status such as an IUCN "Anthropological Site" and/or a UNESCO "World Heritage Site."

All of this has serious implications, not only for Bushmanland, but for how much control the other communal areas will have over their resources and their destinies. Policies and laws regarding land tenure, and thus resource rights will be critical to the economic viability of the communal lands and will be critical for the LIFE project to address.

4.3 Directorates Of Agriculture, Forestry, and Veterinary Services. These are technical branches of the government that must be involved in all phases of planning, including but not limited to providing advice on such matters as carrying capacity of the range, health care for livestock, water quality/quantity for irrigation, soil quality, appropriate dryland agriculture practices or seed varieties, forestry inventories and management plans, as well as other technical matters.

Ultimately, they, along with MWCT, will be critical in determining the economic feasibility of various resource management options based on physical and chemical limitations of the resources, and as a result, technological limitations which have economic implications.

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These technical services, along with MWCT staff, will be some of the key "Teachers" of the communal land people in a two way exchange of information that will overlay modern management principles with traditional knowledge about the natural resource base that has been handed down through the centuries through oral history and example.

4.4 The Local Communities should be seen as the ultimate beneficiaries of activities related to the exploitation of wildlife and other resources found on their lands. It should be in their economic interests, through the Village Game Guard Program to protect, what should be perceived as "their wildlife" from abuse by outsiders (commercial poachers or otherwise).

The community should also be seen as a primary resource user within the communal land area. Traditional hunters have always used wildlife to provide meat for the community. Fishing, honey harvesting and the use of trees/bushes for firewood, building materials, timber and handicraft materials are just a few of the other resources within a communal land area that are commonly used by the community.

Finally, the community should be seen as having a knowledge passed from generation to generation about certain aspects of natural history that could contribute to the development of landuse plans and even to the establishment of wildlife quotas.

They also have the potential to be become actively involved in "Alternative Supply Driven Tourism."

4.5 The Private Sector. This includes, professional hunters, tour operators, and the vast array of other entrepreneurs listed in Section 1.0. Their key role will be the use of their entrepreneurial skills to determine the most economic way of sustainably exploiting a resource. Other factors such as the level of labor intensity, compatibility with other land uses, etc. must be determined through integrated interactive communication through the Environmental Planning Committees. Currently, the professional hunter operating in Bushmanland, is a formal member of the Environmental Planning Committee.

In particular, with regard to consumptive use of wildlife in the communal areas, the Professional Hunter (PH) has been one of the most misunderstood of all of the stakeholders. He has a multi-faceted role to play:

> *He should first of all be seen as the salesman who goes overseas each year to Market the GMA's wildlife resources primarily to North American and European clientele. Like any salesman, his hope is to nurture a long term relationship with sports hunters so as to assure repeat business. This requires significant annual outlays of money, and two to three months

each year traveling to Europe and North America, attending sportsmen's conventions such as the annual Safari Club International Convention held in January of each year in Reno, Nevada. Often, he is obliged to visit and spend considerable time in the homes of wealthier clients, talking hunting, telling tall tales in order to promote his hunting area. Often long term relations are built up and gradually through the years, clients begin coming to him through former clients recommendations based upon the successful hunts and pleasant times they have had in the bush.

The importance of this can not be underscored. A good professional hunter is a "Good Businessman." He is a people person, a raconteur, and above all a great salesman. This role is so critically vital that it can not be under stated.

People in the NGO community are only fooling themselves if they think they have these skills and can replace the professional hunter in this important endeavor.

While this is also true for people involved in ecotourism, it is less important, as with ecotourism, it is rare that the tour operator is dealing a client on a one on one basis, as normally there are a number of people in a group, nor is one receiving so little for so much out lay of cash as in sport hunting. Clients, paying $US 800-1,000/day, require very intense and personalized attention.

Once a quota has been established by the management biologist, he has a key role to play in sitting down with the wildlife management authority and determining how to best divide up the quota so as to maximize revenue generation from safari hunting.

*As a businessman, he has a key role to play in working with MWCT to assure the various wildlife policies, such as how game license fees should be paid, are acceptable with regard to assuring Namibia's competitiveness in the international safari hunting market.

*He should also be considered as a "<u>Game Keeper on an English Estate</u>." He is available to provide information to the management biologist based upon his practical knowledge of wildlife and habitat management gained by spending up to 6 months per year in the field, and a life time of on-the-job training passed on by older professional hunters and by his trackers, skinners and gun bearers who tend to be traditional hunters.

He is available to work with the management biologist to provide him with some of the key information (e.g., location of wildlife populations within the communal areas by species) necessary for the eventual establishment of a quota system and a land use plan.

Once established, he has a key role to play in implementing the management biologist's plan from early season burning to helping in the harvest of game through bringing in foreign sports hunters.

*Many PH's in Namibia are successful farmers and can collaborate local communities at the beginning or end of the season with regard to appropriate farming practices, identifying and adopting new and improved seed varieties, selecting good soils for farming but which will not detract from sport hunting, and other aspects of community development and natural resource management.

4.2.4 The Role Of NGO's. In Namibia, during pre-independence, the communal lands were the sole domain of the NGO community, as the government invested little time, money or infrastructure into these areas. During post independence, since this is the main area inhabited by disadvantaged black Namibians, a major emphasis is being placed on developing communal lands by the new Government.

One gets the feeling that currently the NGO's still see these areas as their domain. They appear to be struggling with the idea that they may have to cooperate with the government, the private sector, and other NGO's such as church groups.

The NGO's will be obliged to become team players if they are to survive. It is believed that their involvement in the Environmental Planning Committee will help this process along.

The key roles of the NGO's should be seen as follows with regard to economic development in the targeted communal areas:

*Community Mobilization And Organization,

*Collection of Baseline Sociological Data that will help understand and be sensitive to local cultures in trying to best determine how to integrate them into development and resource management,

*In collaboration with technicians from the mainline management agencies (MWCT, Directorates of Agriculture and Forestry) collect baseline data on traditional knowledge from the community on natural history and resource management.

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*Advise the Environmental Planning Committee based upon collection and interpretation of the above information and what it implies for landuse planning and natural resource management.

However, they should realize their limitations. They should be willing to bring in government technicians to advise them and the community on issues such as where bore holes might be placed, appropriate dryland farming techniques, determining where and how many game may be harvested, etc.

Most importantly, NGO's are fund raisers, and NOT ENTREPRENEURS otherwise they would not need to rely on donor support in order to survive. The donor commitment must be seen as a short term solution to a long term problem. The SUCCESS OR FAILURE OF THE LIFE PROJECT and what is being strived for in Namibia's communal areas, as well as, the future of the NGO's/rural community will depend on the communities, the government and the NGO's developing long term cordial relationships to the real driving force behind this program, the risk takers, the money makers and that is the Private Sector. All parties will have to overcome their distaste for the private sector and accept that they have a critical role to play in rural development linked to natural resource management on Namibia's communal areas.

4.2.5 LIFE Steering Committee. At a local level within the target areas the above-noted parties are coming together to plan for the future through the Environmental Planning Committees.

Many key policy and planning decisions will arise that will require regular dialogue and the development of collegial relations in the capital of Windhoek (e.g., Sovereignty of communal areas determined by Ministry of Lands and Resettlement, policy issues regarding stewardship over forestry resources through the Directorate of Forestry, etc.) It is strongly recommended that groups representing these parties in the field also be considered for the LIFE Steering Committee in Windhoek so that direction and policy issues can be worked out between these stakeholders based upon a team approach in which all bodies are on board. Joint decisions regarding and policy and direction will then be implemented in the field in a coordinated effort under common direction:

*MWCT
*An umbrella organization representing the NGO's
*Ministry Of Lands And Resettlement
*Directorates of Forestry and Agriculture
*Federation Of Namibian Tourism Associations, tourism being the driving force in these communal areas (More direct link than proposed Chamber of Commerce).

DeGeorges, August 7, 1992.

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ANNEX H

611 (a) 2 LEGAL OPINION

MEMORANDUM

Date: May 5, 1992

TO: Richard Shortlidge, AIDREP
Mark Johnson, PO
Barbara Belding, HNRO

From: Donald Keene, RLA/SA

Subject: Report on TDY to Namibia on April 27 - May 5, 1992

It was a pleasure to visit and work with USAID/Namibia for the first time. Attached is a draft report on my work during this TDY. I hope it is useful and please don't hesitate to contact me in the future if you need additional assistance.

Thank you for your hospitality and assistance.

CC: Melissa Stephens, PDO, USAID/Zimbabwe

DRAFT

Date: May 5, 1992

TO: Richard Shortridge, AIDREP
Mark Johnson, PO
Barbara Belding, HNRO
Renee Yates, PDS

FROM: Donald Keene, RLA/SA

Subject: Report on TDY to Namibia on April 27 - May 5, 1992

The primary purpose of this TDY was to analyze: (1) Namibian legislation already in place, lacking, or essential to enabling NGO's and community based organizations to derive income based on the proper management and use of natural resources in communal lands; and (2) the general legislative framework within which the LIFE project must be designed and implemented. I have consciously attempted to avoid addressing issues already addressed by or within the scope of responsibility of my colleagues Pat Shapiro and Tim Riedler, except where such issues fall under my specific scope of work for this TDY.

LIFE PROJECT

1. Legislative Framework/FAA Section 611 (a) (2) Determination

A. Summary

Section 611 (a) (2) of the Foreign Assistance Act of 1961 ("FAA") prohibits obligations in excess of $500,000 if the agreement requires legislative action within the recipient country, unless such legislative action may reasonably be anticipated to be completed in time to permit the orderly accomplishment of the purposes of such agreement.

Based on discussions with relevant officials of the Government of the Republic of Namibia (GRN), the NGO community in Namibia, USAID/Namibia officials and on a review of project documentation, it is my opinion that the requirements and conditions of FAA Section 611 (a) (2) have been satisfied and, therefore, that section is not a constraint to obligation of project funds.

Except for under the wildlife use and management component, the orderly accomplishment of the project purpose does not "require" legislative action within Namibia. Even within the wildlife use and management component, it can be reasonably expected based on the discussion herein, that the required legislative action will be completed in time to allow for orderly achievement of the purpose of the project. To ensure that the necessary legislation is actually enacted and implemented, a CP or covenant should be included in the project grant agreement requiring such action. It is my understanding that RLA Riedler will assist in formulating such a provision. In addition, USAID should obtain

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from the GRN, preferably prior to project authorization, a written statement setting forth their specific plans concerning enabling legislation, including an illustrative timetable (this could be included in Request for Assistance).

B. Discussion

A primary objective of the project is to increase household income and economic well-being in poor rural communities or in buffer zones to protected areas through community-based natural resource management. To accomplish this objective, it is planned that the project will develop and pursue means of empowering local communities to exercise management and control over natural resources, including wildlife, and to derive income and other benefits from their use. This pilot process has already been initiated in at least two regions, and it is anticipated that the project would extend these pilot activities to other regions.

There is no legal mechanism, however, that permits local communities in designated communal areas or in communal areas inside national parks, game reserves or other designated areas to participate in the management and use of derive income from use of wild life and other Natural Resources. Although certain local communities have been able to participate in Natural Resource management and use in pilot project areas on an informal, ad-hoc and limited basis, it is this "participation" can be intensified or expanded geographically without enabling legislation. As the GRN owns all communal and other designated lands, it reserves the legal right to determine and con.....use of natural resources therein and to derive all income and other benefits therefrom. To date, the GRN has not devolved these rights to local communities in communal or other designated areas.

To achieve the above referred to project objective, therefore, will require legislative action to allow local communities in communal lands to participate in the management and control of Natural Resources and to derive income and other benefits from those resources.

The legal foundation for the GRN's rights in and control over communal and other designated lands starts with the Namibian Constitution.

The Constitution states in relevant part:

Article 100 Sovereign Ownership of Natural Resources.

Lands, water and Natural Resources below and above the surface of the land and in the continental shelf and within the territorial waters and the exclusive economic zone of Namibia shall belong to the State if they are not otherwise lawfully owned.

Article 125 The State Revenue Fund

... (2) All income accruing to the Central government shall be deposited in the State Revenue Fund and the authority to dispose thereof shall vest in the Government of Namibia.

The State Finance Act, for which the Ministry of Finance has primary implementation responsibility, apparently contains similar, but more detailed, language that requires all income accruing to the central government to be deposited in the State Revenue Fund, unless the Government has authorized other disposition of the income.

GRN authority to determine the use and management of natural resources is vested in the Ministry of Wildlife, Conservation and Tourism (MWCT), pursuant to the Natural Conservation Ordinance No. 147 of 1975. To carry out its responsibilities under the Ordinance, the Ministry has promulgated "Regulations Relating to Nature Conservation" (No. 240 dated 25 August 1976, as amended). Under the Ordinance and the Regulations thereunder, the Minister has devolved to commercial farmer the right to use and benefit financially and otherwise from the wildlife which is found on their farms. These rights are based on the farmer meeting certain conditions, primarily fencing requirements, imposed by the GRN.

There is now a reasonable expectation that the GRN will extend the same principles that govern wildlife utilization and the benefits therefrom on commercial land to communal land in time to permit the orderly accomplishment of the subject project component. First, Cabinet Resolution CS/1212/018 dated December 12, 1991 directs the MWCT and the Ministry of Finance to "seriously investigate the possibility to create a mechanism whereby a percentage of revenue generated by trophy hunting can be channeled back to rural or local people of the area." In response to this Cabinet directive, the MWCT has developed a written "Draft Policy on Wildlife Management and Utilization In Communal Areas". The draft policy proposes that the Natural Conservation Ordinance or the Regulations promulgated thereunder be amended to add a section that would extend to communal lands the same principles that govern wildlife utilization and the benefits therefrom on commercial land.

The draft policy proposes that the right to utilize and benefit from wildlife on communal land would be devolved to a rural community that forms a "conservancy". A conservancy, in the context of communal areas, would be a group of local residents who have formed a legally constituted entity for the purpose of conserving and utilizing wildlife and other Natural Resources on a clearly defined physical area within a communal land.

Each conservancy would have the right to utilize wildlife within the bounds of the conservancy for the benefit of the community. It would be able to decide to allow hunting by members of the conservancy, culling of the game for meat, the sale of animals for trophy hunting, or the live sale of game. It would also have authority to enter into a business arrangement with private firms to carry out some or all of these activities. Finally, the conservancy would have the right to establish tourism facilities within its boundaries or engage in a commercial arrangement with a registered tourism operator to act on its behalf.

It is my understanding that the MWCT also intends to add to its draft policy paper provision for local communities to participate in and benefit from wildlife and other natural resource use in designated national parks and/or game reserves. Such local community participation, however, is not deemed "required" to meet the project purpose because it would only apply to the relatively few and small local communities in communal areas within these designated parks or game reserves and income (i.e. percentage of parks entrance fee and concessions) derived from such participation probably would be relatively insignificant.

Once the draft policy is fully vetted within the MWCT, it will be transformed into a draft amendment to the Ordinance and/or draft regulations. The draft legislation would then be forwarded to the Attorney General's office for legal review and probably to the Ministry of Finance (MOF) for comments. Based on conversations with the Attorney General's Office and Dr. Jones and Mr. Burgh of the MOF, it does not appear that the proposed legislation would conflict with the State Finance Act or other legislation. After this review process has been completed, the draft regulations would be forwarded to the Cabinet for approval. It can be reasonably expected that the Cabinet will approve the proposed legislation, given that it requested the MWCT to investigate means for local communities to derive benefits from Natural resource use. If only the Regulations need be modified, only Cabinet approval (and not an Act of Parliament) is required before the new Regulations can be codified into law. If the Ordinance requires modification, however, then an Act of Parliament would be required after Cabinet approval. In any event, it is reasonable to expect that the draft legislation would be approved by Parliament given that the Cabinet and MWCT both appear to be in support of the proposed legislative changes.

Although it is not clear how long the process for drafting approving and codifying the proposed legislation will take, the MWCT Environmental Planning Unit has proposed that legislative action be taken as a "matter of urgency". It is my estimation, based on conversations with MWCT and the Attorney General's office, that the entire legislative process could be completed in 3 - 8 months, even if an Act of Parliament is required.

2. Obligation Mechanism

It is my understanding that all project funds will be obligated through a grant agreement with the GRN. Thereafter, the GRN would formally concur, by countersigning a PIL or signing PIO's, in AID directly negotiating and executing grant or cooperative agreements with NNF, Rossing and a grantee responsible for provision of technical assistance and training. An action memorandum to the AIDREP should be prepared and signed prior to execution of each NGO grant. Each action memo should discuss relevant issues (i.e. PVO registration, competition, type of assistance instrument, grantworthiness, grant description, grantee contribution, etc.).

3. Grantworthiness Requirement

To be eligible for any form of AID assistance, an NGO must be determined to be "grantworthy." To quality as grantworthy on NGO must be legally constituted under the laws of Namibia and must have adequate financial management, technical and administrative capability to administer the AID grant. To be legally constituted, an NGO must be registered as a Section 21 non profit organization, formed as a legal trust or foundation or must otherwise have legal status under Namibian law.

After discussions with relevant staff of both NNF and Rossing Foundation and a review of documents (Trust Deeds, etc. submitted by them), I have concluded that both NGO's are legally constituted and otherwise appear to be grantworthy (assuming the financial reviews indicate adequate financial management capability). With regard to potential subgrant recipients, it is the primary grantee (i.e. NNF) that must make the determination as to the grantworthiness of a potential subgrantee, subject to any subgrantee selection criteria or USAID subgrant concurrence rights that may be negotiated into the USAID/primary grantee agreement.

According to NNF, all the NGO's participating in the project design process except for NARREC, Small Industries Project, RAP-91 the Council for the Environment and the Rossing Conservation Trails, are legally constituted and otherwise grantworthy. It appears that the five exceptions are not legally constituted nor otherwise have de facto, if not de jure, legal authority to conduct their activities. NNF has indicated that the Council for the Environment is probably defunct.

4. PVO Registration Requirements

An NGO that meets the criteria for registration as a U.S. or indigenous PVO, must be so registered. See AID Handbook 13, Annex 1 to Appendix 4C. The conditions of eligibility of non U.S. PVO's are attached. I have also provided copies to NNF and Rossing foundation. Based on discussions with NNF and Rossing and on review of documentation they have provided USAID,

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it is my view that they both qualify as indigenous PVO's. USAID should proceed with provisional pvo registration. See attached guidelines for provisional PVO registration. USAID is not required to register subgrantees as PVO's.

5. Grant Award Competition Requirement

A). Pursuant to Handbook 13, chapter 2, competition is to be used to the maximum extent practicable for the award of Handbook 13 grants or cooperative agreement to Non-governmental Organizations. A grant or cooperative agreement shall be considered to have been awarded on a competitive basis if the award was made after consideration of applications from two or more potential recipient submitted in response to an invitation for applications issued by AID. Invitations for applications should be announced in appropriate publications to the extent practicable.

The requirement for competition is considered to be met when assistance awards are based on prescribed eligibility requirements and selection procedures for mission funded grants or, cooperative agreements to registered PVO's for umbrella programs, field programs or institutional development strengthening.

B). Competition is not required for:

(a). Assistance award based on an unsolicited application when the project office certifies based on explanatory findings and determinations that the proposal:

(1) Was not solicited by A.I.D.; and

(2) Is unique, innovative, or proprietary, and acceptance would be fair, reasonable, and would represent appropriate use of A.I.D. funds to support or stimulate a public purpose;

(b) Assistance awards for which one recipient is considered to have exclusive or predominant capabilities, based on experience, specialized facilities or technical competence, or based on an existing relationship with the cooperating country or beneficiaries;

(c) Amendments to existing assistance awards;

(d) Follow on assistance award intended to continue or further develop an existing assistance relationship.

(e). Such other circumstances as are determined to be critical to the objectives of the foreign assistance program by the cognizant AA or office Director who reports directly to the Administrator.

C. Applying the above competition requirements and exceptions thereto to the proposed LIFE project, I have the following comments:

(1) Grant or Cooperative Agreement with Rossing Foundation - This proposed grant or cooperative agreement can be exempted from competition if USAID receives an unsolicited application and the project office certifies that the proposal is in fact unsolicited and is unique, etc. In addition, a "predominant capability" argument may be possible.

(2) Proposed Grant to Namibia Nature Foundation

It is possible that a Non competition grant award could be made to NNF under the "predominant capability" exception based on NNF's experience reserving as a conduit for assistance to the proposed subgrantees, it strong relationship with MWCT in the are of natural resource use and management, etc. I have asked douglas Reissner to provide USAID with more detailed information on its "predominant capability"

(3) Grant to NGO for Provision of Technical Assistance/ Training

It is my understanding that USAID plans to compete this award by issuing an invitation for applications.

6. Recipient Audit Requirement

As you are aware, standard provisions of Handbook 3 and 13 grant agreements have been amended to incorporate audit related language necessary to comply with the Inspector General Act of 1988, as amended. Copies of the required language for Handbook 3 and Handbook 13 grants is attached. The new language must be included in all new grants and to agreement amendments that provide for incremental funding.

The changes will require foreign governmental and US and foreign non governmental organizations receiving dols 25,000 per year or more of A.I.D. funds in any one calendar year under a grant or loan to have an independent audit performed of the grant or loan in order to determine whether the receipt and expenditure of the funds provided under the grant or loan are presented in accordance with generally accepted accounting principles and whether the grantee or borrower has complied with the terms of the agreement. The independent Auditor must be selected in accordance with the "guidelines for financial audits contracted by foreign recipients" issued by the A.I.D. Inspector General and the audit must be performed in accordance with the "guidelines". See guidelines attached.

7. Drug Free Workplace and Lobbying Certifications

Attached are copies of these two new requirements. They should be attached to and form part of the project grant agreement with the GRN and the three proposed NGO grant agreements.

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ANNEX I

ENVIRONMENTAL ASSESSMENT

In addition, in many areas the health data available are either unreliable or unavailable. The use of clinic-based data under conditions of low clinic attendance meant that official data dramatically underestimated health problems. It is likely that malnutrition, malaria, immunisable diseases, maternal mortality, tuberculosis, and pregnancy-related deaths are all underestimates. Data on acute respiratory infections, disabilities, and metal illness are not available.

The health sector in Namibia is undergoing perhaps the most rapid transition since independence. Similar to efforts currently underway in the Ministry of Education and Culture, the Ministry of Health and Social Services (MOHSS) has completely revised its approach to social service delivery. In health, Namibia has adopted Primary Health Care (PHC) and Community Based Health Care (CBHC) guidelines. The Official National Primary Health Care/Community Based Health Care Guidelines published by MOHSS (1992: 3) give the following PHC objectives:

- The promotion of proper nutrition and an adequate supply of safe water;
- Maternal and child care, including family spacing;
- Immunization against the major infectious diseases;
- Basic housing and basic sanitation;
- Prevention and control of locally endemic diseases;
- Education and training concerning prevailing health problems in communities and the methods of preventing and controlling them;
- Appropriate treatment for common diseases and injuries; and
- Community participation in health and social matters.

The principles underlying the PHC approach are equity, accessibility, affordability, and community involvement, using a decentralized health administrative system.

Progress, albeit slow, has been made on a few important fronts since independence. Principal among these has been the accelerated program of immunization, covering the six leading preventable diseases. Coverage grew to 26% in 1990, and is expected to have risen to almost 50% by 1992. A National Malaria Control Programme has been launched, and it is projected that the distribution of anti-malaria tablets has increased; the drought this year has led to a secular reduction in incidence, making the measurement of program impact impossible. There are also plans to iodise salt, reducing the serious problem of iodine deficiency disorders (an IDD study is currently underway). A clinic-based growth monitoring system is being implemented. MOHSS is particularly keen to use CBHC strategies to ensure that monitoring also covers those children whose mothers do not take them to the clinic for weighing.

Despite some advances, MOHSS continues to be plagued by two basic problems which have undermined implementation of the PHC approach: 1) lack of sufficient finances; and 2) the slow pace of change in attitudes of health personnel from curative to preventive health care. To counter the first problem, MOHSS has placed particular importance on CBHC, whereby communities mobilize their own resources and labor inputs to achieve health targets. For the latter problem, a PHC Training Unit has been established in the Division of Primary Health Care at MOHSS to train personnel in community-based approaches to health care delivery, and to orientate staff towards believing in the approach.

Education

The legacy of *apartheid* is perhaps most evident in the education sector. In no other sector were the extremes of resource allocation so severe. Table 5 provides some of the basic indicators (MEC, 1990: 22):

Table 4
Selected Indicators of Educational Equity (1989)

Ethnic Administration	1990 per Student Costs	Student/Teacher Ratio	% Teachers w/Std 10
Whites	R5.105	13.3	98.9
Coloureds	R2.021	23.0	74.2
Damaras	R1.723	24.0	34.9
Hereros	R1.578	26.3	14.7
Namas	R1.567	22.4	39.0
Caprivians	R839	28.9	35.1
Kavangos	R814	28.2	10.6
Owambos	R616	37.9	21.3

The World Bank (1991), using Government data, paint an even more bleak picture of 'percent qualified teachers', including 0.9% for 'Caprivi', 2% for 'Ovambo', 3.5% for 'Kavango', and 5.8% for 'Herero'.

Standard 10 pass rates ranged from 93.8% under the "Administration for Whites" to 7.7% under the "Administration for Kavangos", 11.0% under the "Administration for Owambos", and 11.1% under the "Administration for Hereros". Within the first four years of education, half of all those children who enter the system drop out: under the "Administration for Owambos", 40% dropped out after the first year, and of those who did not drop out, almost half had to repeat at least one year. The IEES sector assessment (MEC, 1990) and the World Bank report (1991) on poverty underline the inefficiencies and inequality of the educational system.

Formal education does not appear to discriminate against women, in fact girls have a higher propensity to attend primary school than boys. This situation, however, changes at higher levels of education, with boys more likely to continue into secondary schooling. There is also considerable 'gender-typing' in the formal schooling system, reflecting gender-specific curricula and societal pressures.

Information on non-formal education is even more scanty. Adult illiteracy is estimated at 60%, but may be higher. This figure is higher than all other countries in Southern Africa, including war-torn Angola and Mozambique. Only 30% of all adults have completed four years of schooling (an internationally accepted minimum requirement for literacy skills to be assimilated). Non-formal education programs are estimated to reach less than 3% of the population, and have been run principally by churches and NGOs.

To redress these past inequalities, the government has set about the task of reorganizing the educational system and merging all former ethnic educational systems into one, based on the

Procurement sensative

NATURAL RESOURCES MANAGEMENT PROJECT PAPER NAMIBIA

ENTITLED

LIVING IN A FINITE ENVIRONMENT

(LIFE)

(690-0251.73) AMENDMENT #3 (ANNEXES J - P)

SEPTEMBER 1992

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ANNEX J

ANNOTATED LIST OF NGOs INVOLVED IN NATURAL RESOURCES MANAGEMENT

PROFILE
DESERT ECOLOGICAL RESEARCH UNIT

Type: Private non-governmental educational research institution located in Gobabeb along the Kuiseb River.

Basic Purpose: Scientific investigation of desert ecological systems including plants, animals, insects, geology and weather.

Structure: Independent organization, although physical facilities are provided by the Ministry of Wildlife, Conservation and Tourism.

Accounting: Books maintained by staff and audited by outside auditors.

ADDITIONAL INFORMATION:

DERU plans to expand and diversify its range of environmental, conservation, resource management activities. The present research facility would be expanded to accommodate larger numbers of post graduate scholars, with emphasis on more Namibian scholars, and visiting scientists conducting research. The combined Environmental Education and Namib Visitors' Center to be jointly operated by the local community and DERU. This center would introduce and familiarize day visitors with the ecology of the desert and give them greater understanding of the relationship of man to his environment. A special feature of this center will be the use of technology appropriate for desert conditions. The center would also continue its work with the Ministry of Education and Culture in curriculum development and teacher education.

PROFILE

INTEGRATED RURAL DEVELOPMENT AND NATURE CONSERVATION

Type: Non-Government Organization.

Basic Purpose: To involve local communities in natural resource management and to integrate nature conservation into rural development.

Structure: 10 full-time staff, 50 community game guards (32 in the NW Region and 18 in East Caprivi), all but four of whom are Namibians. Directors: Garth Owen-Smith and Margaret Jacobson.

Current Activities: Three projects in the NW Region: 1. the Community (Auxiliary) Game Guard System, run in conjunction with the various communities and their leaders as well as with MWCT field staff; 2. the Purros Project in conjunction with Skeleton Coast Safaris, which will be expanded into NW Kaokoland; and 3. the Wereldsend Environmental Center, initiated jointly with MWCT and Rossing Uranium Ltd. In the E. Caprivi: a community game guard project and a community development program which includes facilitating a community-run camp site and a dugout canoe trail run by local men for tourists. There is also a pilot project aimed at training Himba and Herero men as professional tourist guides.

Accounting: Swakopmund

ADDITIONAL INFORMATION:

PROFILE

NAMIBIA ANIMAL REHABILITATION, RESEARCH & EDUCATION CENTER (NARREC)

Type: Nonprofit veterinary clinic and educational center located in Windhoek.

Basic purpose: Rehabilitation of injured animals, environmental education, research and tertiary education.

Structure: Independent organization with funding from several donors.

Accounting: Detailed accounts of funds expended are provided to donors. An outside auditor audits accounts.

ADDITIONAL INFORMATION:

The Center carries out activities which benefit wildlife directly and provide "hand on" environmental education for students. It is one of the few research and education facilities for conversation agencies, veterinary scientists, biologists and similar scholars in Namibia. The Center in Windhoek also works closely with the impoverished communities in training persons selected from there for jobs in veterinary medicine and wildlife conservation.

The year 1991 saw 500 students visit NARREC and the pace of visits in 1992 is double last year. There are over 25,000 students in the Windhoek area and the Center hopes to eventually reach all of them. The Center is also planning to have camping facilities to provide the students with a "camping experience" to add to the "hands on" environmental education received.

PROFILE

NAMIBIA DEVELOPMENT TRUST

Type: Trust. Board of Trustees consisting of church leaders, labor officials and the President of the National Students Organization.

Basic Purpose: Community Development in urban and rural Namibia. NDT is also the organizer of the Namibian NGO Forum, a group of locally based NGOs and CBOs.

Structure: Originally created by the Council of Churches of Namibia, now an independent organization with staff of 10.

Accounting: Has its own bookkeeper, audited by outside auditor. Programs are evaluated every six months with report to donors.

ADDITIONAL INFORMATION:

NDT's work in conservation and environment protection is through its activities with communal farmers. NDT sponsors programs for communal farmers which include improvement of livestock, better water utilization, providing technical assistance, training in various agricultural practices, seminars and workshops on marketing, credit and extensive training in environmental protection.

The environmental component of its communal farm work is a carefully constructed program. The NDT program officer and four community representatives are to be sent for conservation courses in Kenya and Zimbabwe organized by Kengo and ENDA. The group will also plan to attend courses on reforestation, with the program officer also participating in courses on land use management. These key people will then conduct seminars in their respective communities and initiate community reforestation and conservation activities.

PROFILE
NAMIBIA NATURE FOUNDATION

Type: Foundation

Basic Purpose: Fund raising and Financial Backstopping for Conservation and Environmental Projects.

Structure: An independent organization operating under a Board of Trustees with substantial support from Alt Hana List Group. It has two full-time employees.

Current Activities: The Foundation has become the nexus of external fundraising for conservation programs in Namibia. It solicits funds and then allocates them among projects accepted by its selection committee. From Oct 1989 to Oct 1991, R 585,000 have been expended on projects and R 2,855,000 worth of projects have been accepted for funding.

Accounting: Accounts are kept in accordance with general business practices and are audited by an outside auditor.

ADDITIONAL INFORMATION:

The activities of the Foundation are growing faster than its organizational ability to keep pace. Moreover, while its facilities and its director are provided without charge by Althaver List, Namibia's largest business group, the director's salary is structured as a loan to the Foundation that is reported annually. Several income generation initiatives are being developed to make the Foundation's financing less dependent on its principal contributor.

The first income source will be the Foundation's corporate membership scheme, "corporate ecology". This will generate discretionary funds for the Foundation. Further along two parallel businesses will be established to complement the work of the Foundation and to provide additional sources of revenue. One of these will be an ecotourism company that will work with the NGOs funded through the Foundation in assembling travel packages for this sector of the tourism market. Another will be a firm to market wild plant products developed by NGOs funded by the Foundation.

PROFILE

NAMIBIA SPORT AND RECREATION CLUB (NSRC/NASOK)

Type: Independent non-profit organization.

Basic Purpose: Upliftment of disadvantaged Namibians through athletics and community service work.

Structure: Chairman and Secretary are volunteers. Board of Directors are also volunteers.

Accounting: Accounts maintained by director

ADDITIONAL INFORMATION:

The NASOK/NSRC "Bioland" project is a multifaceted conservation/environmental awareness campaign designed to get maximum community participation in efforts to improve the natural habitat. The project is composed of several specific actions.

The National "Tidy-up" Operation involves students in community clean-up activities where they are taken to areas that as a group they clean of litter and garbage. "Rhino and Rubbish" is a joint project to educate school children about the destruction of the natural habitats of endangered species by man. "Where's Your Habitat Gone?" is aimed at educating adults about ecological destruction, how to prevent it, how to avoid it, and how to correct it. The Bioland Awareness Campaign is a media and billboard campaign to make people more aware of environmental protection. NSRC/NASOK Bioland Leagues promote environmental concern through sports activities for the students involved in the "Tidy-up" Operation.

While the program has been mainly directed toward the Windhoek area, NASOK/NSRC has recently worked with the Save the Rhino Trust to promote nationwide the concept of community involvement in conservation.

PROFILE

NAMIBIAN ASSOCIATION OF NGOs (NANGOS)

Type: Umbrella nongovernmental organization.

Basic Purpose: Sharing of experiences among the NGO community and pooling resources for specific community projects.

Structure: Composed of 24 member NGOs and 6 Regional Farmers' Associations.

Accounting: Accounts kept by volunteer staff.

ADDITIONAL INFORMATION:

NANGOS is directly supporting a community based project called the Eastern Region Environmental Project. Activities are aimed at pollution control and protection of natural flora and fauna. Specific problems addressed are destructive utilization of brush for firewood and overhunting of game animals. The project is at present organized, operated and funded by concerned teachers from the community. They engage their students in clean-up campaigns and foster better understanding of the natural habitat among the students and community at large. NANGOS would like to build on this initial experience by establishing a permanent center for environmental education that would train key persons, most likely teachers, from other communities that could then initiate similar projects in their home communities.

PROFILE

NAMIBIAN CENTRE FOR HOLISTIC RESOURCE MANAGEMENT

Type: Non-profit organization

Basic Purpose: Holistic management teaches people to pinpoint and address the causes of land, wildlife, and financial deterioration rather than applying "quick fixes" to the symptoms. It is a process of goal setting, decision making and monitoring through which stable environments are created with sound watersheds thereby restoring profitability to agriculture and increasing citizen participation in resources management.

Structure: An independent association of members guided by a board, consisting of full time farmers, and funded currently through membership fees and private sponsors.

Accounting: Outside auditors monitor accounts, while annual progress reports are presented on the Annual General Meeting. Minutes of each Board Meeting are also kept.

PROPOSED PLAN:

The Centre plans to expand and diversify its range of resource management activities especially those concerning communities in the so-called communal areas. This goal can at this stage not be achieved to the fullest extent, because the Centre is currently run by full-time farmers with a wide range of commitments. The time has therefore come to employ a permanent executive officer who would be able to direct the training and community activities, which would be necessary to lead to sustainable resource use. The establishment of an office including support services would be around $120,000, while another $200,000 would be needed for a bridging period of two years till the funding of the Center is stabilized and self sustaining.

PROFILE

NEWVELD VENTURES INVESTMENT AND DEVELOPMENT COMPANY

Type: Private Sector Development Agency similar to a venture

Basic Purpose: Promote economic, financial and industrial development through start-up assistance to community enterprises.

Structure: A non-profit company held by 27 private sector shareholders (donors).

Current Activities: Production of crafts, charcoal, and other products in rural communities and establishing domestic and international marketing channels for those products such as the Craft Center in Windhoek.

ADDITIONAL INFORMATION:

Newveld has established community based industries in several rural areas of Namibia as well as channels for marketing the products of those industries. One example is its work with the Kavango Wood Carvers Union. It brought some of the carvers from the far north of the country to the Namibian Craft Center in Windhoek, also set up by Newveld, to teach them how to better respond to the needs of the market. This improved the cooperative's production by making it more market oriented.

Another venture is production of charcoal which introduces an alternative fuel, reduces deforestation, combats a nuisance plant (invader bush), creates employment and transfer technology (how to make charcoal) to microindustry operators. This successful enterprise is now experimenting with using the "fines" or ash produced in the charcoal process to make charcoal briquettes.

PROFILE
THE NYAE NYAE DEVELOPMENT FOUNDATION OF NAMIBIA

Type: Non-governmental organization working in Bushmanland.

Basic Purpose: Self development of the Ju/'hoan Bushman people.

Structure: Works as a support organization for the Nyae Nyae Farmers Cooperative.

Current Activities: Development of the Eastern Bushmanland community in an effort to allow this unique community to be self sustaining by effective management of its not yet overutilized natural resources.

Accounting: Annual progress report and accounting of expenditures submitted to all donors. Organization's books are audited by an outside CPA firm.

ADDITIONAL INFORMATION:

The Foundation was established in 1981, and its community based counterpart, the Cooperative, in 1986. It represents the best example in Namibia of a sound, functioning NGO/CBO relationship.

The Foundation's own projects to develop the Ju/'hoan community rest on the principle that the community must have a secure land tenure system based on traditional values and customs. This is particularly true since the area has better grazing than neighboring areas. Fear of being dispossessed by the Herero Community or having other encroach on the land drives the community and the Foundation.

PROFILE

THE ROSSING FOUNDATION

Type: Community Development and Educational Organization.

Basic Purpose: Creation of jobs and income generating activities for disadvantaged urban and rural Namibians.

Structure: Originally the social responsibility program of the Rossing Company, it is now a largely independent foundation which has recently expanded its sources of funds to include international donor organizations.

Accounting: Regular evaluation of projects and complete internal accounts audited by outside auditors.

ADDITIONAL INFORMATION:

The Foundation is focused on rural development and as such is directly related to the concept of community based natural resource management. One of its programs, Conservation Trails, constitutes an "outdoor laboratory" for environmental education. The Director of the Trails program was also the driving force in the construction of an environmental education center at Wereldsend that is managed by another NGO, Integrated Rural Development and Nature Conservation and has been a leading force in environmental education.

PROFILE

THE SMALL INDUSTRIES PROJECT

Type: Non-governmental organization based at Brakwater.

Basic Purpose: Development and promotion of renewable energy technology. Training and creation of informal sector employment opportunities.

Structure: A project of the Methodist Church but with an independent constitution.

Current Activities: Development and promotion of fuel-efficient wood-burning stoves for domestic and institutional uses. Training of domestic stove manufacturers.

Accounting: Bookkeeping is subcontracted to a professional accountant and is subject to an independent, annual audit.

ADDITIONAL INFORMATION:

The Small Industries Project wishes to expand and diversify its activities. However, the financial security of the project will decrease considerably in 1993 when the principal donor ends its support. The Small Industries Project plans include:

a) Development, promotion, training and extension with regard to fuel-efficient wood-burning domestic stoves that are constructed out of local natural resources such as clay.

b) Development and promotion of biogas digesters to power water pumps, refrigerators and stoves.

c) Development and promotion of fuel-efficient wood-burning stoves that both cook food and heat water for bathing and washing.

d) Development and promotion of fuel-efficient wood-burning ovens for rural and urban bakeries.

e) Promotion of small sheet-metal industries to produce pots, pans, jugs, buckets, lanterns, lamps, etc.

The Small Industries Project will also continue to promote and train people in the production of the successful metal stoves that the project has already developed.

PROFILE

THE SAVE THE RHINO TRUST

Type: Non-governmental organization working with communities in Damaraland.

Basic Purpose: Conservation of certain endangered species, specially rhino and elephant, through community-based protection schemes.

Structure: Independent organization with main center located in Damaraland.

Current Activities: Several programs focused on protecting wildlife by directly involving the local inhabitants through game wardens and the establishment ecotourism camping facilities.

Accounting: Audited, annual financial statement is provided to all donors and other interested parties.

ADDITIONAL INFORMATION:

The Trust has grown faster than its administrative structure can support. Its annual expenditure on field activities has grown from R 100,000 to R 320,000 and it now has a field staff of 48. Lack of adequate institutional infrastructure - permanent administrative and promotional staff, office, communications and publication equipment, and vehicles - impedes its ability to operate effectively and is the source of concern among the organization's leadership and donors.

PROFILE

WILDLIFE SOCIETY OF NAMIBIA

Type: Non-profit organization.

Basic Purpose: Conservation of Wildlife and sustainable utilization of natural resources.

Structure: Membership of 450-500 support organizations and its work. Three centers - Windhoek, Swakopmund, and Tsumeb.

Current Activities: Conservation and protection of wildlife through education, assistance to community based projects and advocacy. Distributed 1000 tree seedlings to bushmen in the north and will buy back trees when they reach commercial size. Set up the recycling of glass operation in Swakopmund. Publishes "Roan News" and holds monthly series of talks.

ADDITIONAL INFORMATION:

The Society believes that the main need in environmental protection and conservation in Namibia today is to position people on site in the communities to deliver advice, assistance, education and guidance. It proposes doing this with full time environmental education officers to carry out its programs.

ANNEX K

ZOOLOGICAL SOCIETY OF SAN DIEGO RESEARCH PROPOSAL

DIRECTORATE OF WILDLIFE CONSERVATION AND RESEARCH

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1992-08-02

Dear Richard

COOPERATIVE RESEARCH IN ETOSHA NATIONAL PARK

This letter is to confirm that the USAID project "Changing large mammal abundance in the Etosha ecosystem and its impact on conservation and economic development in Namibia" is a cooperative research project by the Zoological Society of San Diego and the Etosha Ecological Institute of the Ministry of Wildlife, Conservation & Tourism. We have a long-term agreement with the ZSSD regarding cooperation in the fields of research, training and funding, and the USAID project fits this agreement perfectly. Not only will staff and associates of the ZSSD be involved in this project, but research staff in Etosha will devote the bulk of their time in the next 3-5 years on this project.

We have an excellent working relationship with the ZSSD, and are looking forward to participate in the USAID funded project as equal partners.

Thank you again for making this project possible.

Yours sincerely

Dr. M. Lindeque (Head: Etosha Ecological Institute)

All correspondence to be addressed to The Director: Wildlife Conservation and Research
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CHANGING LARGE MAMMAL ABUNDANCE IN THE ETOSHA ECOSYSTEM AND ITS IMPACT ON CONSERVATION AND ECONOMIC DEVELOPMENT IN NAMIBIA

A Biodiversity Project

Formal Proposal to USAID, Namibia Mission

Richard Shortridge, Jr., and Mark Johnson

5 Dec 1991

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SUMMARY

The government of Namibia's intent on developing self-sufficiency through a wildlife- and tourist-based economy. The following program is designed to enhance Namibia's efforts to achieve their goal through sustained uses of wildlife. Etosha National Park is a critical link in this development scheme. Etosha is Namibia's centerpiece for attracting international tourists, the nucleus for economic development on adjacent communal and private lands, and the only realistic source of wildlife for repopulating many depleted areas throughout Namibia, especially northern communal areas. However, the continued decline of Etosha's plains wildlife compromises international tourism, restoration of wildlife populations, and a wildlife- and tourist-based economy. The proposed 5 year program addresses these problems by (1) identifying biological factors responsible for the declining plains wildlife populations; (2) implementing strategies that increase the abundance of plains animals necessary to sustain a thriving tourism industry; (3) collecting socio-economic information to determine what local people and tourists want from wildlife and wild lands; (4) beginning the restoration of wildlife in some depleted areas and augmenting wildlife in other areas to benefit rural people; and (5) training Namibians in methods required to continue facets of the program, promote self-sufficiency, and maintain biodiversity.

THE PROBLEM

Etosha National Park is Namibia's primary international tourist attraction, principally because Etosha has supported large herds of plains animals and their predators. Etosha is also attractive because it is home for five conspicuous endangered or threatened species (black rhino, elephant, Hartmann's zebra, black-faced impala, and cheetah). Thus, the preservation of Etosha as a large intact ecosystem is critically important for maintaining international tourism and biological diversity.

A strong wildlife- and international tourist-based economy in Namibia is dependent on healthy plains wildlife populations in Etosha. Most foreign currency derived from tourism in Namibia is dependent in some way on Etosha. Wildlife populations in Etosha are potentially the nation's major source of animals to repopulate areas where humans have dramatically reduced or extirpated wildlife, such as most communal lands. Restored wildlife populations can be the foundation for additional tourism, protein resource, game ranching, and wildlife-based cottage industries.

A major impediment to achieving a wildlife- and tourist-based economy is the decline of most major wildlife populations on Etosha's plains, which will inevitably compromise Namibia's tourist industry and the potential restocking of areas depleted of wildlife. The plains populations include wildebeest, plains zebra, springbok, gemsbok, eland and the carnivores and scavengers that depend on them as food sources such as lions, cheetahs, hyaenas, jackals, and vultures. To date, no

comprehensive, systematic study of factors causing the decline of plains wildlife has been initiated. Details on the declines are in Appendix 1.

A second impediment to achieving a widespread wildlife- and tourist-based economy in rural Namibia is the low density of wildlife on communal lands. Drought, competition with domestic stock, and unrestrained harvests of wildlife decimated the wildlife populations from the 1960's through the early 1980's. Restoration of wildlife populations on communal lands must occur before rural Namibians can derive substantial sustenance and economic benefits. Through appropriate assessment and management, Etosha's wildlife populations can be the source for restocking these areas. However, prior to restocking, rural people must participate in the development of wildlife restoration plans that will result in sustainable wildlife use. Currently, several opportunities for restoration exist in Owamboland and Kaokoland. Rural people must be the primary conservators and beneficiaries of these wildlife programs, otherwise attempts at restoring wildlife will fail (Cumming and Taylor 1989, Owen-Smith and Jacobsohn 1990).

Clearly, there is a need to understand what factors have caused the decline in plains wildlife in Etosha and how managers can alter these factors so that the plains ecosystem promotes a wildlife-based economy in Namibia. Adapting this information and applying it to potential restocking of rural lands affords an opportunity to provide a model system for wildlife conservation/management and to directly influence rural socioeconomics through the use of natural resources from a park.

PROGRAM GOALS

The overall goal is to contribute to Namibia's economic self-sufficiency through diverse and sustained uses of wildlife and, in the process, enhance and maintain Namibia's biological diversity. This will be accomplished by:

1) Identifying factors causing Etosha's core plains wildlife populations (wildebeest, plains zebra, springbok, and gemsbok) to decline or remain at low densities.

2) Developing conservation strategies that maintain or increase Etosha's plains animals to support a thriving tourist industry and restore wildlife in depleted portions of Namibia to benefit local people through meat production, tourism, and cottage industries.

3) Training Namibians in conservation methods that sustain wildlife-based economic development and conservation.

PROGRAM DESCRIPTION

A proposed [illegible] economic development, environmental education, and biological diversity in Etosha and adjacent areas. Technical details on phases 2 and 3 are presented in Appendix 1.

Phase 1: Compiling A Historical Perspective of Wildlife Population Dynamics—Year 1

We will continue our comprehensive analysis of past data on plains wildlife populations in Etosha, adjacent study areas, and the communal lands. Published and unpublished historical data and reconnaissance trips are being used to describe population sizes, trends, and potential factors limiting population growth of plains zebra, wildebeest, springbok, and gemsbok.

Significance: A historical perspective is essential for understanding how past events shaped the ecology and economy of the Etosha region and for designing new research and management programs.

Phase 2: Establishing Ecological Monitoring Programs—Years 1-2

We will establish a monitoring system for parameters that describe the dynamics of plains zebra, wildebeest, springbok, and gemsbok populations, and their foods, predators, and diseases. Numbers of plains zebra, wildebeest, springbok and gemsbok will be estimated from annual aerial surveys, and their movements, habitat use, areas of high mortality, and mortality rates will be estimated from ground surveys and from tracking radio-collared animals. Predator numbers will be estimated by techniques that rely on marking and resighting many individuals in the populations (White et al. 1982, Stander 1991). Predator movements, kill rates, and species killed will be monitored by following radio-collared predators (Gasaway et al. 1989, 1991; Stander 1992). Diseases affecting the animals will be monitored from blood and other tissue samples obtained from captured or dead animals.

Significance: These scientifically sound ecological monitoring techniques provide information essential for developing comprehensive wildlife and wildlife-based economic programs in the Etosha region.

Phase 3: Determining Factors Preventing Growth of Plains Zebra, Wildebeest, Springbok, and Gemsbok Populations--Years 1-5

In this phase we collect extensive data needed to assess the roles nutrition, rainfall, disease, predation, and removal of animals by humans play in causing declines and preventing growth of populations of the four plains wildlife species. Hypotheses stating possible causes for declines or lack of population growth will be rigorously tested using scientific methods, statistical procedures, and computer modeling. The end product will be an understanding of what factor(s) regulate animal abundance and which factor(s) must be altered for populations to grow.

Significance: This information is critical for building management strategies that allow plains animals to increase in numbers and for establishing minimal/maximal removal rates of plains animals for translocation from Etosha to other areas.

Phase 4: Training Namibians--Years 1-5

Enhancing Namibians' skills in natural resource management is essential for developing a sustainable wildlife- and tourist-based economy. To help achieve this end, a cooperative training program is being developed among the University of Namibia (U of N), the University of California (U of C) at Santa Cruz, Etosha Ecological Institute, and the Zoological Society of San Diego. Our emphasis will progress from basic education towards training wildlife professionals. Initially, we will focus on upgrading the education of outstanding Ministry employees to qualify them for advancement and allow entry into the U of N's Wildlife Conservation Management Program, a program that trains senior rangers. We will participate with environmental education centers in Etosha, Ovamboland, and Namib-Naukluft Park and instruct U of N undergraduate Life Science students in research and management methods during their field trips in Etosha. Following the inception of the U of N's Honors degree program in 1993, we will support 2 Honors students per year that undertake field projects in Etosha. We will support two M.Sc. students for 2 years when the U of N starts a M.Sc. program in 1994. The U of N will not have a Ph.D. program in the near future, but qualified Namibian students may enter the Environmental studies program at the U of C and will be given some support in Etosha. Namibian students will also learn research and management methods in a field setting by working along side our project staff; ultimately they should develop the skills needed to replace foreign ecologists.

Significance: Only by training Namibians in conservation methods will Namibia build self-sufficiency in conserving its natural resources and developing a wildlife- and tourist-based economy.

Phase 5: Assessing Attitudes Towards Conservation and Economic Development—Years 3-5

We will develop an understanding of rural people's problems with and attitudes toward wildlife, its uses and conservation. A socio-economic survey of a cross-section of people living on communal lands near Etosha will be the basis of the assessment (Infield 1988). The end product will be recommendations on how economic development, conservation, and people's aspirations can be best integrated.

Significance: Recommendations resulting from this survey are critical to guide future conservation, economic, and community development programs in the buffer zone around Etosha.

Phase 6: Developing and Implementing Conservation and Economic Strategies—Years 1-

The results of Phases 1-5, along with practical experiences from programs in Zimbabwe, Kenya, and Botswana, will be used to assist communities, NGO's, private ventures, and government in developing a suite of integrated conservation and economic strategies for Etosha and the surrounding area. Emphasis will be on tactics that maintain or increase plains wildlife in Etosha and the adjacent buffer zones and that yield a variety of sustainable wildlife use programs and diversify tourism. A pilot program of wildlife- and tourist-based economic development will begin in year 1 in the buffer zone adjacent to northwestern Etosha. This pilot program will initially include the restocking of wildlife and the development of water points exclusively for wildlife. The relatively small number of animals needed for restocking during the pilot project will not compromise Etosha's populations prior to population increases. Rural people living near Etosha will play a major role in determining program goals especially in the buffer zone. Buffer zone programs will be designed to benefit local residents and their enthusiastic participation and eventual control of programs is essential. Full implementation of conservation and economic programs is a long-term project for many organizations and is beyond the scope of the present proposal. Workshops will be held in years 3 and 5; the objectives will be to exchange information that enhances wildlife based development programs and specifically to help develop a suite of management options for the Etosha region.

Significance: This is the phase where conservation and economic benefits begin to accrue to the people of Namibia and newly trained Namibians participate in developing a sustainable wildlife- and tourist-based economy.

EXPECTED RESULTS AND RELATIONSHIPS TO OTHER PROGRAMS IN NAMIBIA

Results of the proposed 5-year program will help induce and develop a sustainable wildlife- and tourist-based economy in Namibia. Expected tangible results of the program are (1) helping to

secure Etosha's future as a national park by putting in place conservation strategies that maintain or increase Etosha's wildlife diversity, its use, and strengthen its international tourist appeal; (2) understanding rural people's problems with and attitudes toward wildlife use, protected areas, and conservation and making recommendations for integrating rural people's aspirations, conservation and economic advancement; (3) assisting in developing sustainable wildlife use programs and tourism in Etosha and adjacent communal lands; (4) setting the stage for larger scale wildlife restocking programs in Namibia once Etosha's populations are increasing; (5) training Namibians in research and conservation methods; and (6) maintaining biological diversity.

The above results will be of direct use in other on-going and planned wildlife- and tourist-based economic and conservation programs. The following are some examples of how such information has and can be used in Namibia. 1) Sustainable wildlife use and tourism is currently being planned along a buffer zone on communal land adjacent to Etosha's west and north boundaries. Participants include local communities, private ventures, and the Ministry of Wildlife, Conservation and Tourism. The influence of Etosha would be extended beyond its boundaries and in some areas semipermeable boundaries would allow wildlife to leave the park. The goals include restoring wildlife and wildlife management authority to local communities thus allowing them to benefit directly from Etosha and their own conservation practices, restoring and maintaining biological diversity in local areas, and increasing Namibia's tourism and foreign exchange. Long-term goals include diverse forms of tourism, meat production, subsistence and trophy hunting, sale of live game, development of cottage industries, and employment. Results of our proposed program could be applied in this buffer zone development. 2) A wildlife use program in Damaraland now provides meat and animal products to communities on communal lands. This is a joint venture of local communities, government, private donors, and NGO's. Restocking Etosha's wildlife to other portions of Damaraland and to Kaokoland and Ovamboland will eventually allow the expansion of such programs. 3) Commercial game farming can be accelerated as breeding stock of native species becomes available from Etosha's increasing wildlife populations. These farms generally cater to foreign markets and provide wildlife viewing, trophy hunting, and meat for local and export markets. 4) Environmental education centers such as those planned in Etosha, Owamboland, and Namib-Naukluft Parks and the University of Namibia's Life Sciences and Wildlife Conservation Management programs will receive classroom instruction, written material, and field training of students from our proposed program.

SIGNIFICANCE TO ECONOMICS AND CONSERVATION

Namibia is in the process of land reform, and decisions made during the next few years may dictate land use, economic development, and conservation options for the future. Unemployment and poverty are major causes driving land reform efforts. An urgent need exists to foster wildlife- and tourist-based economic development and conservation. Integrated conservation and economic

enhancement programs must be proposed and initiated before they are precluded by programs that commit to other land use schemes. Etosha National Park can be the immediate basis for expanding wildlife-based economic development because a superb infrastructure exists and is secure, the park is large (22,270 km²), and its diverse habitat can support large numbers of animals and tourists. Also, diverse uses of wildlife along the borders of the park can be rapidly developed, thus offering economic options on adjacent communal lands where few opportunities now exist for rural people. From a long-term perspective, Etosha can supply wildlife to restock other depleted communal lands. But, to sustain these Etosha-based programs declines in some of Etosha's wildlife populations soon must be reversed. If declines continue, opportunities for sustainable wildlife-based economic development and conservation may be irreparably compromised.

We predict that the continued decline of plains animals in Etosha will have dyer economic and conservation consequences in much of Namibia. Continued declines will most likely preclude the development of a significant tourist- and wildlife-based economy. This conclusion is based on: 1) A survey of visitors indicated Etosha and its wildlife was the primary factor attracting foreign tourists (Ministry of Wildlife, Conservation and Tourism). 2) About 80% of visits to other government-operated parks, reserves, and recreation areas were spin-offs from their visit to Etosha. 3) Etosha generates about 50% of all revenue spent in government-operated parks, reserves, and recreation areas. 4) For each dollar spent by foreign visitors in these government-operated areas, visitors, attracted to Namibia by Etosha, spent $10 elsewhere in Namibia; these visitors spend about US$100,000,000 per year. A significant portion of this amount is at risk.

The loss of foreign exchange from tourism will have widespread economic consequences. 1) Tourist dollars that help support rural and urban economies will be lost. 2) The loss of tourists in Etosha will close the door to additional economic options on adjacent communal lands where there are few economic options to subsistence living. 3) The loss of tourist dollars will also reduce the incentive for Namibians to maintain or increase wildlife. This situation may fuel a downward spiral in wildlife numbers and economic growth--fewer animals results in fewer tourists--fewer tourists result in less effort to conserve animals. Eventually, wildlife and wildlands may be replaced by domestic stock and human settlements. There is a precedent; about one-half of Etosha was removed as recently as 1970--most was used for human resettlement. Pressure to repeat this for western Etosha continues. If Etosha cannot pay its way and offer direct benefits to local rural people and the nation as a whole, all or part of it may be lost.

BUDGET JUSTIFICATION

The proposed budget is in Table 1 (page 1[illegible]). Values are in US dollars and budget years 2-3 are adjusted for annual inflation.

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The proposal budget is divided into three source categories: the Zoological Society of San Diego (ZSSD), United States Agency for International Development (USAID), and other funding agencies (OTHER). Agencies providing (or potentially providing funding) in the OTHER category are the US Fish and Wildlife Service, Pew Charitable Trust, Alton-Jones Foundation, Frankfurt Zoological Society, Center for Field Research (Earthwatch) and the Ministry of Wildlife, Conservation and Tourism of Namibia. This is a 5-year research program; funds requested from USAID would be paid during the first 3 years.

Funds from the Zoological Society of San Diego are committed through FY 1994. From FY 1990 through FY 1994 (a five-year period) the ZSSD will have committed over $500,000 to this and other projects with Etosha National Park as the focal facility. (The FY 1991 commitment of the ZSSD is given as an example in Table 1.) In the proposed budget an asterisk (*) in the OTHER category indicates that these funds are currently committed from one or more of the previously named sources.

Specifically, the annual budgets are divided into five sub-headings: LABOR, SUPPLIES, EQUIPMENT, SHIPPING, AND TRAVEL. Equipment is defined as single items with a cost of at least $1,000 and a usable life of three years. Parts (e.g., pumps, solar panels) to be installed by outside contractors are included as supplies in Owamboland operational/supply category.

LABOR: With the exception of one principal investigator (PI), the ZSSD and Ministry assume the PI salaries. The three principal investigators have combined for over 12 years of field work in Etosha (Lindeque, 8 years; Gasaway, 2 years; Phillips, 2 years). The PI's have published over 100 scientific articles including biodiversity (Lindeque), biomass estimates (Lindeque, Gasaway, Phillips), production of wildlife as native food resources (Phillips, Gasaway), and conservation education (Phillips). Dr. Lindeque is a member of the IUCN African elephant and rhinoceros specialist group. Dr. Phillips is a member of the Society for Conservation Biology elementary education group, an advisor to the State of California science curricula task force, and an advisor to the National Academy of Sciences (USA) alternative food resource program. Dr. Gasaway conducted research in Alaska that identified the factors regulating moose populations and their predators and developed wildlife utilization/management programs. The three principal investigators will be involved in, and responsible for, all aspects of the proposed studies.

The request for labor from USAID accounts for 15% of the cost of the entire proposal. The positions requested include technical and clerical support staff to collect, transpose, and analyze data. The salary of Ministry personnel identified as collaborators in Appendix 3 will be assumed by the ministry. The other collaborators, Garth Owen-Smith and Dr. Margaret Jacobsohn, are internationally-known ethno-sociologists and conservationists, and are essential for assessment of the attitudes of rural people toward sustained wildlife utilization. Funds are requested from USAID to support a percentage of their salaries. Throughout the phases of this proposal, the principal investigators will coordinate all projects, but expert collaborators (e.g., Mr. Owen-Smith) will establish the most

appropriate agenda for their portions of the studies (e.g., involvement of rural people with wildlife). USAID is requested to assume costs of a 1-2 month constract with a statician.

SUPPLIES. Over $800,000 in consumable supplies are required to complete the program. Fifteen percent of the supply budget is covered by secured funds, whereas 68% is requested from USAID. Supplies are contained under four major categories: immobilization, radiotracking, Owamboland, and operational.

Immobilization and analysis includes costs to determine the pregnancy rate and nutritional state of animals, and to radiocollar selected individuals. These costs are assumed by the ZSSD as part of its continued effort to support basic management at Etosha.

Radiotracking supplies include the cost of collars required to conduct a three-year analysis of the contribution of anthrax to the mortality of hoofed wildlife, especially zebra, and to assess the impact of predation on pery population. Such knowledge will be essential when animals are translocated to communal areas, such as Owamboland, and for building management strategies for the Etosha region.

Owamboland and Kaokoland, especially tracks of land near northwestern Etosha, have been designated as the site for initial reintroduction of game. This area is termed Owamboland in the budget. Supplies for Owamboland include fence materials for corrals, solar water pumps, and drilling and maintenance of bore holes. The ZSSD has provided supplies for initial bore holes and fencing in FY 1991. Requests for additional Owamboland funds from USAID to supplement ZSSD and OTHER funds are basically restricted to FY 1992.

Operational supplies include fuel and maintenance costs for vehicles and aircraft, office supplies, and computer services. As we are requesting little equipment from USAID, the majority (89%) of the operational supplies to maintain that equipment are being requested.

EQUIPMENT: Eight percent of equipment items, including six vehicles and an airplane, are being funded by the ZSSD and OTHER sources. As in the past, equipment will remain the property of the ZSSD but for specific use in approved projects involving Etosha National Park. Thus, all equipment will remain in Namibia with the exception of the airplane, which will retain a United States registration.

SHIPPING: No shipping costs for equipment are requested from USAID. ZSSD and OTHER sources are covering the transport of vehicles, the airplane, and larger computer equipment.

TRAVEL AND PER DIEM:

Approximately $92,000 are requested for travel costs throughout the study period. Of the total, 37% is assumed by the ZSSD. USAID is requested to pay 52% of the travel and per diem costs.

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FY 93

		ZSSD	USAID	OTHER
LABOR	PI	14,560 (25%)		
	PI	13,520 (50%)	17,600 (50%)	
	PI			1,980 (10%)
	TECHNICIAN 2	12,480 (50%)		
	TECHNICIAN 1		11,000 (100%)	11,000 (100%)
	TECHNICIAN 2		18,700 (100%)	
	CLERICAL		9,900 (100%)	
	MANAGEMENT STUDENTS		9,350 (200%)	
	CONSULTANTS		22,000	30,160 (150%)
	GRAND STUDENTS			22,880
	TRAINEES			12,000
	TEACHER			13,520
	SUBTOTAL	40,560 (18%)	88,550 (40%)	91,540 (41%)
SUPPLIES	IMMOBILIZATION AND ANALYSIS	17,680		
	RADIO TRACKING		80,000	10,400
	OWAMBOLAND	22,880	4,160	26,000
	OPERATIONAL		96,500	12,480
	SUBTOTAL	40,560 (15%)	180,660 (67%)	48,880 (18%)
EQUIPMENT	OPTICALS			520
	VEHICLES	37,500		
	COMPUTER/ SUPPORT	3,950		
	NIGHT SCOPE			7,800
	TENT CAMP		13,000	
	SUBTOTAL	41,450 (66%)	13,000 (21%)	8,320 (13%)
SHIPPING		8,500		2,080 (20%)
TRAVEL & PER DIEM		11,650 (38%)	15,800 (52%)	3,120 (10%)
TOTAL		142,720 (24%)	298,010 (50%)	153,940 (26%)
GRAND TOTAL FY 93		594,670		

FY 94

		ZSSD	USAID	OTHER
LABOR	PI	15,150 (25%)		
	PI	14,070 (50%)	19,360 (50%)	
	PI			2,060 (10%)
	TECHNICIAN 2	12,980 (50%)		
	TECHNICIAN 1		12,100 (100%)	12,100 (100%)
	TECHNICIAN 2		20,570 (100%)	
	CLERICAL		10,900 (100%)	
	MANAGEMENT STUDENTS		10,300 (200%)	
	CONSULTANTS		24,200	31,380 (150%)
	GRAND STUDENTS			23,800 (200%)
	TRAINEES			13,200 (400%)
	TEACHER			14,070 (100%)
		42,200 (18%)	97,430 (41%)	96,610 (41%)
SUPPLIES	IMMOBILIZATION AND ANALYSIS	22,720		
	RADIO-TRACKING		65,000	10,820
	OWAMBOLAND	23,800	4,330	
	OPERATIONAL		105,000	12,980
		46,520 (19%)	174,330 (71%)	23,800 (10%)
EQUIPMENT				
	SUBTOTAL	0	0	0
SHIPPING		1,080 (33%)		2,160 (67%)
TRAVEL		12,120 (36%)	17,900 (54%)	3,250 (10%)
TOTAL		101,920 (20%)	289,660 (56%)	125,820 (24%)
GRAND TOTAL FY 94		517,400		

Table 1: Proposed Program Budget

FY 91		ZSSD		FY 92		ZSSD		USAID		OTHER	
LABOR	PI	26,000	(50%)	LABOR	PI	14,000	(25%)				
	PI	6,000	(25%)		PI	13,000	(50%)	16,000	(55%)		
	PI				PI					1,900	(10%)
	TECHNICIAN 2	5,400	(50%)		TECHNICIAN 2	6,000	(25%)				
	TECHNICIAN 1				TECHNICIAN 1			10,000	(100%)	10,000	(100%)
	TECHNICIAN 2				TECHNICIAN 2			17,000	(100%)		
	CLERICAL				CLERICAL			9,000	(100%)		
	MANAGEMENT STUDENTS				MANAGEMENT STUDENTS			8,500	(200%)		
	CONSULTANTS				CONSULTANTS			20,000	(150%)	29,000	(26%)
	SUBTOTAL	37,400				33,000		80,500		40,900	
SUPPLIES	IMMOBILIZATION	10,700		SUPPLIES	IMMOBILIZATION AND ANALYSIS	19,000					
	DRUGS & EQUIPMENT				RADIO-TRACKING			97,000		30,000	
	GLASSWARE/PLASTIC	2,400			OWAMBOLAND	22,000		29,000		25,000	
	OWAMBOLAND	22,000			OPERATIONAL			89,000		12,000	
	TOOLS	1,400									
	SUBTOTAL	36,500				41,000	(13%)	215,000	(67%)	67,000	(21%)
EQUIPMENT				EQUIPMENT	TENT CAMP			12,000			
					OPTICALS	2,500					
	COMPUTER	3,800			VEHICLES	37,500					
	TRAILER	8,500			COMPUTER/SUPPORT	3,500					
					TRAILER	8,000					
					AIRPLANE					54,000	
					RADAR ALTIMETER			3,000			
					GPS			4,000			
	SUBTOTAL	12,300			SUBTOTAL	51,500	(41%)	19,000	(15%)	54,000	(43%)
SHIPPING		11,400		SHIPPING		7,500	(100%)				
TRAVEL		13,400		TRAVEL & PER DIEM		11,200	(40%)	14,000	(50%)	3,000	(11%)
TOTAL		111,000				144,200	(23%)	328,500	(52%)	164,900	(26%)
GRAND TOTAL FY 91		111,000			GRAND TOTAL FY 92	637,600					

APPENDIX 1 TECHNICAL INFORMATION

THE DECLINE OF ETOSHA'S PLAINS WILDLIFE

In Etosha, surveys and observation indicate numbers of wildebeest, plains zebra, springbok, gemsbok, eland, lions, and cheetahs have dramatically declined since the 1960's or early 1970's. Wildebeest declined from 25,000-30,000 in the 1950's and early 1960's to about 2,200 in 1978 and have remained low through 1990. Zebra declined from about 15,000 in 1974 to about 5,000 by 1990 (Berry 1981b; Berry and Louw 1982a; Lindeque and Lindeque 1987, in review). Gemsbok and springbok declined lesser percentages between 1982 and 1990 (Lindeque and Lindeque 1987, in review). Lions declined from about 500 during the mid 1970's (Berry 1981a) to 270-340 by 1989 (Stander 1991) and about 250-300 by 1991 (L. Scheepers, unpubl. data). Cheetahs, commonly observed during the 1970's, were rarely seen by the mid 1980's (H. Berry, pers. commun.). Similarly, black-backed jackals declined during the 1980's (M. Lindeque, pers. obs.). Population trends are not available for other large carnivores, but their populations also may have followed a downward path.

Several studies have begun to address the causes of the downward trend in zebra and wildebeest populations. Ebedes (1976) suggested anthrax was a major source of mortality for these species during 1966-74. Berry (1981a) concluded anthrax and lion predation were two of the main factors limiting population growth during 1974-78 and that nutrition was not limiting. Preliminary results of a study on plains zebra population dynamics indicate population growth during 1986-91 is limited by high mortality among foals and adults (W. Gasaway and K. Gasaway, unpubl. data); the major causes of mortality have not been defined. Until survival improves, the zebra population will remain at low, and possibly declining, densities. The study of anthrax ecology and its effect on wildlife in Etosha has continued (Winter 1985; Turnbull et al. 1986, 1989; P. Lindeque, unpubl. data), but the degree that anthrax limits population growth remains unknown. Little is known about causes of declines in large carnivores, although food limitations and human killing of predators that leave Etosha probably are major factors.

During the mid 1980's, increased emphasis was placed on evaluating predation as a factor limiting population growth of large grazing mammals. Preliminary information on lion and spotted hyaena demography, prey preference, and kill rates were obtained (H. Berry and L. Scheepers, unpubl. data; Gasaway et al. 1989, 1991; Stander 1991, 1992). Lions were formidable predators on all plains prey populations, killing about 4,400 kg of prey/year/lion (Stander 1992). Recognizing that lion predation may be an important limiting factor, Orford et al. (1988) developed a technique to reduce lion numbers through contraceptive implants in lionesses; this technique has not been used to manage lion numbers in Etosha. Hyaenas were major predators also, killing about 1,400 kg of prey/year/hyaena; plains animals were a large part of that total (Gasaway et al. 1991). Despite

these studies the effects of vegetation on herbivore populations are inadequately understood for developing effective management strategies in Etosha.

DESIGN AND METHODS FOR PHASES 2 AND 3

This section is a detailed description of Phases 2 and 3 of the proposed program and contains some technical terms that will be unfamiliar to readers not versed in ecological jargon. Use of these terms make this section clearer and more concise to the ecologists who will evaluate our approach. We have kept the jargon to a minimum for everyone's convenience. The one term we will define at this time is ungulates—hoofed mammals. We use this to collectively refer to plains zebra, wildebeest, springbok, and gemsbok.

PHASE 2: Establishing Ecological Monitoring Programs—Years 1-2

We will establish monitoring programs for parameters that describe the dynamics of the four plains ungulate populations and their foods, predators, and diseases. During Phase 3, these and other data will be used to identify the factors that limit ungulate population growth.

<u>Ungulate Population Sizes and Trends</u>: Ungulate numbers will be annually estimated during the wet season when ungulates are concentrated and highly visible on a small portion of the plains. Zebra and wildebeest population sizes will be estimated by the number counted during an intensive search from a Piper Super Cub aircraft; large groups will be photographed from the air and counted later (Berry 1981b, Norton-Griffiths 1978). Springbok will be estimated using the two-stage stratified random transect sampling method (Gasaway and Gasaway 1990). Gemsbok is the most difficult species to census. Gemsbok in zebra and wildebeest habitats will be counted during zebra and wildebeest surveys; in the remainder of Etosha, either aerial stratified random transect sampling will be used throughout or intensive aerial surveys will be restricted to limited areas.

Population trends and finite rates of change (lambda) will be estimated from population estimates (Caughley 1977, Gasaway et al. 1986). Juvenile and adult ungulate mortality rates will be estimated from pregnancy, recruitment, and finite rate of change estimates (Sinclair 1974ab, Bergerud and Elliott 1986, Gasaway et al. 1992).

<u>Ungulate Birth and Mortality Rates</u>: Birth rate will be estimated annually from pregnancy rates based on hormones in urine and feces of 100 females for each species (Safar-Hermann et al. 1987, Hessler et al. 1990).

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Juvenile mortality rates will be estimated by two methods. [illegible] rates for each species will be estimated from the difference between the proportion of pregnant females and the proportion of females with offspring. Females with offspring will be estimated yearly from sex and age composition surveys conducted from the ground. (2) The timing, causes, and rates of juvenile mortality will be estimated from radio-collared new-born animals during one or two years for springbok and wildebeest (Gasaway et al. 1992). Animals will be fitted with an expanding collar containing a motion-sensitive radio (Ballard et al. 1979, Schwartz et al. 1983, Gasaway et al. 1992). When the radio is motionless for one hour the signal pulse rate doubles, indicating a probable mortality.

Adult mortality rates will be estimated from (1) mortality rates of radio-collared ungulates (Pollock et al. 1989) and (2) finite rate of population change (lambda) and recruitment (Bergerud and Elliott 1986, Gasaway et al. 1992).

<u>Ungulate Ecology and Mortality</u>: Thirty-five individuals of each of the four ungulate species will be radio-collared and located monthly for three years to identify movements, habitat use, and locations of mortalities. These data will improve our understanding of (1) how variation in rainfall affects ungulate distribution and habitat use, (2) the extent to which plains ungulates vary seasonally in their use of shrublands and woodlands, (3) the period ungulates are susceptible to predation in specific areas, (4) the period ungulates are in anthrax endemic areas, and (5) seasonality and locations of mortalities.

<u>Ungulate Foods</u>: The biomass of grass available will be estimated annually at the end of the wet and dry seasons in portions of Etosha using a pasture meter (W. du Plessis, unpubl. data). Yearly primary production of grasses will be estimated from annual rainfall using regression equations developed in Etosha (Coe et al. 1976, Seely 1978, Le Roux 1980, Berry and Louw 1982b, Nott 1988).

<u>Sizes, Trends, and Movements of Large Predator Populations</u>: Predator numbers, distribution, movements, and population trends will be required as inputs to models that estimate impacts of predation on ungulate population dynamics. Monitoring of cheetahs, lions and spotted hyaenas will be accomplished with individually identifiable, marked, or radio-collared animals. Additionally, the relative abundance of hyaenas will be monitored, as in Kruger National Park, by counting the number of hyaenas coming to recorded calls that are played at regular intervals along specified roads (Mills 1985). Jackal numbers will be estimated on the springbok lambing areas using (1) mark-recapture methods (White et al. 1982) and (2) attempting to mark all individuals in small areas. Movements of lions, cheetahs, jackals, and hyaenas in relation to the seasonal distribution of plains ungulates will show (1) the extent that these predators shift home ranges to maintain migratory plains ungulates as prey and (2) the number of predators and the period they prey on plains ungulates.

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Diseases: Diseases affecting the plains ungulate species and their predators will be identified and monitored by (1) collecting tissue and sera samples for pathological analysis from dead or sick animals and (2) conducting a broad spectrum serological survey of diseases by sampling animals collected at regular intervals.

PHASE 3: Determining the Factors Limiting Growth of Plains Zebra, Wildebeest, Springbok, and Gemsbok Populations– Years 1-5

In this phase we will assess the roles nutrition, rainfall, disease, predation, and culling-translocation play in limiting plains ungulate populations. We will use inductive and hypothetico-deductive methods to build arguments for the importance of each factor.

Nutrition, Rainfall, and Surface Water:

We will evaluate the general hypothesis that nutrition is a major factor limiting growth of plains ungulate populations. This hypothesis leads to two subsidiary hypotheses with specific predictions that are testable.

Hypothesis 1: Plains ungulates are nutritionally stressed.

Alternative hypothesis: Plains ungulates are not strongly affected by nutritional stress.

Significance: This hypothesis sets the stage for evaluating whether nutritional limitations could be sufficient to strongly retard or prevent population growth, as expected if populations are near K carrying capacity (KCC), and for evaluating whether nutritional stress predisposes many ungulates to disease, predation, or starvation. KCC is conceptually the number of animals that can be supported at equilibrium in a steady environment and in the absence of time lags, harvest, and predation (McCullough 1979:85). Although the KCC concept is controversial, it is useful for constructing comparisons.

Predictions of Hypothesis 1:

1: If animals are strongly stressed and near KCC, we should observe the following nutritional indicators:

1) Low reproductive rates (Bloch 1974, McCullough 1979, Albon et al. 1983, Albright and Keith 1987).

2) High neonate or adult mortality rates (Verme 1967, 1969; Child 1972; Sinclair 1974b; Hillman and Hillman 1977, McCullough 1979, Owen-Smith 1990).

- Poor physical condition and low fat content in bone marrow (Riney 1960, Sinclair and Duncan 1972, Brooks et al. 1977, Brooks 1978)
- Retarded body growth rate (Peterson 1977)
- Starvation (Berger et al. 1983, Williamson and Moore 1988, Walker et al. 1987)
- High utilization rates of preferred foods (Albright and Keith 1987, Dunnam 1990)

2. Animal abundance will not increase significantly if disease and predation are reduced.

<u>Tests of Hypothesis 1</u>: Four tests of this hypothesis will be made. First, nutritional indicators for ungulates in Etosha will be compared to similar indicators in nutritionally stressed (near KCC) and unstressed (well below KCC) populations elsewhere. Second, nutritional indicators within Etosha will be compared among years or among local areas of differing KCC and ungulate densities. Third, proportion of the population found dead during drought years (low KCC) will be compared to the proportion found during years with rainfall (1) within ±15% of the long-term median and (2) greater than 15% of the median (high KCC). Fourth, densities of gemsbok and plains zebra in Etosha will be compared to densities where disease and predation are reduced (Kaross). Kaross is a fenced 140 km^2 experimental area in western Etosha.

The rationale for Tests 1-3 is that rainfall is directly related to grass production (Coe et al. 1976, Le Houerou and Hoste 1977, Seely 1978, Desnmukh 1984, McNaughton 1985) and hence to KCC for grazing ungulates. In Etosha, KCC varies widely among years as a result of variation in rainfall. Periods of drought and above average rainfall may strongly affect ungulate population dynamics in Etosha as in other areas (Williamson et al. 1988, Walker et al. 1987, Owen-Smith 1990). Drought, operating through under-nutrition, may be a limiting factor in Etosha. Therefore, we will estimate annual variation in grass production (a KCC index) by regressing annual grass production on rainfall. If nutrition is strongly limiting the populations through density-dependent negative feedback, we predict significant positive correlations between the annual KCC index and the nutritional indicators from the ungulate populations. If nutrition has little or no limiting effects, nutritional indices will be independent of KCC. If animals are not stressed during years of low KCC, then we conclude that they are not nutritionally limited during other periods.

The rationale for Prediction 2 and Test 4 is as follows. If plains ungulates are already at or near KCC in Etosha then density should not increase significantly following a large reduction in disease and predation. Anthrax is rare and predators have been reduced in Kaross. Therefore, if densities can become significantly greater in Kaross than Etosha, Etosha's populations are likely below KCC and not strongly nutritionally stressed.

<u>Hypothesis 2</u>: Closing artificial water holes and drying up of natural springs reduced the area and consequently the food accessible to ungulates.

Alternative Hypothesis: Closing of artificial water holes and drying up of natural springs did not reduce the area accessible to ungulates.

Significance: Acceptance of this hypothesis suggests nutritional limitations, operating through reduced food availability, could have been involved in the population declines.

Prediction of Hypothesis 1: If the proportion of habitat lost to each ungulate species was true a reduction in food could have caused the decline.

Test of Hypothesis 2: The prediction will be tested using data for annual drinking site availability, distance each ungulate species grazes from drinking sites, and the estimated numbers of ungulates during aerial census in Etosha. The proportional change in the area available for grazing will be calculated and compared to the proportional change in ungulate numbers.

The rationale is that a reduction in the number of drinking sites may have reduced the food available to a population because ungulates graze limited distances from drinking sites during the dry season. In Etosha, Berry and Louw (1982a) found wildebeest grazed up to 15 km from water, zebra to 20 km, and springbok and gemsbok to 24 km, although the later two species can live without surface water for long periods.

Disease:

We will identify the diseases affecting the plains ungulates and evaluate the general hypothesis that disease is a major factor limiting growth of plains ungulate populations. This hypothesis leads to four subsidiary hypotheses with specific predictions that are testable.

Diseases will be identified by examining tissues from dead or sick animals for pathology and identified through a broad spectrum serological survey of captured animals (Sinclair 1974b). Dead animals will be located by following scavenger/predators as they forage, and by searching the area on foot and from a truck and airplane. Because of high mortality rates among juveniles, samples for the serological survey will be collected within one week of birth and at about 2 months, 4 months, and 12 months of age. Sera samples will be collected annually from animals older than one year.

Although anthrax has been studied intensively in Etosha and is the only disease known to regularly kill plains ungulates during the past 25 years, the number of anthrax-caused deaths and their effect on plains ungulate population dynamics remains in question. Ebedes (1976) and Berry (1981a) concluded anthrax affects primarily adults and was the most important single cause of mortality for adult zebra and wildebeest in Etosha from 1965 to 1978. However, the sampling methods they used to locate dead animals were differentially biased among causes of death and few of the total deaths were recorded; therefore, the proportion of deaths due to anthrax versus other factors remains uncertain. Because anthrax is potentially one of the most crucial factors affecting the development

:: a management strategy for Etosha and the buffer zone. It's essential that unbiased and conclusive tests be used to assess the affect of anthrax on ungulate population dynamics. We will test four hypotheses to assess if anthrax is a major limiting factor.

Hypothesis 3: **Anthrax-resistance ungulates have a significantly greater survival rate than anthrax-susceptible ungulates.**

Alternative Hypothesis: Survival rates of anthrax-resistance ungulates and anthrax-susceptible ungulates do not differ significantly.

Significance: This hypothesis sets the stage for determining whether controlling anthrax in the environment will be an effective means of increasing wildlife abundance. The test will give a direct estimate of mortality due to anthrax, which is crucial for assessing anthrax's relative importance to the dynamics of ungulate populations.

Prediction of Hypothesis 3: The difference in mean annual survival rates between anthrax-resistant and anthrax-susceptible adult ungulates differs significantly ($P \leq 0.1$ and a 80% chance of detecting a 18% difference).

Test of Hypothesis 3: The prediction will be tested using the difference between survival rates of 130 anthrax-vaccinated (resistant) and 130 unvaccinated (susceptible) radio-collared adult ungulates per species over a 3 year period. Because anthrax has its greatest effect on zebra and wildebeest (Ebedes 1976, Berry 1981a), our focus will initially be on one of these species, zebra.

Hypotheses 4: **A large reduction in anthrax increases a population's finite rate of growth (lambda).**

Alternate Hypothesis: A large reduction in anthrax does not alter a population's finite rate of growth.

Significance: Like Hypothesis 3, this hypothesis helps determine if controlling anthrax in the environment will be an effective means of increasing wildlife abundance.

Predictions of Hypothesis 4:

1) The gemsbok population, which is largely anthrax-resistance, will have a larger finite rate of growth than the anthrax-susceptible populations of plains zebra, wildebeest, and springbok.
2) Subpopulations of plains zebra, wildebeest, and springbok in western Etosha will have larger finite rates of growth than subpopulations in central Etosha and, if anthrax is the primary limiting factor, the western subpopulations will increase.
3) Subpopulations of plains zebra, wildebeest, and springbok in eastern Etosha will have larger finite rates of growth than subpopulations in central Etosha and, if anthrax is the primary limiting factor, eastern subpopulations will increase between major outbreaks of anthrax.

Tests of Hypothesis 4: The predictions will be tested by comparing finite rates of growth for subpopulations in western, central and eastern Etosha. Rates of growth for each species will be calculated from population estimates based on aerial surveys. These tests are contingent on ungulate movement studies confirming that subpopulations during the wet season in western, central and eastern Etosha are discrete.

The rationale is that if anthrax is a major limiting factor, a graded response in population growth rates should be detectable because (1) subpopulations of ungulates are exposed to varying levels of anthrax and (2) species vary in resistance to anthrax. Plains ungulates rarely die from anthrax in western Etosha and the last significant outbreak in eastern Etosha occurred during 1984. In contrast, anthrax-killed ungulates are found each year in the central area. Resistance to anthrax appears high in gemsbok, intermediate in springbok and low in wildebeest and zebra, based on the percentage of anthrax-caused deaths among recorded natural mortalities (Ebedes 1976; Berry 1981a; P. Lindeque, unpubl. data).

Hypothesis 5: The frequency of anthrax-caused deaths is density-dependent, i.e., the proportion of the ungulate population killed by anthrax increases with increasing ungulate density.

Alternate Hypothesis: The frequency of anthrax-caused deaths is independent of ungulate density.

Significance: This hypothesis evaluates whether anthrax has a regulating effect on ungulate numbers. If anthrax-caused deaths are density-dependent, the effect of anthrax on declining populations will diminish, whereas the effects on increasing populations will accelerate. Thus, its effects would be somewhat predictable, which will be important knowledge when developing conservation strategies for Etosha. If anthrax occurrence is independent of density, its effect will be unpredictable.

Predictions of Hypothesis 5:

1) The number of confirmed anthrax-caused deaths, expressed as a proportion of the estimated live population, will increase with ungulate density.
2) The anthrax-caused proportion of all natural deaths will increase with ungulate density.

Tests of Hypothesis 5: The predictions will be tested by regressing anthrax-caused deaths (expressed as proportions of the estimated population) on estimated population size. The proportion of anthrax-caused deaths will be derived from recorded animal deaths and their diagnosed causes; population estimates will be based on aerial surveys. The rationale is that the incidence of most diseases increases with the density of the host; anthrax in Etosha is expected to behave similarly.

Hypothesis 6: **Anthrax primarily kills animals that are not predisposed to death from other causes, i.e., additive mortality.**

Alternative Hypothesis: Anthrax primarily kills animals that are predisposed to death from other causes, i.e., compensatory mortality.

Significance: This hypothesis helps evaluate whether anthrax-caused deaths limit population growth rate (additive mortality) or have little effect on population growth rate because the animals were likely to die soon from other causes (compensatory mortality). If anthrax-caused mortality is largely additive, it will limit population growth to the extent that these deaths occur; significant sources of additive mortality must be considered and controlled when developing Etosha's conservation strategy. In contrast, sources of compensatory mortality are of lesser consequence.

Predictions of Hypothesis 6: Anthrax kills mostly young and prime age adults and adults that are in good body condition with a high percentage of fat in bone marrow.

Tests of Hypothesis 6: The predictions will be tested by comparing age specific body condition rankings and percentage marrow fat in leg bones of anthrax-killed animals to similar parameters from nonanthrax-killed and live animals. The rationale is the following; animals that are in very poor condition or are very old will likely die in the near future from predation, disease, malnutrition, or senescence. Thus, if anthrax kills them, it will have little effect on the population.

Predation:

Predation, like anthrax, has been identified as one of the major sources of ungulate mortality in Etosha (Berry 1981a; Gasaway et al. 1991; Stander 1992). We will evaluate the hypothesis—predation is a major factor limiting ungulate population growth. This general hypothesis leads to the more easily tested subsidiary hypotheses and predictions listed below.

Hypothesis 7: **Predation is a major cause of additive mortality for plains ungulates.**

Alternative Hypothesis: Predation is not a major cause of additive mortality.

Significance: This hypothesis sets the stage for evaluating the role predation plays in maintaining population declines and low densities, which is crucial knowledge for developing an effective conservation strategy for Etosha.

Predictions of Hypothesis 7

1. Predation is a primary cause of death for ungulates less than 2 months old.

2) Estimated predation rates on plains ungulate populations account for a large proportion of the estimated annual mortality.

3) Predators primarily kill animals that are not predisposed to death by other causes, i.e., young and prime age adults and adults in good body condition with moderate to high percentages of fat in bone marrow. Thus, predation is largely additive mortality as opposed to compensatory mortality.

Tests of Hypothesis 7: Prediction 1 will be tested by radio-collaring newly born wildebeest and springbok and determining causes of death (Gasaway et al. 1992). Prediction 2 will be tested through models that compare estimates of predator-caused mortality to estimates of total mortality. Predator-caused mortality will be calculated from observed kill rates of hunting predators, predator numbers, and estimated predation rates on radio-collared juvenile ungulates. Total mortality will be estimated from ungulate demographic data in population models. Prediction 3 will be tested by comparing relative body condition rankings and percentage marrow fat in leg bones of predator-killed animals to similar parameters in nonpredator-killed animals and samples from the living populations. Age of predator-killed animals will be compared to the longevity for the species and the age structure of living populations.

The rationale for the tests is as follows. For predation to be a major factor limiting population growth, predators must (1) kill large numbers of prey that (2) are in good condition and not old-aged, i.e., mortality must be additive to other sources. We will test for both criteria. If prey are largely predisposed to death by other factors such as disease, senescence, or malnutrition, then predation will have a small effect on the population growth rate regardless of the number killed.

Hypothesis 8: A large reduction in predation results in increased ungulate survival and population growth rates.

Alternative Hypothesis: A large reduction in predation has little effect on survival and population growth rates.

Significance: This hypothesis helps to directly determine if (1) predation is an important limiting factor and (2) if temporarily reducing predation will be an effective means of increasing prey abundance.

Predictions of Hypothesis 8:

1) Populations of plains ungulates in areas of reduced predator densities will have higher finite rates of growth and juvenile survival rates than populations in western Etosha.

2) Prey:predator biomass ratios in Etosha are similar to ratios in areas where predation is a major limiting factor.

Tests of Hypothesis 9: Prediction 1 will be tested by comparing finite rates of population growth and juvenile survival rates in populations of western Etosha to similar parameters of populations living with reduced predator densities. Reduced predator densities are found on game farms and Kaross. Rates of population growth for each species will be calculated from population estimates based on aerial surveys, and juvenile survival rates will be estimated from sex and age composition surveys conducted from the ground. These tests are contingent on ungulate movement studies confirming that populations in western Etosha are discrete from the remainder of Etosha. Prediction 2 will be tested by compiling prey predator ratios in Etosha and comparing them to ratios from published and unpublished literature for areas where the limiting effects of predation range from small to large.

The rationale for prediction 1 is that a graded response in population growth rates and juvenile survival rates should be detectable in populations exposed to varying levels of predation if predation is a major limiting factor. Compared to western Etosha, lion density has been reduced in Kaross and all predators have been reduced on the game farms. Deaths from anthrax do not confound these comparisons because anthrax rarely kills plains ungulates in any of these areas. The rationale for prediction 2 is that low prey biomass per unit of predator biomass is characteristic of areas where predation is a major limiting factor; the contrary occurs where predation is a minor limiting factor.

Removal of Ungulates by Culling or Translocation:

Records of the number of animals translocated from and the number killed by humans in Etosha will be compiled for each plains ungulate species. Then population models will be used to assess the importance of these removals on the population dynamics of each species.

Multiple Causes:

Populations in Etosha likely are limited by a combination of factors, with one or two prevailing at any given time. Based on our historical knowledge of population dynamics in Etosha, we propose the following hypotheses.

Hypothesis 9: Specific plains ungulate populations are limited at densities well below KCC primarily by predation and secondarily by disease.

Hypothesis 10: Specific plains ungulate populations are limited at densities well below KCC primarily by predation; disease is trivial.

Hypothesis 11: Specific plains ungulate populations are limited at densities well below KCC primarily by disease and secondarily by predation.

Hypothesis 12: Specific plains ungulate populations are regulated near or slightly below KCC primarily by nutritional limitations; disease and predation are secondary.

Significance of Hypotheses 9-12: These hypotheses predict the combination of factors that limit the specific populations. They provide the synthesis of the single factor hypothesis tests that identify limiting factors and their intensity. This synthesis provides the overview needed to develop effective conservation strategies for the Etosha ecosystem.

Predictions of Hypotheses 9-12: Table 2 summarizes the predictions for the four hypotheses.

Tests of Hypotheses 9-12: The earlier single factor hypotheses and their tests will aid in testing the predictions of these multiple cause hypotheses.

The results of these tests will be a synthesis of population limitations based on empirical data and theoretical concepts similar to that developed in Alaska and Canada for moose-wolf-bear systems (Gasaway et al. 1992).

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Table [illegible]: Predictions of multiple cause hypotheses on factors limiting plains ungulate populations in Etosha National Park. Predictions in the body of the table are those expected for the ungulate populations.

Hypothesis (Major limiting factors listed in order of importance for each hypothesis)	BODY GROWTH RATE	BIRTH RATE	RECRUITMENT	ADULT MORTALITY RATE	MORTALITY DURING DROUGHTS	MAJOR CAUSES OF DEATHS (Listed in order of importance)	NUTRITIONAL CONDITION OF UNGULATES IN FAIR DISTRIBUTION		
							LIVE ANIMAL	DISEASE KILLED	PREDATOR KILLED
[illegible] BELOW KG., PREDATION, DISEASE, NUTRITION	FAST	HIGH	LOW	HIGH	LOW	PREDATION, DISEASE	GOOD	GOOD	FAIR GOOD
[illegible] BELOW KG., PREDATION, NUTRITION, DISEASE (RIDAI)	FAST	HIGH	LOW	HIGH	LOW	PREDATION	GOOD	GOOD	FAIR GOOD
[illegible] BELOW KG, DISEASE, PREDATION, NUTRITION	FAST	HIGH, IF DISEASE DOES NOT IMPAIR IT	MODERATE	HIGH	LOW	DISEASE, PREDATION	GOOD	GOOD	FAIR GOOD
[illegible] BEARING, NUTRITION, DISEASE, PREDATION	SLOW	LOW	LOW	LOW	HIGH	DISEASE OR PREDATION, MALNUTRITION	POOR FAIR	POOR GOOD	POOR FAIR

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[illegible] [illegible] The water [illegible] [illegible] [illegible] Game in the Etosha National Park Madoqua [illegible] 145-153

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Brian Gilliers[1]: Chief Nature Conservation Officer

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EDUCATIONAL BACKGROUND

1974 -	University of Alaska Ph.D. in Zoo Physiology
1967 -	Washington State University M.S. in Zoology
1965 -	Michigan State University B.S. in Wildlife Biology

PROFESSIONAL BACKGROUND

1991 - Present	Research Coordinator, The Zoological Society of San Diego
1976 - 1991	Affiliate Assistant Professor, University of Alaska
1972 - 1990	Research Biologist, Alaska Department of Fish and Game
1989 -	Research Biologist, Directorate of Nature Conservation, Namibia
1987 -	Acting Research Coordinator, Alaska Department of Fish and Game
1986 -	Research Biologist, Directorate of Nature Conservation, Namibia
1969 - 1972	National Institute of Health Fellow, Institute Arctic Biology, University of Alaska
1967 - 1969	Biologist, U.S. Army
1966 - 1967	NDEA Fellow, Department of Zoology, Washington State University
1965 - 1966	Teaching Assistant, Department of Zoology, Washington State University

ADDITIONAL SKILLS

Aircraft pilot: single engine, commercial rating.
Experienced in flying aerial surveys, radio telemetry, wildlife photograph, and hunting.
Computer skills in data bases, spreadsheets, word processing, statistics, and graphics.
Knowledge of African large mammal ecology based on 7 trips and field research.

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1987 Distinguished Moose Biologist award from the North American Moose Conference

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Dr. Albert Franzmann, Wildlife Consultant, P.O. Box 666, Soldotna, Alaska 99669 USA (Retired from Alaska Department of Fish and Game)

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3. Gasaway, W.C. Status of the Fortymile Caribou Herd. Alaska Dept. Fish and Game. Wildl. Info. Leafl. No 1. 4 pp. 1975.

Curriculum Vitae

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1975-79 University of California, Davis
Ph.D. in Zoology, September, 1979

1969-73 University of California, Santa Cruz
B.A. in Biology, June 1973

PROFESSIONAL BACKGROUND

1989- Chairperson of Endowment Funds, Society for Conservation Biology

1987- Adjunct Professor, Biology Department, San Diego State University, San Diego, California

1981- Comparative Physiologist, Zoological Society of San Diego, San Diego, California

1979-81 Postdoctoral Fellow with Dr. Charles L. Ralph, Colorado State University, Fort Collins, Colorado

1977-79 Associate-in-Residence, Department of Zoology, University of California, Davis, California

1975-77 Teaching Assistant, Department of Zoology, University of California, Davis, California

1973-75 Research Assistant, NASA-Ames Research Center, Moffitt Field, Mountain View, California

1971-73 Research Assistant, Department of Biology, University of California, Santa Cruz, California

ACADEMIC HONORS

1978 Regent's Fellow, University of California

1973 Thesis Honors, University of California

1969 Honors-at-Entrance, University of California

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GRANTS AND AWARDS

Field Studies:

1976-77	American Museum of Natural History ($3,125)
1982	Johnson Research Fund (American Philosophical Society: $1,700)
1984-87	Kaiser Foundation ($82,000)
1989	RJR/Land Rover Ltd. ($102,000)
1989	Macnris Fund ($18,000)
1990-91	Institute for Museum Services (IC 00348-90: $25,000)
1990-92	National Science Foundation (PI BNS 90-00100: $68,000)
1992-94	National Science Foundation ($121,488: pending)

Laboratory Studies:

1977-78	Chancellors Fund of the University of California ($2,800)
1980-82	National Science Foundation (Co-PI PCM 80-03835: $149,200)
1982	A. G. Ball (Equipment Grant: $6,500)
1983	Kaiser Foundation ($87,000)
1985	National Science Foundation (Co-PI DMB 85-21321: ($65,00)
1986-87	National Institute of Health (Admin-PI NIH RR01776-02: $163,000)
1987	Nixon Griffis Fund ($2,875)
1989-91	National Science Foundation (PI BNS 89-09207: $94,573)
1989-91	Homeland Foundation ($51,000)
1991	National Science Foundation (PI BNS 92-21211: $122,000: pending)

TEACHING EXPERIENCE

1981- Various invited lectures to both academic and non-academic groups on the physiological aspects of captive propagation of endangered species, especially lizards.

1979-81 Guest lecturer in general biology, comparative anatomy, comparative endocrinology, and zoo animal medicine in the Zoology Department and Veterinary School of Colorado State University.

1975-79 Lecturer in comparative and functional anatomy, ecology, and the physiology section of introductory zoology at the University of California at Davis. Teaching assistant in comparative anatomy, functional anatomy, introductory zoology.

1972-73 Lecturer in advanced zone-system photography at the University of California at Santa Cruz.

SUPERVISORIAL EXPERIENCE

1981- Comparative Physiologist, San Diego Zoo. Currently supervise two post-doctoral research fellows and a laboratory technician, keepers involved with various in-house projects, and a field staff of two in Central America and Africa.

1980-81 Postdoctoral Fellow, Colorado State University. Supervised three laboratory technicians.

1973-73 Administrative Assistant, Department of Zoology, University of California at Davis. Supervised 14 teaching assistants.

EDITORIAL SERVICE

Professional Journals:
- Science
- Herpetologica
- Journal of Herpetology
- Journal of Experimental Zoology
- Journal of Comparative Physiology
- Physiology and Behavior
- Zoo Biology

Popular Journals:
- National Wildlife
- International Wildlife
- Ranger Rick
- Zooniooz
- Junior Scholastic

PROFESSIONAL SERVICE

National Research Council (International Affairs): advisor: green and black iguana as microlivestock.
Komodo Monitor Consortium, AAZPA, 1986-88 Coordinator
Advisor, Animal Use Committee, University of California
Member, K-12 Curricula Committee, Society for Conservation Biology Chairperson of Endowment Committee, Society for Conservation Biology
Advisor, State of California, Science Curricula Framework Committee

PROFESSIONAL MEMBERSHIPS

American Society of Zoologists
Herpetologists League
Society for Conservation Biology

PATENTS

Patent #4,591,694 (1985): "A heated bed module for animals."

PROFESSIONAL REFERENCES

Dr. Werner Heuschele, Director of Research, Zoological Society of San Diego, Box 551, San Diego, CA 92112-0551; (619) 231-1515.

Dr. Kurt Benirschke, Trustee, Zoological Society of San Diego, P.O. Box 551, San Diego, CA 92112-0551; (619) 231-1515.

Dr. Charles L. Ralph, Chairperson, Department of Zoology and Entomology, Colorado State University, Fort Collins, CO 80523; (303) 491-7011.

Dr. Gary C. Packard, Professor, Department of Zoology and Entomology, Colorado State University, Fort Collins, CO 80523; (303) 491-7011.

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2. Phillips, J.A.: Comparative ecological physiology of the golden-mantled ground squirrel, Citellus lateralis. Ph.D. Dissertation. Univ. of California-Davis, CA. 1979.

3. Harlow, H.J., Phillips, J.A. and Ralph, C.L.: The effect of pinealectomy on hibernation in two species of seasonal hibernators, Citellus lateralis and C. beldingi. J. Exper. Zool. 212: 301-303. 1980.

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6. Phillips, J.A. and Jameson, E.W., Jr.: The effect of photoperiod on fat accumulation in juvenile Spermophilus lateralis born in captivity. Canadian J. Zool. 58: 2150-2153. 1980.

7. Phillips, J.A., Harlow, H.J. and Ralph, C.L.: Set point shifts in behavioral thermoregulation in horned lizards (Phrynosoma) after parietal eye manipulation. Amer. Zoologist 20:A 34. 1980 (Abstract).

8. Phillips, J.A.: Growth and its relationship to the initial annual cycle of the golden-mantled ground squirrel, Spermophilus lateralis. Canadian J. Zool. 59: 865-871. 1981.

9. Phillips, J.A. Thermal biology of Phrynosoma: Effects of shielding the parietal eye. SSAR/HL. 1981 (Abstract).

10. Harlow, H.J., Phillips, J.A. and Ralph, C.L.: Day-night rhythm in plasma melatonin in a mammal lacking a distinct pineal gland, Dasypus novemcinctus. Gen. Comp. Endocrinol. 45: 212-218. 1981.

11. Phillips, J.A. and Harlow, H.J.: Elevation of upper voluntary temperatures after shielding the parietal eye in horned lizards. Herpetologica 37: 199-206. 1981.

12. Harlow, H.J., Phillips, J.A. and Ralph, C.L.: Activity, metabolic and blood melatonin rhythms in the nine-banded armadillo, Dasypus novemcinctus, a mammal lacking a distinct pineal gland. 1981 Western Regional Conf. on Gen. and Comp. Endocrinol. (Abstract).

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5. Harlow, H.J., Darnell, D.K. and Phillips, J.A. Pinealectomy in ground squirrels: Effects on behavioral and physiological responses to heat stress. Physiol. Behavior 28: 601-604, 1982.

6. Harlow, H.J., Phillips, J.A. and Falon, C.L. Circadian rhythms and the effects of exogenous melatonin in the nine-banded armadillo, Dasypus novemcinctus: A mammal lacking a distinct pineal gland. Physiol. Behavior 28: 307-313, 1982.

7. Phillips, J.A. Ontogeny of thermoregulation in blue-tongued skinks, Tiliqua scincoides. Amer. Zool. 24: 316, 1983 (Abstract).

8. Phillips, J.A. Ecological physiology of the Komodo dragon, Varanus komodoensis. Ann. Amer. Philosoph. Soc. 1984: 158-160, 1984.

9. Phillips, J.A. Environmental influences on reproduction in golden-mantled ground squirrels. Pp. 103-125. In: Biology of the ground-dwelling squirrels. J. Murie and G. Michener, eds., Univ. Nebraska Press, 1984.

10. Phillips, J.A. [illegible] Ice as a biological optimum. Pp. 191-196. In: One Medicine. O. Ryder and M. Byrd, eds. Springer-Verlag, Heidelberg, 1984.

11. Phillips, J.A. A wholistic view of reptile physiology. In: Captive propagation of reptiles and amphibians. Pp. 51-84., R.L. Grey (ed.). NCHS-BAARS Publication, Davis, CA, 1984.

12. Phillips, J.A., N. Alexander, W.B. Karesh, R. Millar and B.L. Lasley. Stimulating male sexual behavior with repetitive pulses of GnRH in female green iguanas, Iguana iguana. J. Exp. Zool., 234: 481-484, 1985.

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[illegible] Conservation Biology Education in the Aqua. [illegible] Assoc. Zoo Ec. [illegible] 1987.

[illegible] and [illegible] Induction of reproductive activity of lizards via GnRH therapy. Annals N.Y. Acad. Sci. 513: 103-108, 1988.

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37. Albers, A.C., N. C. Pratt, and J. A. Phillips. Seasonal productivity of lizard femoral glands: relationship to social dominance and androgen levels. Physiol. and Behavior(in press).

38. Phillips, J. A. Undisturbed feeding by female cheetahs with cubs. J. Mammal.(in review).

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41. Phillips, J.A. and J.A. Phillips. Estimating a population of Varanus albigularis, largest biomass carnivore in the arid savanna? Herpetologica (in review).

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[illegible]. Phillips, J.A. Who'll get the last laugh. Zoonooz. LXII(5): 16-17.

[illegible] Phillips, J.A. The Forest. Zoonooz. LX11(9): 16-24.

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Curriculum Vitae

MALAN LINDEQUE, PH.D.

PERSONAL INFORMATION

Date of Birth	July 23, 1958
Place of Birth	Johannesburg, South Africa
Citizenship	Namibia
Mailing Address	Etosha Ecological Institute P.O. Okaukuejo via Outjo Namibia
Business Phone	Okaukuejo 5

EDUCATIONAL BACKGROUND

1989	University of Stellenbosch Ph.D. in Zoology
1981	University of Pretoria M.Sc. in Zoology
1979	University of Pretoria B.Sc.(Honns) Cum laude in Mammalogy
1978	University of Pretoria B.Sc. in Zoology/Geology

PROFESSIONAL BACKGROUND

1988-Present	Head of Research, Etosha Ecological Institute, Ministry of Wildlife Conservation and Tourism
1983-1988	Animal Ecologist, Etosha Ecological Institute
1981-1983	Veterinary Medic, South African Army
1979-1981	Research Assistant, Mammal Research Inst., Univ. of Pretoria
1978	Research Assistant, Dept. of Geology, Univ. of Pretoria

AWARDS

1980	Astley Maberley Memorial Scholarship for the best B.Sc.(Honns) student in Zoology in South Africa
1981-1982	CSIR Award for post graduate research
1983	Best student award: Veterinary Medic training course, Equestrian Center, South African Defence Force

SUPERVISORIAL EXPERIENCE

1988-Present	Supervise two research biologists, a wildlife veterinarian, four technicians, a clerk, and 8 laborers

PROFESSIONAL MEMBERSHIPS

Zoological Soc. of Southern Africa: Council Member 1988-89
Wildlife Management Association of Southern Africa
Botanical Society of South Africa
Wildlife Society of South Africa

PROFESSIONAL REFERENCES

Dr [illegible] WWF PO Box 62440 Nairobi Kenya

Prof [illegible] Dept of Zoology Univ of Pretoria South Africa 0001

Prof [illegible] Dept. of Zoology Univ of Stellenbosch South Africa 7600

Dr M K Seely Desert Ecological Research Inst PO Box 953 Walvis Bay, Namibia

Dr M Coe, Dept of Zoology, Univ of Oxford South Parks Road, Oxford OX13PS UK

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Scientific articles

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2. Skinner, J.D., Lindeque, M., Van Aarde, R.J. and Bieckmann, F.C.: The prey of owls from Kolmanskop in the southern Namib Desert. Madoqua 12: 131-132, 1980.

3. Lindeque, M. and Skinner, J.D.: Aseasonal breeding in the spotted hyaena (Crocuta crocuta Erxleben) in southern Africa. Afr. J. Ecol. 20: 271-278, 1982.

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5. Lindeque, M. and Skinner, J.D.: Size frequency analysis of tooth wear in spotted hyaenas (Crocuta crocuta). S. Afr. J. Zool. 19: 291-294, 1984.

6. Lindeque, M., Skinner, J.D. and Millar, R.P.: Adrenal and gonadal contribution to circulating androgens in spotted hyaenas (Crocuta crocuta) as revealed by LHRH, HCG and ACTH stimulation. J. Reprod. Fert. 73: 211-217, 1986.

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8. Van Jaarsveld, A.S., Skinner, J.D. and Lindeque, M.: Growth, development and parental investment in the spotted hyaena, Crocuta crocuta. J. Zool., Lond. 216: 45-53, 1988.

9. Stander, P.E., Nott, T.B., Lindeque, P.M. and Lindeque, M.: Mass marking of zebras in the Etosha National Park, Namibia. Madoqua 17(1): 47-49, 1990.

10. Van Der Merwe, N.J., Lee-Thorp, J.A., Thackeray, J.F., Hall-Martin, A., Kruger, F.J., Coetzee, H., Bell, R.H.V. and Lindeque, M.: Source area determination of elephant ivory by means of isotopic analysis: 'Fingerprinting' tusks. Nature (Lond.) 346: 744-746, 1990.

11. Lindeque, M.: The case for denoming the black rhinoceros in Namibia. S. Afr. J. Sci. 86: 226-227, 1990.

12. Lindeque, M. and Archibald, T.J.: Seasonal wetlands in Owambo and Etosha National Park. Madoqua 17: 129-133, 1991.

13. Lindeque, M.: Dentition and age estimation of elephants in Etosha National Park, Namibia. Madoqua 18 (in press).

14. Lindeque, M.: Population age structure of elephants in Etosha National Park, Namibia. Madoqua 18 (in press).

15. Van Jaarsveld, A.S. and Lindeque, M.: Changes in ovarian morphology, plasma oestradiol-17β and progesterone concentrations suggest some ovarian activity during lactation in the spotted hyaena (Crocuta crocuta). J. Zool., Lond. (in press).

18. Lindeque, M. and Lindeque, P.M.: Satellite tracking of elephants in north-western Namibia. [illegible] (in press).

19. Lindeque, M. and van Laarsveld, A.S.: Post-natal growth in elephants in Etosha National Park, Namibia. [illegible] (in press).

20. Lindeque, M. and Lindeque, P.M.: Aerial census counts of large game in northern Namibia. Madoqua (in review).

21. Lindeque, M. and Lindeque, P.M.: Using distance estimates in aerial censuses in northern Namibia. Madoqua (in review).

22. Lindeque, M. and Lindeque, P.M.: Elephant mortality pattern in Etosha National Park, Namibia. Afr. J. Ecol. (in review).

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24. Lindeque, M.: Elephant population trends in Etosha National Park. Madoqua (in review).

25. Lindeque, M. and Schneepers, J.L.: Utilization of Datura inoxia by ungulates in the Hoanib River, Namibia. S. Afr. J. Wildl. Res. (in review).

Popular Articles:

1. Lindeque, M.: The elephant in Etosha. Directorate of Nature Conservation, SWA/Namibia. 15pp., 1984.

2. Loutit, B. & Lindeque, M.: A great step for the desert giants. Quagga 22: 26-28.

3. Van der Merwe, N.J., Lee-Thorpe, J.A., Thackeray, J.F., Hall-Martin, A., Kruger, J.F., Coetzee, H., Bell, R.H.V. & Lindeque, M.: Identifying ivory. Rhino & Elephant J. 4: 12-15.

4. Lindeque, M.: The Kaokoveld Elephants. Rossing Magazine 1991 (May): 14-17.

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REPORTING SCHEDULE

Annual progress reports will be submitted to USAID three months after the close of financial years 1 through 4. A final report will be submitted 6 months after the completion of the 5-year project (approximately April 1997).

IMPLEMENTATION SCHEDULE
for each phase of the project

Phase 1: Compiling a Historical Perspective of Wildlife Population Dynamics.

Year 1: Compile historic information on wildlife populations in the Etosha region.

Phase 2: Establishing Ecological Monitoring Programs

Year 1:

- Define and/or develop methods to estimate population sizes of wildebeests, zebras, springboks, gemsboks, hyaenas, cheetahs, lions and jackals.
- Define and/or develop methods to estimate ungulate mortality rates, body condition, pregnancy rates, and food availability.
- Develop computer-based data storage and retrieval systems for animal movements, mortality, predation rates, body condition and population size.
- Begin implementing above procedures.

Year 2:

- Implement year 1 procedures.

Phase 3: Determining Factors Preventing Growth of Plains Zebra, Wildebeest, Springbok, and Gemsbok Populations

Year 1:

- Begin collecting data to test the predictions of the nutrition limiting hypothesis (Hypothesis 1).
- Complete the analysis for the test of the hypothesis that reduction in surface water played a major role in limiting wildlife populations (Hypothesis 2).
- Begin a survey to determine if diseases other that anthrax are significant mortality factors of plains ungulates.
- Conduct and complete a pilot study on the effectiveness of the anthrax vaccine in zebra.
- Purchase radio telemetry equipment and immobilization supplies needed for the experiment that will estimate the role of anthrax in limiting the zebra population size (Hypothesis 3)
- Begin compiling data to test whether a large decrease in anthrax will result in increased growth rates of plains ungulate populations (Hypothesis 4).
- Begin compiling data to test of anthrax caused mortalities become less significant as ungulate populations decline (Hypothesis 5).
- Begin compiling data to test if anthrax kills animals that are in good health and would otherwise have lived (Hypothesis 6).

- Begin collecting data to test the hypothesis that predation is a major factor maintaining ungulate populations at low densities (Hypothesis 7 and 8).
- From historic records compile the number of plains ungulates removed by humans from Etosha during 1970-91 and evaluate the effects of these removals on ungulate population dynamics.

Year 2:

- Continue work outlined in Year 1, except for three completed projects.
- Radio collar and vaccinate zebra (Dec. 93) for the zebra mortality study (Hypothesis 3); monitor zebra mortality due to anthrax.

Year 3:

- Continue work outlined in Year 2.

Year 4:

- Complete data collection on Hypothesis 1,4,5,6,7 and 8, and begin final analyses of data for tests of these hypothesis.
- Continue zebra mortality study (Hypothesis 3).

Year 5:

- Complete data collection for Hypothesis 3.
- Complete final analyses for Phase 3 and begin final report due 6 months after the end of Year 5.

Phase 4: Training Namibians

Year 1:

- Provide monetary sponsorship to 2 students in University of Namibia's (U of N) Wildlife Conservation Management Program.
- Project staff will give talks at Environmental Education Centers.
- Project staff will introduce U of N 3rd-year zoology students to field research and natural resource management in Etosha.
- Project staff will advise 1 or 2 under-graduate zoology students from the U of N during their student field projects in Etosha.
- Advise and sponsor 1 or 2 U of N honors students in their 6-month field studies, if U of N initiates it Honors program.
- Two PhD students from the University of California (U of C) will be integrated into the program and begin 2-year field research projects.

Year 2:

- Year 1 program is continued at the same level.

Year 3:

- Year 2 program is continued at the same level.

Year 4:

- Wildlife Conservation management students will complete their program.
- Project staff will give talks at Environmental Education Centers.
- Continue staff participation with the U of N's 3rd-year students and under-graduate field studies.
- All Honors student field projects will be completed.
- U of C PhD students will continue their field research.

Year 5:

- Continue staff participation with the U of N's 3rd-year students and under-graduate field studies.
- U of C PhD students will complete their field studies.

Phase 5: Assessing Attitudes Towards Conservation and Economic Development.

Year 1:

- Plan socio-economic survey.

Year 2:

- Complete socio-economic survey and provide preliminary findings.

Year 3:

- Prepare final report.

Phase 6: Developing and Implementing Conservation and Economic Strategies.

Year 1:

- Continue discussions with citizens in Etosha's buffer zones to assess the desire and potential for wildlife-based economic development and re-establishment of wildlife on communal land.
- Negotiate an agreement with specific communities, NGOs, and government that begins a pilot program to re-establish wildlife for the benefit of the communities.
- Procure materials to build a holding facility and develop water points; start construction if time allows.

- Maintain contact with wildlife-based community development programs in Africa.

Year 2:

- Continue with Year 1 activities. (If the drought persists it will be difficult to proceed; citizens may not be prepared to accept wildlife that competes with domestic stock. Also, holding camps may not support sufficient populations).
- Complete animal holding facility and water point development (contingent upon agreements) and participate in initial phases of stocking the holding facility.
- Based on preliminary research results, being formulating preliminary management options that promote growth of Etosha's plains wildlife populations to (1) maintain Etosha's tourist appeal and (2) provide a source of wildlife for widespread re-stocking of communal lands.

Year 3:

- Participate in the continued re-stocking of the holding facility.
- Continue to participate with communities, NGOs, and government to develop and implement a long-term management program for the pilot project area.
- Organize a workshop to disseminate research findings and enhance the wildlife-based economic programs in the Etosha region. Representatives from southern African countries would be invited.
- Continue formulating and refining management options that would promote growth of Etosha's plains wildlife populations.

Year 4:

- Continue the Year 3 program.

Year 5:

- Hold workshops to develop a suite of management options for Etosha and the adjacent buffer zones.
- Present management options to the policy and decision makers and help implement the selected strategies.
- Begin preparation of Final report.

ANNEX M

SCOPE OF WORK FOR PSC PROJECT MANAGER

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Gray Amendment Certification

Legislative Requirement:

The Gray Amendment (Section 579 of P.L. 101-167, the Foreign Operations, Export Financing and Related Programs Appropriations Act, 1990) requires AID to ensure participation in AID projects by business concerns which are owned and controlled by socially and economically disadvantaged individuals, historically black colleges and universities, colleges and universities having a student body in which more than 40 percent of the students are Hispanic American, and private voluntary organizations which are controlled by individuals who are socially and economically disadvantaged, including women (referred to herein as Gray Amendment entities).

AIDAR Notice 90-2, implementing Section 579 of the Foreign Assistance Appropriations Act requires that for any contract in excess of $500,000 (except for a contract with a disadvantaged enterprise) not less than 10 percent of the dollar value of the contract must be subcontracted to Gray Amendment entities, unless the contracting officer certifies that there are no contracting opportunities or unless the Administrator approves an exception.

Certification:

Elements of this project may be appropriate for minority or Gray Amendment organization contracting. The procurement plan of this project has been developed with full consideration of maximally involving Gray Amendment organizations in the provision of required goods and services. The Mission will make every effort to identify disadvantaged enterprises, particularly minority-owned and women firms, which can manage certain procurements of equipment and/or provisions of technical assistance and evaluation services planned in the project.

Furthermore, the Mission will, in the case of any contract in excess of $500,000 to which the Gray Amendment is applicable, include a provision requiring that no less than 10 percent of the value of the contract be subcontracted to Gray Amendment entities unless the contracting officer certifies that there is no realistic expectation of U.S. subcontracting opportunities, or unless the prime contractor is a Gray Amendment entity.

Richard L. Shortlidge, Jr.
AID Representative

Date: July 12, 1992

Clearance: RLA: DKeene

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ANNEX O

GRAY AMENDMENT CERTIFICATION

9. Prepare all necessary USAID/Namibia reports on matters arising out of project activities.

10. Participate in regional meetings with other participating SADCC countries.

11. Advise the USAID Project Manager and USAID Representative of any issues likely to affect project implementation and make recommendations for appropriate actions to be undertaken by USAID.

12. Coordinate with the MWCT on the preparation of quarterly reports on host country and other contributions to the project.

TERM OF SERVICE:

This will be a full-time position. The appointment will be for five years. The individual will be located in the USAID/Namibia Mission.

QUALIFICATIONS:

Candidate must have at least a M.S. or M.A. in natural resources/environmental/management/economics, the biological or zoological sciences or one of the social sciences with a strong background in community or rural development. S/he must also have at least four years working in a developing country, preferably in Southern Africa. Experience with community based natural resources management is highly desirable.

Experience in managing A.I.D. or other donor-funded projects, preferably in environment, ecology or natural resources sectors. Experience with NGOs and PVOs is highly desirable.

Excellent analytical, written and oral communication and interpersonal skills required. Also individual is required to be computer competent in word processing and spreadsheet programs.

ANNEX M

Scope of Work: Project Manager (Personal Services Contractor)

RESPONSIBILITIES:

The Project Manager, hired under a personal services contract, will be under the general supervision of the USAID Human and Natural Resources Development Officer in the Human and Natural Resources Division and will serve as the principal liaison between USAID/Namibia, the MWCT, the international or US PVO, the Zoological Society of San Diego, the Etosha Ecological Institute and the Namibian NGO community involved in the project's implementation. Responsibilities may include the following:

1. Serve as the point of contact between USAID/Namibia and the MWCT, the PVO, the Zoological Society of San Diego, Etosha Ecological Institute and local NGOs on all matters pertaining to project management, monitoring and implementation.

2. Participate in meetings of the Project Steering Committee and assist with the following:

   (a) Provision of USAID review and approval of sub-grantee proposals in accordance with eligibility criteria, outlined in the Project Paper; and

   (b) Provision of oversight technical and program direction, and impact monitoring of all LIFE project components.

3. Review and recommend approval to USAID of workplans, evaluations and other reports.

4. Visit project field sites and implementing agencies and prepare reports on the status of project implementation including any recommendations for ensuring the efficient and effective implementation of these activities.

5. Draft USAID/Namibia Project Implementation Letters (PILs), Project Implementation Orders (PIOs) and semi-annual Project Implementation Reports (PIRs). Prepare the Project Officer's approval form for signature by the Project Officer.

6. Maintain close contact with agencies implementing project activities and monitor their compliance with the project's goals and objectives and USAID rules and regulations.

7. Arrange project reviews and external project evaluations and ensure compliance by grantees and cooperative agreement recipients with USAID's financial audit requirements.

8. Ensure the collection of baseline project data for monitoring and evaluation purposes. Review impact indicators and track progress in attaining them.

PROJECT

GRANT AGREEMENT

BETWEEN THE GOVERNMENTS OF

THE REPUBLIC OF NAMIBIA

AND THE

THE UNITED STATES OF AMERICA

FOR THE

LIVING IN A FINITE ENVIRONMENT (LIFE) PROJECT

THE NAMIBIAN COMPONENT OF

THE REGIONAL NATURAL RESOURCE MANAGEMENT PROJECT

Dated: September 3, 1992 ***A.I.D. Project Number 690-0251.73***

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ANNEX L

DRAFT PROJECT GRANT GRANT AGREEMENT

Project Grant Agreement

Between the Governments of

The Republic of Namibia ("Grantee"),
acting through the Ministry of Wildlife, Conservation and Tourism

And

The United States of America,
acting through the Agency for International Development ("A.I.D.")

Article 1: ***The Agreement***

The purpose of this Agreement is to set out the understandings of the parties named above ("Parties") with respect to the undertaking by the Grantee of the Project described below, and with respect to the financing of the Project by the Parties.

Article 2: ***The Project***

SECTION 2.1 Definition of Project. The Project, which is further described in Annex 1, will provide assistance to the Grantee to improve the social and economic well-being of people in poor rural communities living in marginal agricultural areas and buffer zones to national parks and game reserves by implementing sustainable community-based wildlife and natural resources conservation and utilization. Annex 1, attached, amplifies the above definition of the Project. Within the limits of the above definition of the Project, elements of the amplified description stated in Annex 1 may be changed by written agreement of the authorized representatives of the Parties named in Section 8.2, without formal amendment of this Agreement.

SECTION 2.2 Incremental Nature of the Project.

(a) A.I.D.'s contribution to the Project, anticipated to not exceed ten million five hundred thousand United States Dollars (US$10,500,000), will be provided in increments, the initial one being made available in accordance with Section 3.1 of this Agreement. Subsequent increments, up to the maximum heretofor mentioned will be subject to availability of funds

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to A.I.D. for this purpose, and to the mutual agreement of the Parties, at the time of a subsequent increment, to proceed.

(b) Within the overall Project Assistance Completion Date stated in this Agreement, A.I.D., based upon consultation with the Grantee, may specify in Project Implementation Letters appropriate time periods for the utilization of funds granted by A.I.D. under an individual increment of assistance.

Article 3: *Financing*

SECTION 3.1 The Grant. To assist the Grantee to meet the costs of carrying out the Project, A.I.D, pursuant to the Foreign Assistance Act of 1961, as amended, agrees to grant the Grantee under the terms of this Agreement not to exceed three million United States ("U.S.") Dollars ($3,000,000) ("Grant"). The Grant may be used to finance foreign exchange costs, as defined in Section 6.1, and local currency costs, as defined in Section 6.2, of goods and services required for the Project.

SECTION 3.2 Grantee Resources for the Project.

(a) The Grantee agrees to provide or cause to be provided for the Project all funds, in addition to the Grant, and all other resources required to carry out the Project effectively and in a timely manner.

(b) The resources provided by the Grantee for the Project, including costs borne on an "in-kind" basis, will be (1) not less than the equivalent of U.S.$1,000,000 and (2) a minimum of twenty-five percent of the total cost of the Project. In calculating its contribution, the Grantee may include the financial and in-kind resources being contributed to the Project by Namibian nongovernmental and research organizations and the private sector.

SECTION 3.3 Project Assistance Completion Date.

(a) The "Project Assistance Completion Date" (PACD), which is August 31, 1997, or such other date as the Parties may agree to in writing, is the date by which the Parties estimate that all services financed under the Grant will have been performed and all goods financed under the Grant will have been furnished for the Project as contemplated in the Agreement.

(b) Except as A.I.D. may otherwise agree in writing, A.I.D. will not issue or approve documentation which would authorize disbursement of the Grant for services performed subsequent to the PACD or for goods furnished for the project, as contemplated in this Agreement, subsequent to the PACD.

(c) Requests for disbursement, accompanied by necessary supporting documentation prescribed in Project Implementation Letters are to be received by A.I.D. or any bank described in Section 7.1 no later than nine (9) months following the PACD, or such other period as A.I.D. agrees to in writing. After such period, A.I.D., giving notice in writing to the Grantee, may at any time or times reduce the amount of the Grant by all or any part thereof for which requests for disbursement, accompanied by necessary supporting documentation prescribed in Project Implementation Letters, were not received before the expiration of said period.

Article 4: Conditions Precedent to Disbursement.

SECTION 4.1 First Disbursement. Prior to the first disbursement under the Grant, or to the issuance by A.I.D. of documentation pursuant to which disbursement will be made, the Grantee will, except as the Parties may otherwise agree in writing, furnish to A.I.D. in form and substance satisfactory to A.I.D.:

(a) A written opinion from the Office of the Attorney General, acceptable to A.I.D., that this Agreement has been duly authorized and/or ratified by, and executed on behalf of, the Grantee, and that it constitutes a valid and legally binding obligation of the Grantee in accordance with all of its terms; and

(b) A statement of the names of the persons holding or acting in the office of the Grantee specified in Section 8.2, and of any additional representatives, together with a specimen signature of each person specified in such statement.

SECTION 4.2 Condition Precedent to Disbursement of Funds to the Nongovernmental Cooperating Recipient for Sub-Agreements to Finance Community Based Wildlife Utilization Activities where Retention of such Income by the Community is Impermissible under Namibian Law.
Prior to the disbursement of funds by A.I.D. through the planned Cooperative Agreement between A.I.D. and a nongovernmental Cooperating Recipient, or the issuance by A.I.D. of documentation pursuant to which disbursement may be made, to finance income generating community based activities involving the utilization of wildlife or other resources where retention of such income by the community is contrary to or otherwise impermissible under Namibian law, the Government of the Republic of Namibia, except as the Parties to this Project Agreement otherwise agree in writing, shall furnish to A.I.D., in form and substance satisfactory to A.I.D., evidence that legislation, regulations, procedures or other authority necessary to permit and authorize communities to manage, utilize and retain income from such natural resources has been enacted or executed and may be implemented.

SECTION 4.3 Notification. When A.I.D. has determined that the

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conditions precedent specified in Section 4.1 and 4.2 have been met, it will promptly notify the Grantee in writing.

SECTION 4.4: Terminal Dates for Conditions Precedent.

(a) If all of the conditions specified in Section 4.1 have not been met within 60 days from the date of this Agreement, or such later date as A.I.D. may agree to in writing, A.I.D., at its option, may terminate this Agreement by written notice to Grantee.

Article 5: Special Covenants.

SECTION 5.1 The Grantee agrees to use its best efforts to ensure that trainees under the Project are selected from among historically, socially and economically disadvantaged Namibians to the maximum extent practical and feasible.

SECTION 5.2 The Grantee agrees that no A.I.D. funds shall be disbursed or otherwise utilized under this Project to provide financial support directly to law enforcement or military forces for purposes of the protection of natural resources, including anti-poaching activities, until such time as the Parties hereto agree otherwise in writing and existing authority under United States law is expanded to clearly authorize such financial support.

SECTION 5.3 Project Evaluation. The Parties agree to establish an evaluation program as part of the Project. Except as the parties otherwise agree in writing, the program will include, during the implementation of the Project and at one or more points thereafter:

(a) evaluation of progress toward attainment of the objectives of the Project;

(b) identification and evaluation of problem areas or constraints which may inhibit such attainment;

(c) assessment of how such information may be used to help overcome such problems; and

(d) evaluation, to the degree feasible, of the overall development impact of the Project.

Article 6: Procurement Source.

SECTION 6.1 Foreign Exchange Costs. Disbursements pursuant to Section 7.1 will be used exclusively to finance the costs of goods and services required for the Project having, with respect to goods, their source and origin, and with respect to services their nationality in the United States (Code 000 of the AID Geographic Code Book) as in effect at the time orders

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are placed or contracts entered into for such goods or services), or other countries included in AID Geographic Code 935 ("Foreign Exchange Costs"), except as AID may otherwise agree in writing, and except as provided in the Project Grant Standard Provisions Annex, Section C.1 (b) with respect to marine insurance. To the maximum extent practicable, goods and services, with the exception of those procured in Namibia and the Rand Monetary Area will have their source and origin in the United States. Ocean transportation costs will be financed under the grant only on vessels under flag registry of the United States or countries included in A.I.D. Geographic Code 941.

SECTION 6.2 Local Currency Costs. Disbursements pursuant to Section 7.2 will be used exclusively to finance the costs of goods and services required for the Project having their source and, except as A.I.D. may otherwise agree in writing, their origin in the Republic of Namibia or the Rand Monetary Area ("Local Currency Costs").

Article 7: Disbursement.

SECTION 7.1 Disbursement for Foreign Exchange Costs.

(a) After satisfaction of conditions precedent in Section 4.1, the Grantee may obtain disbursements of funds under the Grant for the Foreign Exchange Costs of goods or services required for the Project in accordance with the terms of this Agreement, by such of the following methods as may be mutually agreed upon:

(1) by submitting to A.I.D., with necessary supporting documentation as prescribed in Project Implementation Letters, (A) requests for reimbursement for such goods or services, or, (B) requests for A.I.D. to procure commodities or services in Grantee's behalf for the Project; or,

(2) by requesting A.I.D. to issue Letters of Commitment for specified amounts (A) to one or more U.S. banks, satisfactory to A.I.D., committing A.I.D. to reimburse such bank or banks for payments made by them to contractors or suppliers, under Letters of Credit or otherwise, for such goods or services, or (B) directly to one or more contractors or suppliers, committing A.I.D. to pay such contractors or suppliers for such goods or services.

(b) Banking charges incurred by Grantee in connection with Letters of Commitment and Letters of Credit will be financed under the Grant unless the Grantee instructs A.I.D. to the contrary. Such other charges as the Parties may agree to may also be financed under the Grant.

SECTION 7.2 Disbursement for Local Currency Costs.

(a) After satisfaction of conditions precedent in Section 4.1, the

Grantee may obtain disbursements of funds under the Grant for Local Currency Costs required for the Project in accordance with the terms of this Agreement, by submitting to A.I.D., with necessary supporting documentation as prescribed in Project Implementation Letters, requests to finance such costs.

(b) The local currency needed for such disbursements may be obtained:

(1) by acquisition by A.I.D. with U.S. Dollars by purchase; or

(2) by A.I.D. (A) requesting the Grantee to make available the local currency for such costs, and (B) thereafter making available to the Grantee, through the opening or amendment by A.I.D. of Special Letters of Credit in favor of the Grantee or its designee, an amount of U.S. Dollars equivalent to the amount of local currency made available by the Grantee, which dollars will be utilized for procurement from the United States under appropriate procedures described in Project Implementation Letters.

The U.S. dollar equivalent of the local currency made available hereunder will be, in the case of subsection (b) (1) above, the amount of U.S. dollars required by A.I.D. to obtain the local currency, and in the case of subsection (b) (2) above, an amount calculated at the rate of exchange specified in the applicable Special Letter of Credit Implementation Memorandum hereunder as of the date of the opening or amendment of the applicable Special Letter of Credit.

SECTION 7.3 Other Forms of Disbursement. Disbursements of the Grant may also be made through such other means as the Parties may agree to in writing including, but not limited to, grants or cooperative agreements between A.I.D. and indigenous, U.S. or international nongovernmental organizations.

SECTION 7.4 Rate of Exchange. Except as may be more specifically provided under Section 7.2, if funds provided under the Grant are introduced into the Republic of Namibia by A.I.D. or any public or private agency for purposes of carrying out obligations of A.I.D. hereunder, the Grantee will make such arrangements as may be necessary so that such funds may be converted into currency of the Republic of Namibia at the highest rate of exchange which, at the time the conversion is made, is not unlawful in the Republic of Namibia.

Article 8: Miscellaneous.

SECTION 8.1 Communications. Any notice, request, document or other communication submitted by either Party to the other under this

Agreement will be in writing or by telegram or cable, and will be deemed duly given or sent when delivered to such party at the following addresses:

To the Grantee:

Mail Address:	*Permanent Secretary, Ministry of Wildlife, Conservation & Tourism, Private Bag 13346 Windhoek, Namibia*
Alternate Street Address:	*Fifth Floor, Government Building, Windhoek, Namibia*
Phone:	*264-61-2849111*
Fax:	*264-61-229936*

To A.I.D.:

Mail Address:	*Resident Representative, U.S. Agency for International Development, Private Bag 12028, Ausspannplatz, Windhoek, Namibia*
Alternate Street Address:	*Southern Life Towers, 6th Floor, 39 Post Mall Street, Windhoek, Namibia*
Phone:	*264-61-225935*
Fax:	*264-61-227006*

All such communications will be in English, unless the Parties otherwise agree in writing. Other addresses may be substituted for the above upon the giving of notice.

SECTION 8.2 Representatives. For all purposes relevant to this Agreement, the Grantee will be represented by the individual holding or acting in the office of the Permanent Secretary of the Ministry of Wildlife, Conservation and Tourism and A.I.D. will be represented by the individual holding or acting in the office of the Resident A.I.D. Representative, each of whom, by written notice, may designate additional representatives for all purposes other than exercising the power under Section 2.1 to revise elements of the amplified description in Annex 1. The names of the representatives of the Grantee and A.I.D., with specimen signatures, will be provided to A.I.D. and the Grantee, which may accept as duly authorized any instrument signed by such representatives in implementation of this Agreement, until receipt of written notice of revocation of their authority.

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SECTION 8.3 Standard Provisions Annex. A "Project Grant Standard Provisions Annex" (Annex 2) is attached to and forms part of this Agreement.

IN WITNESS WHEREOF, the Republic of Namibia and the United States of America, each acting through its respective Government's duly authorized representative, have caused this Agreement to be signed in their names and delivered as of the third day of September in the year one thousand nine hundred and ninety-two.

REPUBLIC OF NAMIBIA	UNITED STATES OF AMERICA
BY:	BY:
DR. ZEDEKIA NGAVIRUE	MRS. GENTA HAWKINS HOLMES
TITLE: DIRECTOR GENERAL NATIONAL PLANNING COMMISSION	TITLE: AMBASSADOR UNITED STATES OF AMERICA
BY:	BY:
MR. NIKO BESSINGER	DR. RICHARD L. SHORTLIDGE JR.
TITLE: HON. MINISTER MINISTRY OF WILDLIFE, CONSERVATION AND TOURISM	TITLE: RESIDENT REPRESENTATIVE USAID MISSION TO NAMIBIA

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Program Grant Agreement for LIFE (690-0251.73) dated September 3, 1992.

Project Number: *690-0251.73*
Appropriation: *72-112/31014*
Allowance: *281-60-673-01-69-21*
Budget Plan Code: *GSS2-92-21673-IG12*

Funds Obligated by this Agreement: *$3,000,000*
Funds Obligated to Date: *$3,000,000*

Authority: *Funds 92 STATE 274291*
CN Expiration 92 STATE 277221
Delegation of Authority 92 STATE 280948
RLA Clearance: FAX August 18, 1992

Funds Available: *USAID Controller, Carl L. Lewis*

Date: 9/2/92

ANNEX 1

AMPLIFIED PROJECT DESCRIPTION

ARTICLE 1:

Project Description

Section 1.1 Goal and Purpose

The goal of the Life Project is to enhance the capabilities of poor, rural communities living on marginal lands to meet their basic human needs by broadening Namibia's resource base and managing its natural resources in a sustainable manner. As part of the Regional Natural Resources Management Project, the general purpose is to improve the social and economic well-being of residents of targeted rural communities (defined as marginal and buffer zones in Namibia) by implementing sustainable community-based wildlife conservation and utilization programs. The marginal and buffer areas of the country to be included in the LIFE project are Caprivi (both East and West), Bushmanland and the Etosha National Park catchment area.

The specific purposes of the Namibia component in these three geographic regions are to:

(1) increase the social and economic well-being of poor rural communities living in marginal agricultural areas or in buffer zones to national parks and protected areas, through sustainable and economically viable community-based natural resource management;

(2) improve community-based groups capabilities to manage natural resources in a sustainable manner, through strengthening local, regional, and national organizations and institutions which provide services to these communities;

(3) develop appropriate and relevant natural resource management strategies and approaches for community management of natural resources which have wider applicability in Namibia's diverse and marginal areas; and

(4) establish closer ties and linkages with similar activities in the Southern Africa region and elsewhere in Africa and the world.

Section 1.2 End of Project Status

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While the Project is expected to improve directly bio- diversity, planning and general resource management in the affected marginal areas, it will contribute to the attainment of overall improved resource management in Namibia. There will be greater awareness and sensitivity to the environment and better management of natural resources. Participating communities will be empowered to control the benefits derived from the land they live on and interaction with the government is expected to improve. As specific measures of basic human needs, the Project is expected to result in increased household incomes, improved nutrition, more employment opportunities and more environmental awareness and skills at the community level.

By the end of the Project, an institutional framework will exist that is characterized by decentralized decision-making and a stronger partnership among the GRN, NGOs, the private sector and rural communities. There will be an increased number of established community based decision-making bodies related to natural resource management, with representation from community sub-groups on related committees. NGOs that are involved in natural resource management and community development will have improved administrative and organizational structures and more disadvantaged Namibians will be trained for employment by the GRN and the private sector. By the end of the Project, NGOs will have improved their chances of operating independent of external assistance through expanded funding from the private sector and widen donor community. As indicated, there will be a stronger involvement of Namibia's private sector in supporting natural resource management. Additional strategies for natural resource management will also have been developed and disseminated to appropriate government agencies and NGOs.

Baseline data for assessing the project's impact will be compiled during the first year of the project. These data will consist of three profiles:

Profile 1:
Characteristics Of The Area Covered By The Specific Activity. This will include information on physical and environmental characteristics such as climate, soil types, vegetation and land use patterns.

Profile 2:
Socio-Economic And Demographic Features of the population residing in the area. This will encompass variables such as numbers of people, their location and living patterns, sources of income and employment, community leadership and decision-making.

Profile 3:
Natural Resource Base. This will include estimates of wildlife populations by species and the availability of other natural resources for sustainable exploitation, how these resources are being presently

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used, their current/potential economic value to various stakeholders, and knowledge/attitudes/practices of communities towards these resources. Data will be collected on the community's attitudes and perceptions about conservation authorities working in their areas and how responsive these authorities have been to problems associated with wildlife or other resources .

With these profiles in place, the project will analyze and evaluate how these various factors are affected during the course of the project's implementation. At the end of the project, it is expected that the following closely linked objectives will have been achieved:

1. Natural Resource Empowerment Of Local Communities Legislation will be in place which empowers local communities with the right to manage and economically benefit from the sustainable management of resources on their lands.

2. Changes In Revenue Streams To Communities From Sport Hunting. There will be changes in the hunting license distribution system so that a large portion of the money derived from sport hunting (e.g., trophy fees) return directly to the concerned community for the purpose of resource management and community development. Similar changes should be considered for legislation involving forestry and other valuable resources that may be found.

3. Increased Community Revenue From Natural Resource Management. Significant increases will occur in the community's income being derived directly and indirectly from wildlife and other natural resource utilization;

4. Decreased Human/Wildlife Conflicts. There will be significant decreases in the number and incidences of conflicts between wildlife and human populations;

5. Improved Wildlife Habitat And Populations. There will be significant increase in improvement of wildlife habitat and gains in wildlife populations;

6. Improved Wildlife And Natural Resources Management. There will be significant increases in sustainable wildlife and natural resource utilization and management practices being observed by the community;

7. Increased Environmental Awareness. There will be significant increases in community's awareness of environmental issues;

8. Active Collaboration With Conservation Authorities. There will be significant increases in communities' ability to effectively interface and

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interact with conservation authorities; and

9. Improved Community Land and Resource Use Planning. There will be significant increases in communities' capacity to plan, develop and implement community based initiatives in sustainable natural resource utilization.

10. Community Ties To Private Sector. There will be closer links to the private sector which may begin collaborating directly with the local community to market and sustainably exploit their resources (tour operators, professional hunters, logging concerns, meat processing companies, handicraft marketing, etc.).

Section 1.3 Project Components

The LIFE project has four complementary, interrelated components that all support community-based natural resource management: (1) Community-based natural resource management activities themselves; (2) planning and applied research support; (3) environmental education; and (4) regional coordination and exchange of information.

The four project components support the core concept of the sustainable management of Namibia's natural resources by rural communities. The first component will support specific community-based pilot activities, which will start in Caprivi, Bushmanland and possibly expand into the communal areas surrounding the Etosha National Park upon completion of the comprehensive research program for the Etosha catchment area being conducted by the Etosha Ecological Institute and the Zoological Society of San Diego. These activities will be selected based on their relevance to the ecological, economic and social needs of the people in these regions. The second component will support planning and applied research that is relevant to community-based resource management project activities in these three regions. Research on socio-economic conditions will be done before the start of new pilot initiatives to ensure that benefits will accrue to the local communities; and, monitoring and evaluation of ongoing activities in Caprivi and Bushmanland will provide valuable information that can be used to adapt those projects, develop new ones and share lessons learned within Namibia and with other countries in the SADCC region. The third component will finance environmental education activities, that, in turn will strengthen the community-based initiatives by providing training for community decision makers, teachers, community liaison officers and game guards. The fourth component links the Namibian experience to similar regional programs in Zimbabwe, Malawi, Zambia, and Botswana through regional research, conferences, workshops and seminars coordinated by Malawi as well as other countries in the East and Southern Africa regions.

Component 1: *Community-based Natural Resource Management:*

The Community-based natural resource management component will strengthen and expand the on-going community-based conservation and development activities initiated by NGOs and the GRN in Caprivi and Bushmanland and possibly the Etosha area. This component has two aspects which will be funded through subgrants from the International or US PVO: (a) Pilot activities that will be implemented as part of on-going or planned NGO conservation and development programs; and (b) the institutional strengthening of NGOs and community-based organizations working in these regions. Most activities under this component are adaptive or experimental and maximum use will be made of local NGOs for implementation.

The pilot activities supported will take into account the following criteria:

o Proposed activities must be directly linked to at least one of the three geographic and one of the four programmatic areas of the project. These are community-based resource utilization, institutional capacity building, applied research, or environmental education in Bushmanland, Caprivi or the Etosha catchment area;

o Technical, economic, social and environmental feasibility studies must accompany the proposal and indicate that it is socio-economically and ecologically justified;

o Proposals must indicate which specific communities or resource users are targeted for subgrant activities; proposals must provide clear evidence that these groups have been involved in proposal development and that they will participate fully in their implementation;

o Proposals must explain what steps have been, or will be, taken to strengthen the local communities' long term capacities to sustainably use and manage their natural resources;

o Proposals must provide achievable and realistic targets and objectives within the time frame of the project;

o A plan for monitoring, evaluating and reporting on the project's progress and impacts must be presented;

o Proposals should ensure that planned activities will not adversely affect women or other disadvantaged groups, as well as outline constraints to their full participation and detail strategies to ensure their participation in and benefits from sound resource use;

o Proposals should demonstrate innovative and creative ways to

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promote growth in income and employment which encourages maximum community involvement and participation;

o Proposals which, present the possibility for replication or adaption elsewhere are encouraged;

o Proposals that incorporate collaboration among two or more organizations, including government services where appropriate, are encouraged;

o For proposed activities that are meant to continue after the period of the subgrant, proposals must demonstrate the sustainability of the activities, i.e., how recurrent cost will be borne in the long run, how post-intervention activities will be managed, etc.; and

o Proposals should indicate the extent to which the community is committing its own resources, both in-kind and in cash.

Applying these criteria, the following illustrative activities have been scheduled for LIFE project funding through the Cooperative Agreement with the PVO:

(a) Caprivi: Building on experience in Damaraland/Kaokoland and in East Caprivi, two Namibian NGOs, Integrated Rural Development and Nature Conservation (IRDNC) and the Namibia Nature Foundation, in close collaboration with the MWCT, are carrying out a community game guard program in Damaraland, Kaokoland and Caprivi and will receive subgrants for their Caprivi activities. West Caprivi is bounded to the west and east by the Okavango and Kwando Rivers respectively, to the north by Angola and the south by Botswana. The IRDNC/MWCT/NNF activity links the economic development of rural communities to wildlife and their environment and involves local communities in the management and utilization of their natural resources. Its objective is to enable the approximately 14,000 people living within the project area (which includes a proclaimed game reserve and the east bank of Kwando river from Singalamwe to Malengalenga) to coexist with wildlife. The region is also important for its biodiversity because it includes the only two examples of riverine floodplains in Namibia, some of the only remaining intact riverine vegetation and habitat for rare water birds and mammals, including sable, buffalo, hippopotamus, elephants, wild dogs, etc.

The Mbukushu, Khoe, !Kung, Yei, and the so-called "River Bushmen" groups reside in the project region. The areas have been extensively surveyed by the MWCT and IRDNC with full community participation to determine socio-ecological conditions and how to best resolve conflicts between people and wildlife. A key problem experienced by the people of the West Caprivi with wild animals, mainly elephants, is damage to crops.

The IRDNC/MWCT/NNF activity includes a community game guard

program, the placement of Community Liaison Officers, and the development of income/employment-generating, resource use schemes. Community game guards are individuals selected by the communities themselves. They are employed and trained by IRDNC to monitor animal populations and poaching. Official anti-poaching activities will continue to be the responsibility of the MWCT under its anti-poaching units. Illegal hunting activities uncovered by the guards will be reported to community leaders for discussion and resolution, including, if necessary, the involvement of government officials. In cases where serious conflicts recur, the "problem" animal is destroyed only after the local chief and conservation officer have approved of this action. The meat, by-products, and revenue from wild animal culling are distributed to the community or held in a community trust fund to compensate the community for losses. Local communities are being empowered to be fully involved in regional planning and have authority to make decisions about the sustainable use of their resources and to derive benefits from these resources to meet their needs.

Two Community Liaison Officers (one for East and the other West Caprivi) will be recruited to undertake extension work and to support community-based organizations in the management of their resources. The position of Community Liaison Officer is not a government post, but an ombudsperson and facilitator (accountable to the local NGO and communities served) who is the community's advocate and planner for local management and utilization of the resources. One of the primary responsibilities of the Community Liaison Officer will be to develop, with the full participation of the community and facilitated by the game guards, resource management initiatives that generate benefit to the community. These benefits may be social (i.e. increased confidence, awareness, knowledge, empowerment, increased status) or economic (i.e. meat, financial revenues, employment) or other positive outcomes for the community. Examples of benefit-generating activities include: community managed tourism, hunting safaris, traditional hunting schemes, trophy hunting, handicraft production and sales and veld food schemes. Illustrative tasks of the Community Liaison Officer and game guards include:

- *increase local awareness of the surrounding environmental conditions and systems, both in the present and in the future, in which residents live;*
- *determine specific needs and resource issues, as well as propose options for the community to consider;*
- *facilitate the establishment of appropriate and representational institutions for management of the resources;*
- *assist communities plan, design and implement specific*

income or employment schemes involving sustainable utilization of the community's natural resources.

- *provide technical assistance for resource utilization schemes;*
- *facilitate communication and act as a broker for the community among the private sector, the government, donors and others;*
- *training activities for community-based organization members; and*
- *support activities for community game guards.*

The LIFE project will initially finance the Community Liaison positions, community game guards (non-paramilitary), vehicles and maintenance costs as part of the subgrants to the Namibian NGOs. Payment of these recurrent costs by USAID under the project will gradually diminish as community and other resources became available. The mid-term project evaluation will focus on sustainability and will assist participating NGOs and communities to develop plans for shifting the financing of recurrent cost to the income generated by the community based activities. A plan for the phasing out of USAID funded recurrent costs will be in place by the end of the project's third year. The MWCT plans to incorporate the western bank of the Kwando River into the West Caprivi game reserve. It is anticipated that this will be done during the second year of the project.

(b) ***Bushmanland:*** *The Ju/'hoan Bushman Development Foundation, now called the Nyae Nyae Development Foundation of Namibia (NNDFN), in collaboration with the MWCT, is implementing a series of activities in Bushmanland which will be supported through LIFE subgrants. These activities are designed to enable local people (approximately 2,500) to benefit from wildlife utilization through a range of activities from trophy hunting to low impact ecotourism which is socially acceptable, locally managed and stimulates income and employment growth for the local community. The Bushmanland region has also been surveyed extensively by the MWCT and NNDFN who consulted widely with the local community before beginning project activities.*

Eastern Bushmanland is of particular significance for biodiversity conservation in Namibia. The region is part of the Kalahari sandveld system, but the eastern part, which is the focus of this project, is characterized by a series of seasonal water pans which serve as a focal point for people and wildlife alike. During the wet season, the area is prone to extensive flooding and the inundated areas attract large numbers of pelicans, flamingoes and other water birds. The area also attracts significant numbers of rare or

endangered birds such as the Wattled Crane, Ethiopian Snipe, and Slaty Egret. The region supports, seasonally, a population of 300-400 elephants and is one of the few regions of Namibia where the endangered wild dog occurs. Other significant game species include the roan antelope, a remnant population of buffalo, eland, giraffe, and wildebeest. Predators include lion, leopard and cheetah.

Eastern Bushmanland has a population of about 2,500 who consist of the Ju/'hoan San people who are traditional hunters and gatherers. Communities have a small number of cattle for milk and slaughter and most villages are engaged in dryland gardening. Like the West Caprivi region, there have been tensions surrounding the use of land and wildlife between the local people and outsiders such as the governments, tour operators and other ethnic communities. In the past, the conservation authorities tried to establish a game reserve in the region, but the effort was resisted by the local community as a threat to their land rights. The game reserve was never proclaimed. The biodiversity of the region has been threatened by the settlement of people at water points, especially boreholes, localized overgrazing and resulting bush encroachment, incursion of cattle herders into the region from Hereroland, and poaching from within and outside the area. Game numbers (ungulates) have declined significantly over the past decade and will soon reach critically low numbers if the trend is not reversed.

The local community has organized itself into the Nyae Nyae Farmer's Cooperative and has in turn formed the Bushmanland Environmental Planning Committee. The Committee consists of local representatives from:

- *The Nyae Nyae Farmer's Cooperative,*
- *The Nyae Nyae Development Foundation,*
- *The Ministry of Wildlife, Conservation and Tourism*
- *The Ministry of Agriculture*
- *The Ministry of Lands and Resettlement*
- *The Private Sector (professional hunters)*

It has been decided that this group will work to produce an integrated landuse plan for Eastern and Western Bushmanland. Eastern Bushmanland will be established as a Wildlife Management Area in which a mixed landuse will be based upon wildlife, some livestock and dryland farming, and forestry.

The communities are very much aware of the overgrazing that has occurred in neighboring areas and believe that their future is still tied to the survival of large game species. The local communities would

like to develop their own low impact tourism industry and explore how the wildlife of the area can become a key resource for the development of Eastern Bushmanland.

Currently, wildlife populations are very low in Eastern Bushmanland due to the drought, a change of pattern in veld fires, termite pasture destruction, veterinary fencing, and animal and human predation. The main factor, however, is believed to be the lack of strategically located water points so wildlife can take advantage of the excellent veld food:

Species	Estimated #'s 1990	Estimated #'s 1982
Roan	100	160
Wildebeest	250	530
Buffalo	12	70
Eland	3	500
Oryx (Gemsbok)	250	340
Giraffe	250	940
Kudu	500	850
Elephant	250	210
Hartebeest	100	200
Sassaby	0	7
Duiker	600+	600
Reedbuck	0	30
Steenbok	800+	870
Warthog	60	370
Ostrich	100	280

Predators	Estimated #'s 1990	Estimated #'s 1982
Brown Hyena	20	50
Spotted Hyena	100	150
Cheetah	25	20
Lion	50	170
Leopard	100	80
Serval Cat	10	7
Wild Dog	37	110
Caracal	80	50

Source: Grellmann, Volker. 1991. The Bushman. What does the future hold? ANVO Hunting Safaris, Windhoek. 28p.

The residents of Eastern Bushmanland are interested in reintroducing the now locally extinct zebra, springbok, sable and reedbuck, while building up and sustainably managing the existing population of wildlife.

With appropriate MWCT policies, the current annual offtake of only 6 elephant, 4-5 leopards and 5-6 antelope, sport hunting has the potential to return as much as R 250.000/year to Eastern Bushmanland with a great potential of increasing revenue to the community if the wildlife population can be increased from reintroduction programs and improved wildlife management.

Similar to the IRDNC/MWCT activity in West Caprivi, the NNDFN/MWCT is implementing a community game guards program and will have Community Liaison Officers who will assist with the development of income and employment benefit generating activities. The aim of project's activities is to conserve the biodiversity and life-supporting ecological balance of Eastern Bushmanland, while empowering the local people to manage and benefit from the direct use of natural resources such as wildlife, wild plants and timber.

Alternative forms of supply driven tourism which have been discussed include:

- *Craft marketing,*
- *Demonstration Villages for tourists,*
- *Training Bushmen to become professional trophy hunting guides,*
- *Developing pay-to-use camping facilities,*
- *Providing a Bushman Guide Service for tourists coming into the area; both foot and vehicle safaris.*
- *Conducting ornithological tours when the local pans are seasonally inundated and serve as important waterbird habitat.*

More traditional use of natural resources, that are likely to be part of the NNDFN/MWCT project, for sustainable economic development include hunting of dangerous game, forest management, sustainable exploitation of veld products for income-generation (e.g., beekeeping), marketing of vegetables, livestock marketing.

In addition to the activities described above, fuel-efficient stoves (to lessen the demand for forest wood) and charcoal makers (as a potential source of income generation), as well as, water conservation technologies may be introduced which will help local communities better conserve and benefit from these precious resources.

The LIFE project will assist the NNDFN/MWCT by providing community liaison officers, funding community game guards, vehicles and equipment to carry out project activities. As in the case of Caprivi, the recurrent cost components will increasingly be financed by non-USAID sources over the life of the Project. A plan for this reduced reliance on LIFE Project financial resources will be developed by the third year of the project.

Within Caprivi and Bushmanland, subgrants will be made to those NGOs already working and to others for community-based resource management projects. Given women's key roles in using these resources to meet household needs, many of the subgrants are expected to support activities and organizations involving women.

(c) Institutional Strengthening for Resource Management

Institutions, appropriate to the resource management tasks and acceptable to the communities involved, need to be established and strengthened in order for local participants to exercise control of local resources and their benefits. The functions of local level institutions that will qualify for assistance under this project element include:

- *o Technical wildlife management*
- *o Generation, intake and administration of financial and other resources,*
- *o Allocation of responsibilities and benefits within the community,*
- *o Promotion of the development of local enterprises,*
- *o Representation to the higher levels of administration,*
- *o Environmental education, formal and non-formal,*
- *o Natural resource accounting,*
- *o Natural resource marketing,*
- *o Low impact ecotourism, and*
- *o Craft production and marketing.*

Community-based organizations operating in the targeted geographic areas will receive support for services, material and equipment that are used directly for management activities and for organizational skills development, such as training and technical assistance in planning, accounting and financial management, administration, and evaluation. This assistance to community organizations will be carried out through subgrants to NGOs by the PVO.

USAID is in the process of conducting financial management assessments of potential NGO subgrant recipients to identify their strengths and weakness to plan and implement projects. Training will be provided to NGO subgrantees as required to ensure the proper financial management of subgrant activities. The result of the financial assessments are expected to be completed by September 1992 and will be incorporated into the incountry training program of the PVO.

To strengthen Namibian NGO capacity, subgrants will be provided to local NGOs, especially those already involved in the administration of umbrella subgrants in the two regions. The most important of these NGOs is the Namibia Nature Foundation. The NNF is likely to receive one of the initial institutional strengthening grants under LIFE because it already serves as an "umbrella" local NGO that handles small grants from donors such as GTZ, WWF, NORAD and the EEC and has a well established structure for evaluating, selecting and managing donor funds. It presently manages a project portfolio of around US$1.0 million. Support will be required, however, if the NNF is to assume additional project management responsibilities in the LIFE Project areas and to raise funds from private and other donors to sustain the community based initiative in Bushmanland, Caprivi and the Etosha catchment area.

(d) Training

Both long and short-term training of Namibians is an important part of the LIFE project and will be incorporated into each project component. Special attention will be given to Namibians from Caprivi, Bushmanland and the Etosha area who in the past have not had access to preservice and inservice training. The training component will also provide support to the MWCT's Affirmative Action plan. The MWCT and several NGOs have identified preliminary training needs in a number of fields, including program administration, natural resource economics, finance, management, communication, environmental education and ecotourism including alternative tourism, as well as in specific technical skill areas such as basic building/construction, craft production and wood working skills and first aid.

The LIFE project will assist the MWCT and NGOs with training programs for the Community Liaison Officers, MWCT and NGO personnel, community groups and community leaders. However, long-term degree training outside Namibia will be limited to GRN personnel. The incountry diploma training will be open to Namibians from the communities and private and pubic sectors who are working in or serving the needs of the three geographic regions. Illustrative training areas include the following:

MWCT

- *Community-based conservation theory and skills, communications and facilitation skills*
- *Management skills*
- *Accounting and finance*
- *Leadership*
- *Natural resources management (e.g. wildlife, range, forestry)*
- *Environmental impact assessment*
- *Socio-economic impact assessment*
- *Environmental natural resources economics*
- *Gender planning*

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o *Community based environmental education*

NGOs

o *English conversation training*
o *First Aid*
o *Driving skills*
o *Vehicle maintenance*
o *Camp management*
o *Small Business management/Finance*
o *Ecotourism/Tourist operation and management*
o *Animal and plant identification*
o *Basic building/construction skills*
o *Construction of wetland systems from grey water*
o *Erection and maintenance of water installations*
o *Public relations and communications skills*
o *Basic bookkeeping*
o *Computer literacy*
o *Personnel Management*
o *Community Development*
o *Social marketing for natural resource management*
o *Gender planning and evaluation*
o *Woodworking/Carpentry skills*
o *Low impact ecotourism*

Component 2: *Planning and Applied Research*

(a) Overview

Given the adaptive and experimental nature of community-based resource management projects and the need to develop viable lessons learned that can be applied on a broad scale, the applied research component of the Life Project will pay specific attention to the intended and unintended impacts of project and sub-project interventions. All activities will need to include the collection and analysis of base-line data for selected indicators and periodic monitoring of these indicators over the life of the project. Also there is the need to broaden and deepen Namibia's existing private and public research capacities.

Generally, the "adaptive management" concept is most useful in ongoing project planning as it provides a means for taking into account short-term changes. The basic principle of the adaptive management theme is that there is monitoring and feedback between research and management, and that management approaches should be used as experimental tests of our understanding of the ecological systems and what is required for their sustainability. The approach thus stresses the importance of feedback into decision-making. The adaptive management approach is relevant to both

ecological and social systems. When it has been applied in the development field, it has been referred to as a "rolling" or "flexible" design. Examples of planning and applied research activities that focus on community-based sustainable management of natural resources and directly relate to the project's community based initiatives in the geographic areas of Caprivi, Bushmanland and Owambo are:

- ***Study of Declining Large Mammal Populations by the Etosha Ecological Institute and the Zoological Society of San Diego***

The GRN is working to develop self-sufficiency through a wildlife and tourist-based economy. Etosha National Park, Namibia's primary international tourist attraction, is the home of five conspicuously endangered species, i.e., the black rhino, elephant, Hartmann's zebra, black-faced impala, and cheetah. The preservation of Etosha as a large intact ecosystem which includes the buffer communal and commercial areas surrounding the National Park is critically important for maintaining international tourism and biological diversity. Unfortunately, there has been a steady decline in most major wildlife populations on Etosha's plains and, to date, no comprehensive, systematic study of factors causing the decline of ungulates has been done. The LIFE project will finance a research grant to the Zoological Society of San Diego in collaboration with the Etosha Ecological Institute to support a study of what factors have caused the decline in wildlife in Etosha and how managers can alter these factors so that the ecosystem promotes a wildlife-based economy in Northern Namibia. Adapting this information and applying it to potential restocking of rural lands could provide a model system for wildlife conservation and management throughout the Etosha ecosystem, particularly in southern and western Ovambo, Damaraland and Kaokoland. This study is considered to be an essential element for the planning for the community based initiatives in the communal areas along the park's borders which may be initiated in the latter years of the project.

- ***Fire Ecology In The Northern Kalahari Woodlands.*** *Fire is used extensively by the communities in Owambo, Kavango, Caprivi and Bushmanland and may alter the environment to a less productive level endangering sustainability of current management practices. Fire may contribute to a loss in variety of grasses and promote bush encroachment, or vice versa depending on when and how often it is applied.*

- ***Community Development And Low Impact Ecotourism***

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Potential In Caprivi, Bushmanland and Etosha Catchment Area. *This feasibility study would investigate the economic, cultural, institutional and environmental potential of low impact and socially acceptable eco-tourism (e.g., marketing of handicrafts, village based tourism, foot safaris) in these unique, fragile and difficult to access regions of Namibia.*

o ***Ovambo Ethnobotany Project.*** *Of all regions in Namibia, it is in Ovambo where depletion of favored plant resources (e.g., Colophospermum mopane for poles) is most apparent with implications for core conservation areas such as Etosha National Park. There is increasing pressure on commercially important wild plant resources (e.g., fuelwood, palm fibre, traditional dyes as Berchemia discolor), and wood for carving (e.g., Commiphora africana) since they provide a buffer against extreme poverty as people fall back on wild plant use as a source of income. Little is known of traditional conservation and resource management practices in the region, nor the sustainability of current extractive practices. In conjunction with the resource users and managers, appropriate solutions will be identified and developed to assure sustainable use of Ovambo's major plant resources.*

o ***Changing Patterns Of Wild Plant Use By Women In The Caprivi Area.*** *Throughout Africa, women are the main wild plant resource users, and the first group to suffer if craftwork, fuelwood, veld food, thatch-grass and other resources are depleted. The Caprivi is one of the most culturally and botanically diverse parts of Namibia, which is of great interest to development and conservation planners. Although human densities in the West Caprivi are low, the same does not apply to East Caprivi, due to the influx of people from southern Angola and Zambia. Starting with a broad-based survey documenting plant names and uses in both the West and East Caprivi, this study will focus on the role of women as plant gatherers, comparing plant use in the peri-urban Katima Mulilo to that in the two selected rural villages in two different vegetation types.*

o ***Affirmative Action "People's Botany Projects In Bushmanland, Caprivi and The Etosha Catchment Area.*** *In order to stimulate the involvement of Namibian graduates, during vacation periods, employ 20 graduate students at the University of Namibia to undertake ethnobotanical surveys in their home villages over a three year period. Many graduates come from remote rural villages, are familiar with local vegetation and are aware of over-exploitation or scarcities of favored plant species. The students will act as rural facilitators during vacations and would carry out surveys of exploitation rates, traditional uses and management of these plants, as well as the current status (common, rare, extinct) and reasons for the status of important wild plants.*

Within the context of community-based resource management projects, the biological sciences are used for monitoring the impact of project activities on the resources, including changes in populations and their structures among key species; rates of deforestation; and loss of species diversity, among other indicators. Applied social science can play an important role in providing the necessary analyses of the dynamics (motivational, technical, and administrative) involved and suggesting management options that are accessible and feasible to both central planners and local communities.

The socioeconomic topics to be investigated and integrated into monitoring and evaluation of community based initiatives include the following:

- *identification and analysis of culturally determined tenure, rights, responsibilities, and practices relating to environmental, social/institutional, and economic resources;*
- *identification and analysis, by gender, of micro-level individual, household, and community motivational and decision-making factors, including the domestic economy, and the range of economic options individuals perceive;*
- *impact of project interventions on leadership structures and decision-making processes;*
- *investigation of center-periphery relationships in bureaucratic, legal, and administrative structures, with the inherent conflicts over resource control these relationships involve; and*
- *the current role of women in natural resources management and their perceived needs, constraints, and opportunities within their primary role as household managers.*

(b) <u>Strengthening of the MWCT in Analysis and Application of Results to Policy and Legislation</u>

The Environmental Planning Unit in the MWCT currently has only two employed professionals, a biologist and community-based conservation specialist. Given the importance of analyzing the economic dimensions of management decisions and environmental policies, it is critical that a natural resource economist also be placed in the unit. Under this component of the LIFE project which will be handled through the Cooperative Agreement with the PVO, a Namibian economist from one of Namibia's disadvantage communities will be recruited and long-term post-graduate training provided in natural resource economics. Replacement personnel for this economist will

be provided by the PVO while he is receiving training (expected to be between two and three years). An overlap of at least six months is planned to allow for a transition period and on-the-job counterpart training. Once training is completed, it is expected that the MWCT will assume all costs associated with the resource economist position in the Environmental Planning Unit.

The Environmental Planning Unit has received a grant from the AID Biological Support Program administered by World Wildlife Fund, for a Coordinator for community-based resource management for one year beginning in 1992. The LIFE project is expected to fund this position for three years, starting in the second year of the Project. The position will be filled by the PVO.

(c) Training for Namibians Working in Natural Resource Management

Both GRN and NGOs cite the lack of trained personnel as a major constraint facing the development of effective natural resource management programs. While there is a need for providing short-term training to field practitioners as described above, there is also a need for long-term and short-term and technical training in the social and natural sciences, environmental education and interpretation, and in administration. Funds will be available under this component of the LIFE Project to support training of disadvantaged Namibians in the natural resource areas from the three geographic areas and NGOs working in these areas. The emphasis will be on specific training programs to enhance the research and analytical skills of those working in the environmental natural resources and social sciences to promote their involvement in community based applied research. This may involve strengthening the staff capacity of NISER, NEPRU, DERU and other local research organization to service the three geographic areas.

Component 3: Environmental Education

Environmental education (EE) will enable people in the communities affected by the project to understand the environment in which they live, to identify and analyze environmental problems facing their communities and to find the solutions which will enable them to sustainably utilize and benefit from natural resources. Sustainable management of Namibia's unique and ecologically diverse natural resources, including wildlife, will require the understanding and active involvement of Namibians, particularly those residing in the marginal communal areas and buffer zones involved in this project. People must become more aware of how rapidly Namibia's natural resources of land, soil, water and wildlife are diminishing, as well as the potential economic value of these resources. These people need to understand that it is within their ability to preserve their natural resources while simultaneously improving their economic position.

Government officials and certain educational institutions are aware of the need for community-level environmental education and have begun to consider ways to incorporate EE activities in their programs. The MEC has appointed an EE coordinator in the curriculum planning unit and the subjects of Environmental Studies, Life Science and Natural Economy are being added to the curriculum at the primary, secondary and senior levels, respectively.

The MWCT has an Environmental Education co-ordinator based in Windhoek who is part of the Environmental Education and Extension Section. The primary aim of this section is to develop a national awareness of the diversity within, and fragile nature of, the Namibian environment, and to encourage and promote the sustainable utilization of Namibia's natural resources. The objectives of the section are to develop a national, interactive communications network, and to facilitate natural environmental experiences and learning opportunities.

The MWCT has taken the initiative to draft an EE policy and views EE as an important part of its work. The development of an Environmental Education Center in the Etosha National Park at Namutoni is an important part of the MWCT's 1992 program and will be done in collaboration with the Rossing Foundation through a grant financed under the USAID financed READ project. The primary objective of the center is to establish environmental awareness among the public, particularly among neighboring rural communities and to promote this awareness of practical conservation and sustainable utilization of natural resources.

The MWCT is developing an extension program that will increase the people's understanding of the benefits that conservation and tourism bring to the nation. Groups from the LIFE pilot project areas of Caprivi and Bushmanland including primary and secondary school children, local teachers, community leaders, community game scouts, and policy makers are expected to directly benefit from the Namutoni Center and its outreach program.

There may be a need for small community based EE centers in the Kwando area to support work in Caprivi and the Tsumkwe area of Bushmanland. These facilities may be financed by subgrants from either the LIFE or READ projects to those NGOs implementing the community based initiatives and directly integrated into their community level activities. Support services such as curriculum materials, staff, training, etc., would be provided through the READ Project's grant to the Rossing Foundation.

While the project recognizes the importance of EE initiatives in GRN and community programs and provides for such education directly and indirectly in each project component, the major EE program in Namibia will be supported through the USAID grant to the Rossing Foundation financed under the READ project (673-0004).

Component 4: *Regional Communications and Exchange of Information*

The regional Natural Resources Management Project (NRMP) is being carried out in a variety of differing political, cultural, economic, and environmental settings in SADCC member countries. Since the LIFE project is similar to the country programs in Botswana, Zimbabwe and Zambia, there exist valuable opportunities for sharing experiences. Each participating SADCC country can benefit from the others, successes and mistakes by sharing information and lessons learned.

While each national program has its own focus and stage of development, there are numerous opportunities for networking and information exchanges. Each participating country, for example, is either addressing or planning a community game guard program. The sharing of information on on-going Namibian programs implemented will offer other approaches to regional projects for study and comparison. At the same time, information on the established programs in Zambia and Zimbabwe can allow Namibia to assess possible expansion of its national programs. Cross-border census and monitoring of wildlife populations would also be facilitated. In addition, specific research on topics common to regional projects can be shared. Topics might include: evaluations of resource management activities; community dynamics; empowerment of women; decentralization of authority; greater involvement of private sector; or pilot ecotourism activities. Regional or bilateral cooperative activities could include the development of regional environmental educational materials.

Both Botswana and Namibia have a common focus on the sustainable utilization of veld products, and re-establishment of indigenous veld plants. Namibia can benefit from the experience of Botswana's utilization and re-establishment of veld products as project activities. Involuntary resettlement of human populations and the effect on resource activities is common to Zimbabwe, Botswana, and Namibia. The sharing of research on this topic among Southern Africa countries will help create a broader knowledge base and understanding of a shared situation and has reliance to the pending political and economic changes in South Africa. Namibia's scientific research and results of specific activities such as the de-horning of rhino are significant on a regional basis. Results from the Namibian and Zimbabwean de-horning programs will assist other SADCC and African countries in deciding whether to utilize this approach.

The office of the SADCC Sector Coordinator in Malawi will serve as the facilitator for regional communications and exchange of information. Regional research, conferences, workshops and seminars are coordinated through the Malawi component of the NRM. Each national participant is represented on the regional Project Coordinating Committee (PCC) which is chaired by Malawi. The body meets at least once a year in Malawi to discuss

and analyze progress and constraints on overall project implementation; propose and approve regional activities and meetings; and review the terms of reference for the mid-term evaluation.

A reference center for publications, articles, and conference proceedings relating to community-based resource management, wildlife utilization, community development and other topics relevant to NRMP activities has been established in Malawi. Each participating country forwards relevant reports to the coordinating unit in Malawi. A list of holdings is distributed periodically from Malawi to all project participants, and articles are sent to participants upon request. A regional data base established in Malawi maintains records of baseline information on wildlife populations and habitat, socio-economic variables, and environmental conditions. Each participating country forwards baseline data to Malawi for inclusion in the data base. Information stored in the data base is available to all participants for analysis and review. Through the monitoring and evaluation process and the comparison of results, a unique opportunity is provided for formulation of theories regarding necessary conditions and policy environment for success, viability of different approaches, and implementation constraints. The lessons learned provide a valuable knowledge base for the design of future community-based resource utilization programs.

ARTICLE 2:

Cost Estimates and Financial Plan

Section 2.1 *The Budget*

The budget for the LIFE project is presented in Annex P, Tables I through VII. The estimated overall cost of the five year project is $10.5 million.

The project will be implemented through a Cooperative Agreement with a U.S. or International PVO and a Research Grant to the Zoological Society of San Diego and USAID/Namibia. None of the funds under the project will actually be disbursed to or through the Government of Namibia. If the Project's budget is broken down by these various modes of implementation the funds will be allocated as follows:

	Total	%
US PVO	$ 8,028,404	76
San Diego	916,145	9
Inflation/ Contingency	503,420	5
USAID	1,052,031	10

TOTAL	*$ 10,500,000*	*100%*

The Cooperative Agreement with the US or International PVO will provide management support to the project, long-term and short-term technical assistance, workshops, conferences, regional networking, in-country and external participant training and subgrants to Namibian NGOs and other organizations for the community based activities, applied research, institutional support and environmental education. Of the $8,028,404 in this Cooperative Agreement, $2,515,614 or 31 percent will cover the management support functions. This represents 24 percent of the LOP funding. When the USAID management component is added, the proportion of the project going to cover management activities rises to 34 percent. Therefore, the bulk or approximately two-thirds of the financial resources will be used in direct support of the project's goals and objectives. The subgrants to Namibia NGOs totaling $2,496,100 amount to 31 percent of funds in the Cooperative Agreement. The remaining 44 percent of the funds covers technical assistance, training, workshops and regional coordination/networking.

The three year research project being carried out jointly by the Zoological Society of San Diego and the Etosha Ecological Research Institute of Namibia is estimated to cost $1,860,670. However, only $916,170 or 49 percent of the funds is being requested under the LIFE project. The balance of the funding will come from donations and contributions raised by the Zoological Society of San Diego.

It is planned that the $10.5 million project will be obligated in three tranches of $3.0 million in FY 92 and $4.5 million in FY 93 and $3.0 million FY 94.

Section 2.2 *Host Country Contributions*

In support of the community development activities, the MWCT will make the following contributions. First, the MWCT will contribute the equivalent of $1,386,504 for activities related to the LIFE project in the Caprivi region. This includes involvement of anti-poaching personnel in protecting wildlife resources, park management staff in protecting resources and interacting with surrounding communities in problem animal control and project related meetings. Second, in Bushmanland, the MWCT will contribute the equivalent of $263,020 for project related activities. These activities include the involvement of personnel in protecting wildlife resources through law enforcement and maintenance of water points for wildlife, attendance at Bushmanland environmental planning committee meetings and other project related meetings with the communities, NGOs and other Ministries.

Third, in Owamboland and Kaokoland, the MWCT will contribute the equivalent of $655,713 for conservation management. Their activities include

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the control of problem animals such as elephants which leave Etosha, law enforcement, protection and maintenance of resources, extension activities, and servicing of the game guard system in Kaokoland.

For the direct and indirect support of the research activities in the Etosha catchment area, the MWCT will allocate the equivalent of $1,449,741 for conservation management in the Etosha National Park. The project related activities include the salaries and work of the Etosha anti-poaching unit, as well as the salaries and work of rangers and conservators involved in maintaining and protecting the park's wildlife and infrastructure. Etosha conservation staff will also interact with the local communities bordering the park for problem animal control and the development of better relations between the park and its neighbors. This is in terms of the policy of integrating the park into surrounding economies and land-use patterns which will be implemented under LIFE funding.

Overall project management will be provided by the MWCT's Environmental Planning Unit. It is estimated that 50% of their budget will be allocated to the LIFE project. This contribution represents the equivalent of $343,426. The unit coordinates community-based conservation at the national level, representing the MWCT on the LIFE project and field work in LIFE project areas. The ministry will also backstop the technical experts furnished by the PVO.

The GRN's contribution is summarized as follows:

	GOVERNMENT OF NAMIBIA (U.S. Dollar equivalent)	
	Amount (US$)	Percent (%)
Planning and Applied Research	1,449,741	35.4%
Community Development	2,305,237	56.2%
Project Management	343,426	8.4%
TOTAL	4,098,404	100%

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Section 2.3 *Audits/Evaluations*

Audits will be conducted each fiscal year in accordance with the standard provisions of OMB Circular A133 for grants or cooperative agreements. Under new audit requirements. all non-U.S. and non governmental grantees and subgrantees receiving $25,000 per year or more of AID funds in any one calendar year under a grant, are required to have an independent audit performed of the grant in order to determine whether the receipt and expenditure of the funds provided under the grant are presented in accordance with generally accepted accounting principles and whether the grantee has complied with the terms of the agreement. The independent auditor must be selected in accordance with the "guidelines for financial audits contracted by foreign recipients" issued by the AID Inspector General and the audit must be performed in accordance with the "guidelines." Copies of guidelines have been sent to local CPA firms and will be sent to all participating NGOs. Local firms will be identified by USAID and certified by RIG/A in Nairobi. It is expected that the US PVO will conduct a single audit, encompassing subgrants funded each year in compliance with this requirement. Two Non-Federal Audits will be funded under the Project for the San Diego Zoological Society and will be through or under a direct contract awarded by REDSO/ESA. The audits will be during year three and five. The USAID/Namibia Controller will coordinate the audit activities for USAID.

Two evaluations will be funded under the Project. The evaluations will be during years three and five. The USAID/Namibia Project Manager will coordinate evaluation activities for USAID. The evaluations will be conducted under a direct contract or indefinite quantity contract work order arranged by USAID Namibia.

Implementation Strategy: Given the diversity and complexity of the problems being addressed by the LIFE project, the project implementation strategy is presented in the form of two tables. Table 3 gives an overview by [illegible] [illegible] problems, their causes and potential solutions. In Table 4, the strategy for addressing these problems is outlined by region and by year.

TABLE 3: Outline of Major Problems and Possible Solutions in the Regions Covered by the Project.

PROJECT AREA	PROBLEMS	CAUSES	POTENTIAL SOLUTIONS TO PROBLEMS FROM A COMMUNITY BASED STRATEGY OF SUSTAINABLE NATURAL RESOURCES MANAGEMENT
1. Caprivi	(1) Displaced persons/families (2) No employment opportunities (3) Poor support services and high incidence of disease and malnutrition among children (4) Declining wild life resources (5) Loss of domestic food crops (6) Juxtaposition of population to protected game areas	(1) Artificial peri-urban areas established by South African Defence Force. Families attracted to areas in search of work. (2) With the coming of independence, most people lost their jobs as South African Defence Force pulled out. (3) Health and educational infrastructure dismantled after the war. Loss of South African personnel not replaced by Namibians. (4) Poaching and war activities contributed to decline in wildlife. (5) Wild animals, particularly elephants, responsible for devastating crops. Made worse this year by drought. (6) Original park boundary failed to include the South Western side of Kwando River. Not done for political reasons because area was used by South African politicians as a personal hunting area.	(1) Locally recruited Game Scouts to monitor wildlife population and control poaching and to facilitate the identification and implementation of community based natural resource income generation schemes. (2) The rich and diverse forests combined with the vast Kwando River delta is home to a wide selection of wildlife and plants. Area offers a variety of opportunities for ecotourism involving communities and private tour operators. (3) Income from community based wild life management could be used to upgrade social services such as health care and education. (4) Legislation is needed to incorporate the western side of the Kwando into the park land. (5) Environmental education outreach program and establishment of a satellite Environment Education center in Kwando area. (6) Establishment of a Landuse Planning Process as basis for decision making in development of area (7) Enhanced coordination among various GRN ministries, local organizations and private sector.
2. Bush-manland	(1) Loss of traditional migration patterns and ways of living created a dependency on the government among people who historically have been independent and self-supporting. (2) Degradation of a once staple ecological system. (3) Unemployment (4) Resettlement of non-Bushman in the area. (5) Decreased wildlife populations. (6) Increased use of domestic livestock.	(1) Decision by former administrative authorities to encourage the Bushman to concentrate around peri-urban areas. (2) Emphasis in agricultural extension on cattle ranching at expense of wildlife and habitat contributed to marked decreases in wildlife populations. (3) Change from a pastoral economy to settled agricultural one. (4) Political pressure to open up Bushman for cattle grazing by Herero and other groups. (5) Veterinary Fencing (6) Poaching (7) Human Settlement at designated water points (8) Drought (9) Veld Fires (9) Terminal pasture destruction (10) Human Pop. Increase from 650 in 1960 to 4,500 in 1992.	(1) Decentralization of populations by re-establishing traditional settlements. (2) Reintroduction of once common game such as zebra, springbok, sable and reedbok. (3)Waterpoint management for wildlife. (4)Quotas based on annual wildlife counts and trends in trophy size. (5)Establishment of a Landuse Planning Process as basis for decision making in development of area. (6) Eco tourism with emphasis on the Bushman's unique culture and the wildlife and plantlife of the area. (7) Establishment of community, conservancies to manage natural resources and allow benefits to flow into the community. (8) Environmental education directed at community leaders and decision makers. (9)Establish game scout program.

PROJECT AREA	PROBLEMS	CAUSES	POTENTIAL SOLUTIONS TO PROBLEMS FROM A COMMUNITY BASED STRATEGY OF SUSTAINABLE NATURAL RESOURCES MANAGEMENT
3. Etosha Catchment Area	(1) Degradation of pasture land spread of bush and toxic plants. (2) Loss of forest resources - desertification (3) Declining water table and increased salinity of underground fresh water sources. (4) Concentration of people along pipeline in a few artificial peri-urban areas. (5) Increase in female headed households. (6) Loss of migratory routes for wild animals. (7) Declining numbers of large mammals.	(1) Decrease in transhumance and pastoralism. (2) Uncontrolled growth in cattle, donkeys and small stock. (3) Construction of pipeline and establishment of artificial urban centers by South African Defence Force encouraged people to congregate at these centers. Loss of wage income with their departure. (4) Rapid increase in population. (5) Departure of males to Windhoek and other areas in search of work. (6) Unauthorized fencing of communal grazing areas by richer farmers. (7) Poaching of wildlife and indiscriminate cutting of trees. (8) Destruction of the makalani palm for basket making. (9) Narrowing of Etosha park boundaries.	(1) Cultivation and conservation of wild plants/fruits affords a measure of protection during times of drought and poor rainfall (2) A complementary balance of game and domestic stock affords a better use of pasture and grasslands. (3) Decentralization and managed growth. (4) Ecotourism in the sparsely populated areas to the north and west of the Etosha Park. (5) Introduction of community game scouts to control poaching and work with communities on sustainable natural resources initiatives. (6) Formation of conservation conservancies. (7) Environmental education directed at key members of the community. Program operated out of Etosha and satellite centers in region. (8) Sustainable resource management of the makalani palm and identification of alternate plants for basket making. (9) Research on the factors causing deadlines in large mammal populations. (10) Region wide landuse plans (11) Enhanced coordination among various GRN ministries, local organizations and the private sector.

TABLE 4. Implementation Strategy for the Project by Region and Year

REGION	YEAR 1 FY92/93	YEAR 2 FY93/94	YEAR 3 FY95/96	YEAR 4 FY95/96	YEAR 5 FY96/97
1 Overall Program Implementing Agents 1. US PVO 2.Namibia NGOs 3. Community Stakeholders 4. GRN 5. USAID 6. Namibian Private Sector	Selection of International PVO and setup of management Unit in Windhoek. (2) Award of grant to Zoological Society of San Diego. (3) Passage of legislation to permit communities to benefit from natural resources management. (4) Subgrant to Namibia Nature Foundation for institutional strengthening. (5) MWCT established coordinating organizational structures in Caprivi and Bushmanland.	(1) National workshop on community based initiatives. Feedback to Steering Group. (2) First group of longterm participants enter training. (3) Baseline data collected and targets set. (4) Subgrants awarded for applied research in support of project. (5) Quarterly progress review held. (6) Technical Assistance arrives. (7) Landuse plans reviewed and modified.	(1) National workshop on community based initiatives. (2) Quarterly progress reviews held. (3)Mid-term evaluation by outside group (4) Modification of project made based on evaluation (5) Second group of LT participants enter training first group returns (6) Landuse plans reviewed and modified.	(1) National workshop on community based initiatives (2) Quarterly progress reviews held (3) Third and final group of participants enter training second group returns (4) Landuse plans reviewed and modified.	(1) Final National workshop on community based initiatives (2) Quarterly progress reviews (3) Final evaluation held (4) All participants return (5) Landuse plans reviewed and modified. (6) Follow on project for SARP funding prepared.
2 Caprivi Implementing Agents 1 IRDNC 2. NNF 3. MWCT 4. Private Sector Tourist firms 5. NewVeld Ventures 6. The community	(1) Subgrants to Integrated Rural Development and Nature Conservation and NNF (2) Study/Plan for expanding Caprivi Game Reserve to include west bank of Kwando (3) Analysis of low impact ecotourism potential (4) Study of employment/income opportunities (5) Natural resource based handicraft potential study (6) Baseline data collected analyzed. Impact indicators established. (7) Coordination mechanism established.	(1) Implementation continues with emphasis on landuse planning and developing community based income activities (2) Data collected on program impact. (3) Local Environmental education program initiated. (4) Marketing of handicrafts and other veld products initiated (5) Schemes for low impact tourism initiated (6) Training of community liaison officer and game guards. (7) Caprivi Game Reserve expanded to include west bank of Kwando.	(1) Implementation of phase I program continues. (2) Mid-project evaluation undertaken (3) Plans developed to begin shifting recurrent cost from USAID grant to other sources (e.g. Joint ventures with private sector revenue from natural resource exploitation or ecotourism). (4) Training of community liaison officer and game scouts.	(1) Program modified to take into account evaluation results. (2) Training continues (3) Emphasis on sustainability of availability of project activities emphasized.	(1) Program ends. (2) Final evaluation (3) Training ends.

TABLE 4: Implementation Strategy for the Project by Region and Year

REGION	YEAR 1 FY92/93	YEAR 2 FY93/94	YEAR 3 FY95/96	YEAR 4 FY95/96	YEAR 5 FY96/97
3. Bushmanland Implementing Agents 1. Nyae Nyae 2. NNF 3. MWCT 4. The private sector 5. New Veld Ventures/ Rossing 6. The community	(1) Subgrant to Nyae Nyae Foundation to initiate program. (2) Restrictions on tour operators in area. Emphasis on low impact tourism to allow gains in wildlife population and community-based management. (3) Emphasis on staff development such as hiring and training of camp scouts. (4) Analyses of natural resources based income / employment opportunities (5) Baseline data collected and analyzed program impact indicators selected. (6) Coordination mechanism established.	(1) Implementation of program continues. (2) Data on program's impact collected. (3) Schemes for income and employment expanded (4) Training of community based staff. (5) Training of Bushmen as professional hunting guides.	(1) Implementation of program continues. (2) Mid-project evaluation. (3) Plans developed to begin shifting recurrent cost from USAID grant to other source (e g. Joint ventures with private sector revenue from natural resource exploitation or ecotourism). (4) Training community based staff continues.	(1) Program modified to take into account results of evaluation. (2) Training continues. (3) Emphasis on sustainability of project activities emphasized.	(1) Program ends and final evaluation (2) Training ends.
4. Etosha Catchment Area Implementing Agents 1. MWCT 2.ZSSD / EEI 3. The community 4. NGOs 5. Research organizations	(1) Research on the decline of large ungulates initiated in Etosha Area by Etosha Ecological Institute and Zoological Society of San Diego.	(1) Research continues. (2) Environmental assessment undertaken (3) Socio-economic research on options for community based. Initiates undertaken with local research organizations	(1) Research continues and results incorporated into landuse plans for community based initiatives (2)First phase plan development with limited and selected communities. (3) NGO/CBO identified and selected to implement program. (4) Subgrant for pilot community based activities awarded.	(1) Program implemented (2) Community level staff trained.	(1) First phase program evaluated.

Section 3.2 *Implementation Arrangements*

Various options for project management and implementation have been considered. One option was to use a national NGO in view of the GRN's positive relationship with NGOs as implementing agencies for Namibia's numerous new development programs. Such an NGO would have to have a range of skills and the mandated interest to take on the multi-faceted implementation tasks required by the LIFE project. The ability to recruit and manage long and short-term international and Namibian technical advisors as well as participant training and to manage AID procedures and regulations are critical to the smooth implementation of Project activities. Also the implementing organization would need to be regarded by the MWCT and the NGO community as neutral and be impartial in considering subgrant requests from applicants without conflict of interest. Also the organization would need to assist in the development of institutional capacity among the NGOs and Namibian organizations. The local organizations that come closest to being able to meet these criteria are the Namibia Nature Foundation and the Rossing Foundation.

USAID and the MWCT have decided that the best strategy is to use an international or U.S. PVO to implement the LIFE project. The PVO, once selected, will be encouraged to form a partnership with a local NGO to provide local staff, expertise and office space for its incountry operation and to bring local experience and knowledge to strengthen project implementation. As the PVO would bring particular advantages to project implementation, including familiarity with AID regulations and procedures, experience managing similar projects elsewhere in Africa, and networks of contacts with projects and agencies working in natural resource management issues in the Southern Africa region and beyond. These skills coupled with the local experience and capacity of a Namibian partner is considered the preferred option for project management.

A bilateral grant agreement between the Government of Namibia (GRN) and USAID will be executed. The grant agreement will authorize USAID to negotiate and sign a Cooperative Agreement with a PVO to provide management support and fund subgrants, technical assistance and training. The grant agreement will also authorize USAID to make a research grant to the Zoological Society of San Diego for the research study in Etosha to be done jointly with the Etosha Ecological Institute. Under the Cooperative Agreement with the PVO, a technical support staff of two persons for overall project management will be selected. In addition, the PVO will provide a project manager, and a locally hired accountant. The responsibilities of the PVO will include the provision of short-term technical assistance to the subgrantees, long and short-term technical assistance to the NGOs and GRN,

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and all necessary long and short-term training. The PVO will also manage the various subgrants for community-based activities, institutional strengthening and research.

The preferred methods of financing are direct payment or reimbursement, although a letter of credit may be authorized. These procedures are approved methods of financing. To the extent required, periodic advances may be provided to the grantees/recipients. Advances will be limited to the amount required for immediate disbursing needs in accordance with U.S. Treasury cash management guidelines.

In accordance with A.I.D. requirements, USAID/Namibia will have ultimate responsibility for LIFE project management, monitoring and financial management. USAID/Zimbabwe will retain responsibility for consolidating and coordinating overall assessments of the impact of the regional project and will act as the official accounting station for the project's accounts. USAID/Namibia will hire a Personal Services Contractor (USPSC) who will be assigned to the Human and Natural Resources Division to assist with project management, monitoring and implementation. The PSC will be responsible for project management, reporting, ABS preparation, Congressional reporting, PILs and PIOs as required by AID. Also USAID/Namibia will hire a FSN program specialist and a FSN project accountant who will be splitfunded between the LIFE and READ Projects. The accountant and program specialist will be located in the Human and Natural Resources Division and assist the Project Manager and US PSC in handling the management and financial aspects of the project.

Overall project management and oversight will be provided by a Project Steering Committee (SC) composed of six senior representatives drawn from the MWCT, USAID, the Integrated Rural Development and Nature Conservation, the Nyae Nyae Foundation, a Namibian training institution and the United Chambers of Commerce. Both IRDNC and Nyae Nyae will represent the Caprivi and Bushman communities on the committee. It is anticipated that by the second year of the project these NGOs will be replaced on the committee by elected representatives from the communities themselves. The private business community will be represented by the Chairman of the United Chambers of Commerce. Given the emphasis placed on human resources development in the project, a representative from one of the major public or private training organizations will be chosen to serve on the committee. Other participating organizations in the project may be represented on the committee in an advisory or non-voting status.

The PVO will review and recommend proposals to the SC for approval and participate as technical advisor and secretariat to the SC. The SC will be responsible for reviewing annual workplans and budgets and will provide policy guidance as required. The PVO will be responsible for submitting quarterly operational and financial status reports including host country

contributions to the SC, USAID and MWCT.

The PVO will have responsibility for reviewing and recommending approval to the SC of subgrants to NGOs and other groups which will implement activities in community-based resource utilization, institution building, environmental education and planning and applied research. Subgrants or contracts of $50,000 or less do not require prior approval of the SC provided the activity is covered in the annual work plan. The PVO will ensure that recipient organizations have adequate management and accounting systems in place to safeguard U.S. Government funds. The PVO will hold ultimate responsibility for overall financial accounting and be responsible for ensuring the technical, social and economic viability of each of the subgrants and other activities, as well as their compliance with the guidelines established by the SC and consistent with AID and GRN procedures.

In addition, the PVO will identify, recruit and field short and long term technical assistance needs in support of community-based resource use, baseline research studies, institutional strengthening, etc., including the technical personnel that would be seconded to the MWCT. The MWCT and the PVO will work out an agreement of understanding that specifies to whom seconded technical experts are to report. It is expected that every effort will be made to select indigenous, disadvantaged Namibians for technical posts. In cases where this is not possible, disadvantaged Namibians will be selected for training immediately upon selection of the technical advisor so that they are able to assume substantive project management positions prior to the departure of the technical experts.

All project commodities will be procured by the PVO with the exception of those project commodities such as a computer and vehicle which will used by the project funded staff working in the USAID mission. Commodities purchased under the subgrants will be the responsibility of the subgrantees. The PVO will procure from U.S. source and origin to the maximum extent possible. Gray Amendment entities will be used to the maximum extent possible for the procurement of commodities and services. Every effort will be made to ensure that Gray Amendment organizations receive copies of the Invitation for Application for the Cooperative Agreement.

The US Peace Corps has also indicated its interest and willingness to participate in the implementation of project activities. Beginning in FY 94 (October 1993), Peace Corps Volunteers (PCVs) will be recruited to provide technical assistance to the local NGO grantees and community groups and to assist the Ministry of Wildlife Conservation and Tourism with natural resource management and conservation. The provision of PCVs will be based on the technical assistance needs as identified by the MWCT and NGOs themselves and will be determined by their respective capacity to provide adequate work and support for each PCV requested.

(a) Description of Process

1. Role of AID

USAID/Namibia will have responsibility for project monitoring, assessing the program's impact, and financial accountability and for ensuring ultimate conformity of the project to USAID and US Government rules, regulations and procedures. Funds control will be shifted from USAID/Zimbabwe to USAID/Namibia. USAID/Zimbabwe will serve as accounting station making payments and maintaining financial records. The Chief of the USAID/Namibia's Human and Natural Resources Division will be designated as the USAID Project Officer and will be responsible for overseeing all project implementation activities, and represent USAID on the SC. He/She will be assisted by a project manager, hired under a US PSC financed half under this Project, and half under the READ Project. A FSN project specialist splitfunded with the READ Project will also be recruited.

The US PSC will report to the Human and Natural Resource Division Chief on all aspects of project implementation and will supervise the FSN staff on a day-to-day basis. The PSC's responsibilities will include continuous monitoring of all project activities, drafting of Project Implementation Letters (PILs) and Project Implementation Orders (PIOs) and semi-annual Project Implementation Reports. The PSC, in consultation with the USAID Project Officer, will maintain close contact with the international PVO and the Zoological Society of San Diego and will monitor their compliance with the terms of the Cooperative Agreement or grant, respectively. The PSC's scope of work is contained in Annex M.

The PSC and Namibian project specialist will also arrange external project evaluations in years 3 and 5. She/He, in conjunction with USAID, MWCT and the SC, will be responsible for recommending corrective action as necessary, based on the findings of evaluations and audits.

2. Role of MWCT

The MWCT will be responsible for interpreting the GRN's national policy, establishing policy and guidance for the LIFE project, and assuring that all Project activities fit within the GRN national policy framework. The MWCT will also be responsible for coordinating activities with the Government. Regarding pilot activities, the Environmental Planning Unit of MWCT, on behalf of the GRN, will establish baseline project data and monitor, and evaluate all pilot activities in the three geographic areas.

In addition, the MWCT will be a member of the SC which will establish policy and guidance for the LIFE Project. The MWCT may also provide, through the subgrantees, scopes of work, annual work plans and performance

reviews for the Community Liaison Officers, Natural Resource Economist, and Coordinator for Community-based Resource Management that would be recruited by the PVO and seconded to MWCT. The MWCT will also be responsible for preparing quarterly reports on its in-kind contribution to the project. They will be assisted in this through a contract with a local CPA firm to establish the system for reporting of the contribution.

3. Responsibilities of the US/International PVO Cooperative Agreement Recipient

Under the Cooperative Agreement, the PVO will have primary responsibilities to: undertake day-to-day management of the project and the financial resources made available by USAID through the Cooperative Agreement; review and recommend approval of subgrants; document and monitor subgrant activities; and provide long and short term technical assistance and training to the MWCT and Namibian NGOs/CBOs participating in the Project. Specific tasks are as follows:

- *Report quarterly to the GRN and USAID on project activities, project progress and expenditures;*
- *Prepare an annual workplan and budget to be submitted and approved at the first of each calendar year by the Steering Committee with GRN and USAID concurrence;*
- *Provide a funding mechanism for activities implemented by NGOs, and other agencies in the three geographic areas involving community-based resource utilization, environmental education, planning and applied research and institutional capacity building; execute subgrants and disburse funds;*
- *Ensure that potential subgrantees have adequate accounting, procurement and financial management capabilities and report quarterly on their in-kind contributions to the project;*
- *Provide long-term technical assistance including a project coordinator and Subgrant Manager for project management; a resource economist for the MWCT; and a coordinator for community-based resource management who will also be provided in the second year of the project;*
- *Strengthen NGOs by providing support, upon request, in defining and planning projects, proposal preparation, organizational development, and activities management;*
- *Provide short-term technical assistance, including experts, as required;*

- *Support the Steering Committee's work in terms of convening meetings, communications and other secretariat services as requested by the Committee;*

- *Identify issues in natural resource use and suggest, as requested, revisions in national policy and practices for consideration by the MWCT;*

- *In collaboration with the Steering Committee, monitor and evaluate subgrants activities;*

- *Collaborate with the managers of other related projects in the design and provision of training relevant to community participation in and benefit from use of resources;*

- *Identify training requirements and make recommendations to the Steering Committee;*

- *Carry out and implement participant training plans, prepare non-funded PIO/Ps for USAID and MWCT approval;*

- *Procure project commodities, including vehicles;*

- *Facilitate the building of an effective project implementation team; and*

- *Suggest to USAID and the MWCT how the Steering Committee can become more representative of the communities benefitting from the project.*

4. *Role of the Steering Committee*

All project activities will be coordinated and monitored by the Steering Committee, composed of six representatives as described earlier in the paper. The Chairperson of the Steering Committee will be the MWCT. The SC will make decisions by consensus. Although the Steering Committee will operate on consensus, USAID and MWCT regulations require that USAID and the MWCT retain final right of approval on all project activities and expenditures to ensure conformity with their respective and applicable policies, regulations and statutes. Specific tasks of the Committee include:

- *Advise the MWCT and USAID on all project activities;*

- *Oversight of PVO support staff through reports at Committee meetings and written quarterly reports, annual workplans/budgets and evaluations;*

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- *Establishment of procedures for all categories of subgrants, including community-based resource utilization, environmental education, and applied research and institution capacity building;*

- *Review and approve subgrant applications in accordance with criteria and priorities set by the project;*

- *Review of annual audits and two external evaluations during the life of the project; and implement actions to correct problems identified during the audits and evaluations;*

- *Monitor impact of government policies and legislation concerning community resource utilizations in the three geographic areas, and make recommendations as appropriate; and*

- *Develop a plan during the life of the project for Namibian NGOs to maintain the key functions of LIFE on a sustainable basis at the conclusion of the project.*

ANNEX 2

PROJECT GRANT STANDARD PROVISIONS

Definitions: As used in this Annex, the "Agreement" refers to the Project Grant Agreement to which this Annex is attached and of which this Annex forms a part. Terms used in this Annex have the same meaning or reference as in the Agreement.

Article A: Project Implementation Letters

To assist Grantee in the implementation of the Project, A.I.D., from time to time, will issue Project Implementation Letters that will furnish additional information about matters stated in the Agreement. The parties may also use jointly agreed-upon project Implementation Letters to confirm and record their mutual understanding on aspects of the implementation of this Agreement. Project Implementation Letters will not be used to amend the text of the Agreement, but can be used to record revisions or exceptions which are permitted by the Agreement, including the revision of elements of the amplified description of the Project in Annex 1.

Article B: General Covenants

SECTION B.1.

The Parties will cooperate to assure that the purpose of this Agreement will be accomplished. To this end, the Parties, at the request of either, will exchange views on the progress of the Project, the performance of obligations under this Agreement, the performance of any consultants, contractors, or suppliers engaged on the Project, and other matters relating to the Project.

SECTION B.2. Execution of Project

The Grantee will:

(a) carry out the Project or cause it to be carried out with due diligence and efficiency, in conformity with sound technical, financial, and management practices, and in conformity with those documents, plans, specifications, contracts, schedules or other arrangements, and with any modifications therein, approved by A.I.D. pursuant to this Agreement; and

(b) provide qualified and experienced management for, and train such staff as may be appropriate for the maintenance and operation of the Project,

and, as applicable for continuing activities, cause the Project to be operated and maintained in such manner as to assure the continuing and successful achievement of the purposes of the Project.

SECTION B.3. Utilization of Goods and Services

(a) Any resources financed under the Grant will, unless otherwise agreed in writing by A.I.D., be devoted to the Project until the completion of the Project, and thereafter will be used so as to further the objectives of the Project.

(b) Goods or services financed under the Grant, except as A.I.D. may otherwise agree in writing, will not be used to promote or assist a foreign aid project or activity associated with or financed by a country not included in Code 935 of the A.I.D. Geographic Code Book as in effect at the time of such use.

SECTION B.4. Taxation

(a) This Grant Agreement will be free from any taxation or fees imposed under laws in effect in the territory of the Grantee.

(b) To the extent that (1) any contractor, including any consulting firm, any personnel of such contractor financed under the Grant, and any property or transaction relating to such contracts and (2) any commodity procurement transaction financed under the Grant, are not exempt from identifiable taxes, tariffs, duties or other levies imposed under laws in effect in the territory of the Grantee, the Grantee will, as and to the extent provided in and pursuant to Project Implementation Letters, pay or reimburse the same with funds other than those provided under the Grant.

SECTION B.5 Reports, Accounting Records, Audits, Inspections

(a) The Grantee shall furnish A.I.D. such information and reports relating to the Project and to this Agreement as A.I.D. may reasonably request.

(b) The Grantee shall maintain accounting books, records, documents, and other evidence relating to the Project and to this Agreement, adequate to show, without limitation, all costs incurred under the Grant, the receipt and use of goods and services acquired under the Grant, the costs of the Project supplied from other sources, the Nature and extent of solicitations of prospective suppliers of goods and services acquired, the basis of award of contracts and orders, and the overall progress of the Project toward completion ("Project books and records"). At the Grantee's option, with

approval by A.I.D., Project books and records shall be maintained in accordance with one of the following methods: (1) generally accepted accounting principles prevailing in the United States, (2) generally accepted accounting principles prevailing in the country of the Grantee, (3) accounting principles prescribed by the International Accounting Principles Committee (an affiliate of the International Federation of Accountants), or (4) such other accounting principles as the Parties may agree to in writing. Project books and records shall be maintained for at least three years after the date of last disbursement by A.I.D.

(c) If $25,000 or more is disbursed directly to the Grantee in any one calendar year under the Grant, the Grantee, except as the parties may otherwise agree in writing, shall have financial audits made of the funds disbursed to the Grantee under the Grant in accordance with the following terms:

(1) The Grantee shall select an independent auditor in accordance with the "Guidelines for Financial Audits contracted by Foreign Recipients" issued by the A.I.D. Inspector General ("Guidelines"), and the audits shall be performed in accordance with the "Guidelines".

(2) An audit of the funds provided under the Grant shall be conducted for each fiscal year of the Grantee. The audit shall determine whether the receipt and expenditure of the funds provided under the Grant are presented in accordance with generally accepted accounting principles agreed to in section (b) above and whether the Grantee has complied with the terms of the Agreement. Each audit shall be completed no later than one year after the close of the Grantee's fiscal year.

(d) The Grantee shall submit an audit report to A.I.D. within 30 days after completion of such audit arranged for by the Grantee in accordance with this section. The A.I.D. Inspector General will review each report to determine whether it complies with the audit requirements of the Agreement. Subject to A.I.D. approval, costs of audits performed in accordance with the terms of this section may be charged to the Grant. In cases of continued inability or unwillingness to have an audit performed in accordance with the terms of this section, A.I.D. will consider appropriate sanctions which include suspension of all or a portion of disbursements until the audit is satisfactorily completed or A.I.D. performs its own audit.

(e) The Grantee shall submit to A.I.D., in form and substance satisfactory to A.I.D., a plan by which the Grantee will ensure that funds made available to subrecipients that receive $25,000 or more in any one calendar year under the Grant are audited in accordance with this Agreement. The plan should describe the methodology to be used by the Grantee to satisfy

its audit responsibilities with respect to any subrecipient to which this section applies. Such audit responsibilities with respect to subrecipients may be satisfied by relying on independent audits of the subrecipients or on appropriate procedures performed by the internal audit or program staff of the Grantee, by expanding the scope of the independent financial audit of the Grantee to encompass testing of subrecipients' accounts, or by a combination of tests procedures. The plan should identify the funds made available to subrecipients that will be covered by audits conducted in accordance with other audit provisions that would satisfy the Grantee's audit responsibilities. (A nonprofit organization organized in the United States is required to arrange for its own audits; a private voluntary organization organized outside the United States with a direct Grant from A.I.D. is required to arrange for its own audits; and a host-country contractor should be audited by the cognizant Grantee contracting agency). The Grantee shall ensure that appropriate corrective actions are taken on the recommendations contained in the subrecipients' audit reports; consider whether subrecipients' audits necessitate adjustment of its own records; and require each subrecipeint to permit independent auditors to have access to records and financial statements as necessary.

(f) A.I.D. may, at its discretion, perform the audits required under this Agreement on behalf of the Grantee by utilizing funds under the Grant or other resources available to A.I.D. for this purpose. The Grantee shall afford authorized representatives of A.I.D. the opportunity at all reasonable times to audit or inspect the project, the utilization of goods and services financed by A.I.D., and books, records and other documents relating to the project and the Grant.

SECTION B.6. Completeness of Information

The Grantee confirms:

(a) that the facts and circumstances of which it has informed A.I.D., or caused A.I.D. to be informed, in the course of reaching agreement with A.I.D. on the Grant, are accurate and complete, and include all facts and circumstances that might materially affect the Project and the discharge of responsibilities under this Agreement;

(b) that it will inform A.I.D. in timely fashion of any subsequent facts and circumstances that might materially affect, or that it is reasonable to believe might so affect, the Project or the discharge of responsibilities under this Agreement.

SECTION B.7. Other Payments

Grantee affirms that no payments have been or will be received by any official of the Grantee in connection with the procurement of goods or services

financed under the Grant, except fees, taxes, or similar payments legally established in the country of the Grantee.

SECTION B.8. Information and Marking

The Grantee will give appropriate publicity to the Grant and the Project as a program to which the United States has contributed, identify the Project site and mark goods financed by A.I.D., as described in Project Implementation Letters.

Article C: Procurement Provisions

SECTION C.1. Special Rules

(a) The source and origin of ocean and air shipping will be deemed to be the ocean vessel's or aircraft's country of registry at the time of shipment.

(b) Premiums for marine insurance placed in the territory of the Grantee will be deemed an eligible Foreign Exchange Cost, if otherwise eligible under Section C.7(a).

(c) Any motor vehicles financed under the Grant will be of United States manufacture, except as A.I.D. may otherwise agree in writing.

(d) Transportation by air, financed under the Grant, of property or persons, will be on carriers holding United States certification, to the extent service by such carriers is available. Details on the requirement will be described in a Project Implementation Letter.

SECTION C.2. Eligibility Date

No goods or services may be financed under the Grant which are procured pursuant to orders or contracts firmly placed or entered into prior to the date of this Agreement, except as the Parties may otherwise agree in writing.

SECTION C.3. Plans, Specifications and Contracts

In order for there to be mutual agreement on the following matters, and except as the Parties may otherwise agree in writing:

(a) The Grantee will furnish to A.I.D. upon preparation,

(1) any plans, specifications, procurement or construction schedules, contracts, or other documentation relating to goods or services to be financed under the grant, including documentation

relating to the prequalification and selection of contractors and to the solicitation of bids and proposals. Material modifications in such documentation will likewise be furnished to A.I.D. on preparation;

(2) such documentation will also be furnished to A.I.D., upon preparation, relating to any goods or services, which, though not financed under the Grant, are deemed by A.I.D. to be of major importance to the Project. Aspects of the Project involving matters under this subsection (a) (2) will be identified in Project Implementation Letters;

(b) Documents related to the prequalification of contractors, and to the solicitation of bids or proposals for goods and services financed under the Grant will be approved by A.I.D. in writing prior to their issuance, and their terms will include United States standards and measurement;

(c) Contracts and contractors financed under the Grant for engineering and other professional services, for construction services, and for such other services, equipment or materials as may be specified in Project Implementation Letters, will be approved by A.I.D. in writing prior to execution of the contract. Material modifications in such contracts will also be approved in writing by A.I.D. prior to execution; and

(d) Consulting firms used by the Grantee for the Project but not financed under the Grant, the scope of their services and such of their personnel assigned to the Project as A.I.D. may specify, and construction contractors used by the Grantee for the Project but not financed under the Grant, shall be acceptable to A.I.D.

SECTION C.4. Reasonable Price

No more than reasonable prices will be paid for any goods or services financed, in whole or in part, under the Gant. Such items will be procured on a fair and, to the maximum extent practicable, on a competitive basis.

SECTION C.5. Notification to Potential Suppliers

To permit all Unites States firms to have the opportunity to participate in furnishing goods and services to be financed under the Grant, the Grantee will furnish A.I.D. such information with regard thereto, and at such times, as A.I.D. may request in Project Implementation Letters.

SECTION C.6 Shipping

(a) Goods which are to be transported to the territory of the Grantee may not be financed under the Grant if transported either: (1) on an ocean

vessel or aircraft under the flag of a country which is not included in A.I.D. Geographic Code 935 as in effect at the time of shipment, or (2) on an ocean vessel which A.I.D., by written notice to the Grantee has designated as ineligible; or (3) under an ocean or air charter which has not received prior A.I.D. approval.

(b) Costs of ocean or air transportation (of goods or persons) and related delivery services may not be financed under the Grant, if such goods or persons are carried: (1) on an ocean vessel under the flag of a country not, at the time of shipment, identified under the paragraph of the Agreement entitled "Procurement Source: Foreign Exchange Costs", without prior written A.I.D. approval or on a non-U.S. flag air carrier if a U.S. flag carrier is available (in accordance with criteria which may be contained in Project Implementation Letters) without prior A.I.D. approval or (2) on an ocean vessel which A.I.D., by written notice to the Grantee, has designated as ineligible; or (3) under an ocean vessel or air charter which has not received prior A.I.D. approval.

(c) Unless A.I.D. determines that privately owned United States-flag commercial ocean vessels are not available at fair and reasonable rates for such vessels, (1) at least fifty percent (50%) of the gross tonnage of all goods (computed separately for dry bulk carriers, dry cargo liners and tankers) financed by A.I.D. which may be transported on ocean vessels will be transported on privately owned United States-flag commercial vessels, and (2) at least fifty percent (50%) of the gross freight revenue generated by all shipments financed by A.I.D. and transported to the territory of the Grantee on dry cargo liners shall be paid to or for the benefit of privately owned United States-flag commercial vessels. Compliance with the requirements of (1) and (2) of this sub-section must be achieved with respect to both any cargo transported from U.S. ports and any cargo transported from non-U.S. ports, computed separately.

SECTION C.7. Insurance

(a) Marine insurance on goods financed by A.I.D. which are to be transported to the territory of the Grantee may be financed as a Foreign Exchange Cost under this Agreement provided (1) such insurance is placed at the lowest available competitive rate, and (2) claims thereunder are payable in U.S. dollars or, as A.I.D. may agree in writing, in the currency in which such goods were financed or in any freely convertible currency. If the Grantee (or government of Grantee), by statute, decree, rule, regulation, or practice discriminates with respect to A.I.D.-financed procurement against any marine insurance company authorized to do business in any State of the United States, then all goods shipped to the territory of the Grantee financed by A.I.D. hereunder will be insured against marine risks and such insurance will be placed in the United States with a company or companies authorized to do a marine insurance business in a State of the United States.

(b) Except as A.I.D. may otherwise agree in writing, the Grantee will insure, or cause to be insured, goods financed under the Grant imported for the Project against risks incident to their transit to the point of their use in the Project; such insurance will be issued on terms and conditions consistent with sound commercial practice and will insure the full value of the goods. Any indemnification received by the Grantee under such insurance will be used to replace or repair any material damage or loss of the goods insured or will be used to reimburse the Grantee for the replacement or repair of such goods. Any such replacements will be of source and origin of countries listed in A.I.D. Geographic Code 935 as in effect at the time of replacement, and, except as the Parties may agree in writing, will be otherwise subject to the provision of the Agreement.

SECTION C.8. U.S. Government-Owned Excess Property

The Grantee agrees that wherever practicable, United States Government-owned excess personal property, in lieu of new items financed under the Grant, should be utilized. Funds under the Grant may be used to finance the costs of obtaining such property for the Project.

SECTION D.1. Termination

Either Party may terminate this Agreement by giving the other Party 30 days written notice. Termination of the Agreement will terminate any obligations of the Parties to provide financial or other resources to the Project pursuant to this Agreement, except for payments which they are committed to make pursuant to noncancellable commitments entered into with third parties prior to the termination of this Agreement. In addition, upon such termination A.I.D. may, at A.I.D.'s expense, direct that title to goods financed under the Grant be transferred to A.I.D. if the goods are from a source outside Grantee's country, are in a deliverable state and have not been offloaded in ports of entry of Grantee's country.

SECTION D.2. Refunds

(a) In the case of any disbursement which is not supported by valid documentation in accordance with this Agreement, or which is not made or used in accordance with this Agreement, or which was for goods or services not used in accordance with this Agreement, A.I.D., notwithstanding the availability or exercise of any other remedies under this Agreement, may require the Grantee to refund the amount of such disbursement in U.S. Dollars to A.I.D. within sixty (60) days after receipt of a request therefor.

(b) If the failure of Grantee to comply with any of its obligations under this Agreement has the result that goods or services financed under the Grant are not used effectively in accordance with this Agreement, A.I.D. may require the Grantee to refund all or any part of the amount of the disbursements under

this Agreement for such goods or services in U.S. Dollars to A.I.D. within sixty days after receipt of a request therefor.

(c) The right under subsection (a) or (b) to require a refund of a disbursement will continue, notwithstanding any other provision of this Agreement, for three years from the date of the last disbursement under this Agreement.

(d) (1) Any refund under subsection (a) or (b), or (2) any refund to A.I.D. from a contractor, supplier, bank or other third party with respect to goods or services financed under the Grant, which refund relates to an unreasonable price for or erroneous invoicing of goods or services, or to goods that did not conform to specifications, or to services that were inadequate, will (A) be made available first for the cost of goods and services required for the Project, to the extent justified, and (B) the remainder, if any, will be applied to reduce the amount of the Grant.

(e) Any interest or other earnings on Grant funds disbursed by A.I.D. to the Grantee under this Agreement prior to the authorized use of such funds for the Project will be returned to A.I.D. in U.S. Dollars by the Grantee.

SECTION D.3. Nonwaiver or Remedies

No delay in exercising any right or remedy accruing to a Party in connection with its financing under this Agreement will be construed as a waiver of such right or remedy.

SECTION D.4. Assignment

The Grantee agrees, upon request, to execute an assignment to A.I.D. of any cause of action which may accrue to the Grantee in connection with or arising out of the contractual performance or breach of performance by a party to a direct U.S. Dollar contract with A.I.D. financed in whole or in part out of funds granted by A.I.D. under this Agreement.

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ANNEX M

SCOPE OF WORK FOR PSC PROJECT MANAGER

ANNEX M

Scope of Work: Project Manager (Personal Services Contractor)

RESPONSIBILITIES:

The Project Manager, hired under a personal services contract, will be under the general supervision of the USAID Human and Natural Resources Development Officer in the Human and Natural Resources Division and will serve as the principal liaison between USAID/Namibia, the MWCT, the international or US PVO, the Zoological Society of San Diego, the Etosha Ecological Institute and the Namibian NGO community involved in the project's implementation. Responsibilities may include the following:

1. Serve as the point of contact between USAID/Namibia and the MWCT, the PVO, the Zoological Society of San Diego, Etosha Ecological Institute and local NGOs on all matters pertaining to project management, monitoring and implementation.

2. Participate in meetings of the Project Steering Committee and assist with the following:

   (a) Provision of USAID review and approval of sub-grantee proposals in accordance with eligibility criteria, outlined in the Project Paper; and

   (b) Provision of oversight technical and program direction, and impact monitoring of all LIFE project components.

3. Review and recommend approval to USAID of workplans, evaluations and other reports.

4. Visit project field sites and implementing agencies and prepare reports on the status of project implementation including any recommendations for ensuring the efficient and effective implementation of these activities.

5. Draft USAID/Namibia Project Implementation Letters (PILs), Project Implementation Orders (PIOs) and semi-annual Project Implementation Reports (PIRs). Prepare the Project Officer's approval form for signature by the Project Officer.

6. Maintain close contact with agencies implementing project activities and monitor their compliance with the project's goals and objectives and USAID rules and regulations.

7. Arrange project reviews and external project evaluations and ensure compliance by grantees and cooperative agreement recipients with USAID's financial audit requirements.

8. Ensure the collection of baseline project data for monitoring and evaluation purposes. Review impact indicators and track progress in attaining them.

9. Prepare all necessary USAID/Namibia reports on matters arising out of project activities.

10. Participate in regional meetings with other participating SADCC countries.

11. Advise the USAID Project Manager and USAID Representative of any issues likely to affect project implementation and make recommendations for appropriate actions to be undertaken by USAID.

12. Coordinate with the MWCT on the preparation of quarterly reports on host country and other contributions to the project.

TERM OF SERVICE:

This will be a full-time position. The appointment will be for five years. The individual will be located in the USAID/Namibia Mission.

QUALIFICATIONS:

Candidate must have at least a M.S. or M.A. in natural resources/environmental/management/economics, the biological or zoological sciences or one of the social sciences with a strong background in community or rural development. S/he must also have at least four years working in a developing country, preferably in Southern Africa. Experience with community based natural resources management is highly desirable.

Experience in managing A.I.D. or other donor-funded projects, preferably in environment, ecology or natural resources sectors. Experience with NGOs and PVOs is highly desirable.

Excellent analytical, written and oral communication and interpersonal skills required. Also individual is required to be computer competent in word processing and spreadsheet programs.

ANNEX N

ILLUSTRATIVE SET OF BASELINE DATA AND PROJECT INDICATORS

ILLUSTRATIVE SET OF BASELINE DATA

AND

PROJECT INDICATORS

Baseline Data

I. Project Area (Profile)

1. Physical properties
   - a. climate
     - 1. Rainfall pattern & distribution
     - 2. temperature
   - b. soil types
   - c. vegetation
   - d. forest type and cover
   - e. wetlands/available water
   - f. predominant land use
     - 1. agricultural practices
     - 2. area under cultivation
     - 3. crops grown
     - 4. yield (bags/hectare ...)
     - 5. type of livestock owned
     - 6. size/distribution of livestock populations
     - 7. surface area wildlife habitat
     - 8. km boundary with national park/GMA/WMA

2. Population/demographics
   - a. # of people in project area/density
   - b. # of households
   - c. household size
   - d. origin of household (immigrant)
   - e. head of household (gender)

3. Household economy
   - A. Income
     - a. income from crops sold
     - b. labor patterns
     - c. income from wages
     - d. other sources of income
     - e. type of assistance or relief?
     - f. non-cash income
   - B. Expense/cost
     - a. use of income
     - b. cost/availability-income generating inputs
       - 1. seed cost
       - 2. fertilizer
       - 3. fees/sale permits/licenses ..
       - 4. transportation

4. Community Profile
   - 1. social services available
   - 2. # small enterprises
     - a. ownership by gender
   - 3. proximity to market centers
   - 4. availability of transportation

5. leadership structure
6. perceived community needs/problems
7. community institutions/organizations
   a. # of organizations
   b. membership by gender
   c. focus/purpose of organization

5. Community/Wildlife Interface
   a. type of natural resource/resources harvested
   b. purpose of harvest (scale/consumption)
   c. # crop damage incidents from wildlife
   d. wildlife species responsible
   e. crop damaged
   f. #/type livestock losses from wildlife
   g. #/type human injury or death from wildlife
   h. perceived benefits of wildlife
   i. perception of resource base (wildlife/forest ...) decreasing? no change? concern?

6. Natural Resource Base
   a. wildlife species and numbers present
   b. population composition (age, sex, distribution)
   c. vegetational analysis and utilization

II. Conservation Authority Profile
1. # hectares administered (as % of total land area)
2. % staff to area
3. % expenditure to area
4. interface with community
   a. # PAC animals killed
   b. # response to crop damage incident
   c. # response to human injury/death
   d. # arrests of illegal hunters
   e. # illegal offtake by species

Overall Project Indicators

Wildlife:

-- Decrease in the number of conflicts between human and wildlife populations
    1. decreased crop damage
    2. decreased human injury
    3. decreased PAC actions
-- Increase in wildlife habitat
-- Increase in wildlife population or population at sustainable level
-- Decreased level of illegal hunting

Socio-economic improvement and/or change

-- Increase in community social services
-- Increase in incomes
-- Increase in community small enterprises
-- Increased stature of women through:
    1. Increase in women owned businesses
    2. Increased incomes to women
    3. Increased training for women
    4. Increased participation in decision making
-- Population increase from immigration (with evaluation of negative/positive aspects)

Sustainable community based management

-- introduced sustainable practices adopted by community residents (wildlife management/utilization schemes initiated)
-- length of time new management approach is practiced
-- sq km covered by new practice
-- if community has substantially increased proprietorship of resource is it capturing it's resource AND state of resource base itself
-- workings of project itself: full staff? Perceptions of implementor's funding available
-- conflict as measure of raised awareness/monitoring process of charge
-- problem of raised expectations in Community

ANNEX O

GRAY AMENDMENT CERTIFICATION

Gray Amendment Certification

Legislative Requirement:

The Gray Amendment (Section 579 of P.L. 101-167, the Foreign Operations, Export Financing and Related Programs Appropriations Act, 1990) requires AID to ensure participation in AID projects by business concerns which are owned and controlled by socially and economically disadvantaged individuals, historically black colleges and universities, colleges and universities having a student body in which more than 40 percent of the students are Hispanic American, and private voluntary organizations which are controlled by individuals who are socially and economically disadvantaged, including women (referred to herein as Gray Amendment entities).

AIDAR Notice 90-2, implementing Section 579 of the Foreign Assistance Appropriations Act requires that for any contract in excess of $500,000 (except for a contract with a disadvantaged enterprise) not less than 10 percent of the dollar value of the contract must be subcontracted to Gray Amendment entities, unless the contracting officer certifies that there are no contracting opportunities or unless the Administrator approves an exception.

Certification:

Elements of this project may be appropriate for minority or Gray Amendment organization contracting. The procurement plan of this project has been developed with full consideration of maximally involving Gray Amendment organizations in the provision of required goods and services. The Mission will make every effort to identify disadvantaged enterprises, particularly minority-owned and women firms, which can manage certain procurements of equipment and/or provisions of technical assistance and evaluation services planned in the project.

Furthermore, the Mission will, in the case of any contract in excess of $500,000 to which the Gray Amendment is applicable, include a provision requiring that no less than 10 percent of the value of the contract be subcontracted to Gray Amendment entities unless the contracting officer certifies that there is no realistic expectation of U.S. subcontracting opportunities, or unless the prime contractor is a Gray Amendment entity.

Richard L. Shortlidge, Jr.
AID Representative

Date: July 12, 1992

Clearance: RLA: DKeene

ANNEX P

BUDGET TABLES

USAID/NAMIBIA
NATURAL RESOURCES MANAGEMENT--NAMIBIA
TABLE I
SOURCES AND USES OF FUNDS

ELEMENT	USAID FX	USAID LC	HOST GOVT. FX	HOST GOVT. LC	OTHER DONORS FX	OTHER DONORS LC	SUB-TOTAL FX	SUB-TOTAL LC	TOTAL
I. TECHNICAL ASSISTANCE	3193852.82	1143451.25					3193852.82	1143451.25	4337304.07
II PARTICIPANT TRAINING	360000.00	710000.00					360000.00	710000.00	1070000.00
III. PLANNING & APPLIED RESEARCH	965494.90	550650.10		1449741.00	661150.00	283350.00	1626644.90	2283741.10	3910386.00
IV. COMMUNITY DEVELOPMENT		1896100.00		2305237.00				4201337.00	4201337.00
V. PROJECT MANAGEMENT	716630.98	135400.01		343426.00			716630.98	478826.01	1195456.99
VI. REGIONAL COMMUNICATION	125000.00						125000.00		125000.00
VII. EVALUATION	200000.00						200000.00		200000.00
VIII. INFLATION/CONTINGENCY	503419.94						503419.94		503419.94
TOTAL	6064398.64	4435601.36	0.00	4098404.00	661150.00	283350.00	6725548.64	8817355.36	15542904.00

USAID/NAMIBIA
NATURAL RESOURCES MANAGEMENT--NAMIBIA
TABLE II
SUMMARY EXPENDITURES BY PROJECT ELEMENT

ELEMENT		FY 1992/3	FY 1994	FY 1995	FY 1996	FY 1997	TOTAL
I.	TECHNICAL ASSISTANCE	1174859.71	1033853.70	1201589.48	448576.75	478424.43	4337304.07
II.	PARTICIPANT TRAINING	280000.00	280000.00	280000.00	120000.00	110000.00	1070000.00
III.	PLANNING & APPLIED RESEARCH	453500.00	448010.00	439635 00	100000.00	75000.00	1516145.00
IV.	COMMUNITY DEVELOPMENT	391000.00	315400.00	357900.00	401800.00	430000.00	1896100.00
V	PROJECT MANAGEMENT	195162.78	131963.42	179500.84	150291.54	195112.40	852030.99
VI.	REGIONAL COMMUNICATION	25000.00	25000.00	25000.00	25000.00	25000.00	125000.00
VII.	EVALUATION			100000.00		100000.00	200000.00
VIII.	INFLATION/CONTINGENCY	125976.12	111711.36	129181.27	62283.41	74267.78	503419.94
	TOTALS	2645498.62	2345938.48	2712806.59	1307951.70	1487804.61	10500000.00

USAID/NAMIBIA
NATURAL RESOURCES MANAGEMENT--NAMBIA
TABLE III(A)
DETAILED EXPENDITURES BY PROJECT ELEMENT
TECHNICAL ASSISTANCE--U.S.PVO

	FY 1992/3	FY 1994	FY 1995	FY 1996	FY 1997	TOTAL
CHIEF OF PARTY - SEE TABLE IV	211925.57	186686.85	212037.69			610650.10
FSN PROJECT MANAGER-SEE TABLE IV	35200.00	38720.00	42592.00	46851.20	51536.32	214899.52
FSN ACCOUNTANT " "	35200.00	38720.00	42592.00	46851.20	51536.32	214899.52
OFFICE OPERATIONS	109100.00	75810.00	87191.00	91310.10	100241.11	463652.21
VEHICLES (1)	25000.00					25000.00
HOME OFFICE SUPPORT	35000.00	38500.00	42350.00	46585.00	51243.50	213678.50
OVERHEAD-U.S.PVO	135427.67	113531.05	128028.81	69479.25	76367.18	522833.96
AUDIT	50000.00	50000.00	50000.00	50000.00	50000.00	250000.00
TOTAL	636853.24	541967.90	604791.49	351076.75	380924.43	2515613.81

USAID/NAMBIA
NATURAL RESOURCES MANAGEMENT--NAMIBIA
TABLE III(B)
DETAILED EXPENDITURE BY PROJECT ELEMENT
TECHNICAL ASSISTANCE

	FY1992/3	FY1994	FY1995	FY1996	FY1997	TOTAL	
RESOURCE MGT ECONOMIST-SEE TABLE IV	191925.57	166686.85	192037.69			550650.10	ASSUMES LOWER SALARY BY $20000.00.
RESOURCE MGT COORDINATOR " "	191925.57	166686.85	192037.69			550650.10	ASSUMES LOWER SALARY BY $20000.00.
SHORT TERM TECHNICAL ASSISTANCE	30000.00	45000.00	75000.00	75000.00	75000.00	300000.00	
OVERHEAD -U.S. PVO	124155.34	113512.11	137722.61	22500.00	22500.00	420390.06	
TOTAL	538006.48	491885.80	596797.99	97500.00	97500.00	1821690.26	

USAID/NAMIBIA
NATURAL RESOURCES MANAGEMENT--NAMIBIA
TABLE III(C)
DETAILED EXPENDITURES BY PROJECT ELEMENT
PARTICIPANT TRAINING

	FY 1992/3	FY 1994	FY 1995	FY 1996	FY 1997	TOTAL	
LONG-TERM TRAINING	120000.00	120000.00	120000.00			360000.00	ASSUMES $30,000 PER PERSON PER YEAR.
SHORT-TERM DIPLOMA TRAINING	100000.00	100000.00	100000.00	60000.00	50000.00	410000.00	ASSUMES $10,000 PER COURSE.
WORKSHOPS	60000.00	60000.00	60000.00	60000.00	60000.00	300000.00	ASSUMES ONE WORKSHOP PER MONTH @$5,000 PER WORKSHOP (EXCLUDES EXTERNAL SHORT-TERM TA COSTS.
TOTAL	280000.00	280000.00	280000.00	120000.00	110000.00	1070000.00	

USAID/NAMIBIA
NATURAL RESOURCES MANAGEMENT--NAMIBIA
TABLE III(D)
DETAILED EXPENDITURES BY PROJECT ELEMENT
COMMUNITY DEVELOPMENT

	FY 1992/3	FY 1994	FY 1995	FY 1996	FY 1997	TOTAL
SUB-GRANTS TO NGO BY REGION						
BUSHMANLAND--SEE TABLE V	80800.00	96700.00	109200.00	121800.00	131400.00	539900.00
CAPRIVI--SEE TABLE V	310200.00	218700.00	248700.00	280000.00	298600.00	1356200.00
TOTAL	391000.00	315400.00	357900.00	401800.00	430000.00	1896100.00

USAID/NAMBIA
NATURAL RESOURCES MANAGEMENT--NAMBIA
TABLE III(E)
DETAILED EXPENDITURE BY PROJECT ELEMENT
PLANNING & APPLIED RESEARCH

	FY 1992/3	FY 1994	FY 1995	FY 1996	FY 1997	TOTAL	
RESEARCH SUB-GRANTS TO NGOS	125000.00	150000.00	150000.00	100000.00	75000.00	600000.00	ASSUMES $25000.00 PER PROPOSAL.
SAN DIEGO ZOOLOGICAL SOCIETY							
PERSONNEL COSTS	80500.00	88550.00	97405.00			266455.00	
TRACKING/OPERATIONAL SUPPLIES	215000.00	180660.00	174330.00			569990.00	
CAMPING EQUIPMENT	19000.00	13000.00				32000.00	
TRAVEL	14000.00	15800.00	17900.00			47700.00	
SUB-TOTAL	328500.00	298010.00	289635.00			916145.00	
TOTAL	453500.00	448010.00	439635.00	100000.00	75000.00	1516145.00	

USAID/NAMIBIA
NATURAL RESOURCES MANAGEMENT--NAMIBIA
TABLE III(F)
DETAILED EXPENDITURES BY PROJECT ELEMENT
PROJECT MANAGEMENT--USAID

	FY 1992/3	FY 1994	FY 1995	FY 1996	FY 1997	TOTAL	
PROJECT MANAGER - SEE TABLE IV	95962.78	83343.42	96018.84	81461.34	95962.78	452749.17	ASSUMES PART TIME POSITION, 50%.
PROJECT ACCOUNTANT (FSN)	17600.00	19360.00	21296.00	23425.60	28718.41	110400.01	ASSUMES PART TIME POSITION, 50%.
PROJECT ASSISTANT (FSN)	18600.00	20460.00	22506.00	24756.60	28718.41	115041.01	ASSUMES PART TIME POSITION, 50%.
SECRETARY	8000.00	8800.00	9680.00	10648.00	11712.80	48840.80	ASSUMES PART TIME POSITION, 50%.
COMPUTER	10000.00			10000.00		20000.00	
VEHICLE	25000.00					25000.00	
OFFICE EQUIPMENT AND FURNITURE	20000.00					20000.00	
AUDIT			30000.00		30000.00	60000.00	
TOTAL	195162.78	131963.42	179500.84	150291.54	195112.40	852030.99	

TABLE IV
TECHNICAL ASSISTANCE BUDGET
CHIEF OF PARTY

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
A PERSONAL COMPENSATION						
1. BASIC PAY	72295.00	75909.75	79705.24			227909.99
2. POST DIFFERENTIAL						
B. PERSONAL BENEFITS						
1. FICA (EMPLOYER'S PORTION)	5530.57	5807.10	6097.45			17435.11
2. EDUCATION ALLOWANCE	27000.00	28350.00	29767.50			85117.50
3. HEALTH, LIFE & SOS INSURANCE	2500.00	2500.00	2500.00			7500.00
4. RETIREMENT	1000.00	1000.00	1000.00			3000.00
C. TRAVEL AND TRANSPORTATION						
1. INTERNATIONAL TRAVEL	8000.00		12000.00			20000.00
2. EXCESS BAGGAGE	1000.00		1500.00			2500.00
3. PER DIEM (POST ASSIGN/RETURN)	1000.00		1500.00			2500.00
4. REGIONAL TRAVEL	12000.00	12600.00	13230.00			37830.00
5. UAB	4200.00		6000.00			10200.00
6. HOUSEHOLD EFFECTS	15000.00		18000.00			33000.00
7. POV	3500.00		3500.00			7000.00
8. STORAGE	1800.00	1890.00	1984.50			5674.50
9. R&R		12000.00				12000.00
10. HOME LEAVE		17000.00				17000.00
D. RENT & UTILITIES						
1. RESIDENTIAL RENT	24000.00	25200.00	26460.00			75660.00
2. UTILITIES	1800.00	1980.00	2178.00			5958.00
3. FURNISHINGS	20000.00		2500.00			22500.00
4. APPLIANCES	4000.00		1500.00			5500.00
5. SECURITY UPGRADE	5000.00					5000.00
6. MAINTENANCE	1500.00	1650.00	1815.00			4965.00

E OTHER DIRECT COSTS

1. PHYSICAL EXAMINATION	500.00	500.00	500.00			1500.00
2. MISCELLANEOUS	300.00	300.00	300.00			900.00
	211925.57	186686.85	212037.69			610650.10
LOCAL HIRE BUDGET-PROJECT MANAGER						
SALARY	26000.00	28600.00	31460.00	34606.00	38066.60	158732.60
BENEFITS	5200.00	5720.00	6292.00	6921.20	7613.32	31746.52
TRAVEL/PER DIEM	4000.00	4400.00	4840.00	5324.00	5856.40	24420.40
	35200.00	38720.00	42592.00	46851.20	51536.32	214899.52
LOCAL HIRE BUDGET-PROJECT ACCOUNTANT						
SALARY	26000.00	28600.00	31460.00	34606.00	38066.60	158732.60
BENEFITS	5200.00	5720.00	6292.00	6921.20	7613.32	31746.52
TRAVEL/PER DIEM	4000.00	4400.00	4840.00	5324.00	5856.40	24420.40
	35200.00	38720.00	42592.00	46851.20	51536.32	214899.52
OFFICE OPERATIONS						
SECRETARY	16000.00	17600.00	19360.00	21296.00	23425.60	97681.60
DRIVER	10400.00	11440.00	12584.00	13842.40	15226.64	63493.04
CLEANER	4700.00	5170.00	5687.00	6255.70	6881.27	28693.97
OFFICE FURNITURE (3 DESKS, CHAIRS, ETC)	10000.00		2000.00			12000.00
OFFICE EQUIPMENT	10000.00		2000.00			12000.00
COMPUTERS	20000.00					20000.00
SUPPLIES	2000.00	2000.00	2000.00	2000.00	2000.00	10000.00
OFFICE RENT/UTILITIES	24000.00	26400.00	29040.00	31944.00	35138.40	146522.40
COMMUNICATIONS	12000.00	13200.00	14520.00	15972.00	17569.20	73261.20
	109100.00	75810.00	87191.00	91310.10	100241.11	463652.21

USAID/NAMBIA
NATURAL RESOURCES MANAGEMENT--NAMIBIA
TABLE V
DETAILED EXPENDITURE FOR NGOS
COMMUNITY DEVELOPMENT

	FY1992/3	FY1994	FY1995	FY1996	FY1997	TOTAL
BUSHMANLAND-NYAE NYAE FOUNDATION						
1. PERSONNEL COSTS	39000.00	55000.00	62000.00	72000.00	81000.00	309000.00
2. TRAINING	3000.00	2600.00	1800.00	1400.00	1400.00	10200.00
3. OFFICE EQUIPMENT/SUPPLIES	2000.00	400.00	400.00	3000.00	600.00	6400.00
4. CAMPING EQUIPMENT/TOOLS	1000.00			700.00		1700.00
5. VEHICLES						
6. VEHICLE RUNNING COSTS	9000.00	10000.00	12000.00	14000.00	16000.00	61000.00
7. RESEARCH/EVALUATION	800.00	700.00	4000.00	700.00	1400.00	7600.00
8. COMMINITY DEVELOPMENT	19000.00	19000.00	19000.00	19000.00	19000.00	95000.00
9. OVERHEAD	7000.00	9000.00	10000.00	11000.00	12000.00	49000.00
SUB-TOTAL	80800.00	96700.00	109200.00	121800.00	131400.00	539900.00
CAPRIVI-INTERGRATED NAT.FOUNDATION						
1. PERSONNEL COSTS	122000.00	110000.00	127000.00	147000.00	168000.00	674000.00
2. TRAINING	7000.00	9000.00	6000.00	6000.00	2600.00	30600.00
3. OFFICE EQUIPMENT/SUPPLIES	4000.00	700.00	700.00	1000.00		6400.00
4. CAMPING EQUIPMENT/TOOLS	8000.00			8000.00		16000.00
5. VEHICLES (2)	59000.00					59000.00
6. VEHICLE OPERATING COSTS	18000.00	20000.00	24000.00	27000.00	31000.00	120000.00
7. RESEARCH/EVALUATION	13000.00	4000.00	9000.00	4000.00	5000.00	35000.00
8. COMMUNITY DEVELOPMENT	51000.00	55000.00	59000.00	61000.00	65000.00	291000.00
9. OVERHEAD	28200.00	20000.00	23000.00	26000.00	27000.00	124200.00
SUB-TOTAL	310200.00	218700.00	248700.00	280000.00	298600.00	1356200.00
GRAND TOTAL	391000.00	315400.00	357900.00	401800.00	430000.00	1896100.00

METHODS OF FINANCING & IMPLEMENTATION--NAMIBIA

TABLE VI

ELEMENT	METHOD OF IMPLEMENTATION	METHOD OF FINANCING	TOTAL
TECHNICAL ASSISTANCE	COOPERATIVE AGREEMENT WITH U.S. PVO	DIRECT PAYMENT OR LETTER OF CREDIT	4337304.07
PARTICIPANT TRAINING	COOPERATIVE AGREEMENT	DIRECT PAYMENT OR	1070000.00
(i) LONG TERM TRAINING	WITH U.S. PVO	LETTER OF CREDIT	<360000.00>
(ii) SHORT TERM TRAINING	" "	" "	<410000.00>
(iii) WORKSHOPS	" "	DIRECT REIMBURSEMENT OR ADVANCE	<300000.00>
PLANNING & APPLIED RESEARCH	SPECIFIC SUPPORT GRANT	DIRECT PAYMENT OR	1516145.00
(i) SAN DIEGO ZOOLOGICAL SOCIETY	WITH SAN DIEGO ZOOLOGICAL SOCIETY	LETTER OF CREDIT	<916145.00>
(ii) RESEARCH SUB-GRANTS	COOPERATIVE AGREEMENT WITH U.S. PVO	DIRECT PAYMENT OR LETTER OF CREDIT	<600000.00>
COMMUNITY DEVELOPMENT	COOPERATIVE AGREEMENT WITH U.S. PVO	DIRECT PAYMENT OR LETTER OF CREDIT	1896100.00
PROJECT MANAGEMENT--USAID			852030.99
(i) COMMODITIES	PERSONAL SERVICE CONTRACTS	DIRECT PAYMENT	<727030.99>
(ii) AUDIT	PURCHASE ORDER FOR EQUIPMENT	DIRECT REIMBURSEMENT	<65000.00>
REGIONAL COMMUNICATION	IQC OR DIRECT CONTRACT	DIRECT PAYMENT	<60000.00>
	COOPERATIVE AGREEMENT WITH U.S. PVO	DIRECT PAYMENT OR LETTER OF CREDIT	125000.00
EVALUATION	IQC BUY-IN WITH WORK ORDER OR DIRECT CONTRACT	DIRECT REIMBURSEMENT OR DIRECT PAYMENT	200000.00

TABLE VII
GOVERNMENT OF NAMIBIA
HOST COUNTRY CONTRIBUTION
(RAND EQUIVALENT)

ITEM	1	2	3	4	5	TOTAL
I. PLANNING + APPLIED RESURCH (ETOSHA NATIONAL PARK)						
A. SALARIES	460,000	460,000	460,000	460,000	460,000	2,300,000
B. TRAVEL / SUBSISTENCE	36,000	36,000	36,000	36,000	36,000	180,000
C. MATERIAL / SUPPLIES	25,060	25,060	25,060	25,060	25,060	125,300
D. EQUIPMENT MAINTENANCE	9,800	9,800	9,800	9,800	9,800	49,000
E. TRANSPORT	172,000	172,000	172,000	172,000	172,000	860,000
F. CAPITAL ASSETS	400,000					400,000
SUBTOTAL	1,102,860	702,860	702,860	702,860	702,860	3,914,300
II. COMMUNITY DEVELOPMENT						
A. CAPRIVI (EAST AND WEST)						
1. SALARIES	504,000	504,000	504,000	504,000	504,000	2,520,000
2. TRAVEL SUBSISTENCE	65,000	65,000	65,000	65,000	65,000	325,000
3. MATERIALS / SUPPLIES	79,300	79,300	79,300	79,300	79,300	396,500
4. EQUIPMENT MAINTENANCE	1,625	1,625	1,625	1,625	1,625	8,125
5. TRANSPORT	97,500	97,500	97,500	97,500	97,500	487,500
6. CAPITAL ASSETS	6,435					6,435
SUBTOTAL	753,860	747,425	747,425	747,425	747,425	3,743,560
B. BUSHMANLAND						
A. SALARIES	78,000	78,000	78,000	78,000	78,000	390,000
B. TRAVEL / SUBSISTENCE	12,038	12,038	12,038	12,038	12,038	60,190
C. MATERIAL / SUPPLIES	14,943	14,943	14,943	14,943	14,943	74,715
D. EQUIPMENT MAINTENANCE	0	0	0	0	0	0
E. TRANSPORT	37,050	37,050	37,050	37,050	37,050	185,250
F. CAPITAL ASSETS	0	0	0	0	0	0
SUBTOTAL	142,031	142,031	142,031	142,031	142,031	710,155
C. ETOSHA CATCHMENT AREA (OVAMBO AND KAOKOLAND)						
1. SALARIES	240,000	240,000	240,000	240,000	240,000	1,200;000
2. TRAVEL SUBSISTENCE	20,000	20,000	20,000	20,000	20,000	100,000
3. MATERIALS / SUPPLIES	18,835	18,835	18,835	18,835	18,835	94,175
4. EQUIPMENT MAINTENANCE	250	250	250	250	250	1,250
5. TRANSPORT	75,000	75,000	75,000	75,000	75,000	375,000
6. CAPITAL ASSETS	0	0	0	0	0	0
SUBTOTAL	354,085	354,085	354,085	354,085	354,085	1,770,425
SUBTOTAL (A, B, +C)	1,249,976	1,243,541	1,243,541	1,243,541	1,243,541	6,224,140
III. PROJECT MANAGEMENT (ENVIRONMENTAL PLANNING UNIT)						
1. SALARIES	142,600	142,800	142,800	142,600	142,800	713,000
2. TRAVEL SUBSISTENCE	5,750	5,750	5,750	5,750	5,750	28,750
3. MATERIALS / SUPPLIES	5,800	5,800	5,800	5,800	5,800	29,000
4. EQUIPMENT MAINTENANCE	0	0	0	0	0	0
5. TRANSPORT	25,000	25,000	25,000	25,000	25,000	125,000
6. CAPITAL ASSETS	31,500	0	0	0	0	31,500
SUBTOTAL	210,850	179,150	179,150	179,150	179,150	927,250
TOTAL (I + II)	2,563,486	2,125,551	2,125,551	2,125,551	2,125,551	11,065,690

TABLE VII
GOVERMENT OF NAMIBIA
HOST COUNTRY CONTRIBUTION
(US DOLLAR EQUIVALENT)

ITEM	1	2	3	4	5	TOTAL
I. PLANNING + APPLIED RESURCH (ETOSHA NATIONAL PARK)						
A. SALARIES	170,370	170,370	170,370	170,370	170,370	851,852
B. TRAVEL / SUBSISTENCE	13,333	13,333	13,333	13,333	13,333	66,667
C. MATERIAL / SUPPLIES	9,281	9,281	9,281	9,281	9,281	46,407
D. EQUIPMENT MAINTENANCE	3,630	3,630	3,630	3,630	3,630	18,148
E. TRANSPORT	63,704	63,704	63,704	63,704	63,704	318,519
F. CAPITAL ASSETS	148,148	0	0	0	0	148,148
SUBTOTAL	408,467	260,319	260,319	260,319	260,319	1,449,741
II. COMMUNITY DEVELOPMENT						
A. CAPRIVI (EAST AND WEST)						
1. SALARIES	186,667	186,667	186,667	186,667	186,667	933,333
2. TRAVEL SUBSISTENCE	24,074	24,074	24,074	24,074	24,074	120,370
3. MATERIALS / SUPPLIES	29,370	29,370	29,370	29,370	29,370	146,852
4. EQUIPMENT MAINTENANCE	602	602	602	602	602	3,009
5. TRANSPORT	36,111	36,111	36,111	36,111	36,111	180,556
6. CAPITAL ASSETS	2,383	0	0	0	0	2,383
SUBTOTAL	279,207	276,824	276,824	276,824	276,824	1,386,504
B. BUSHMANLAND						
A. SALARIES	28,889	28,889	28,889	28,889	28,889	144,444
B. TRAVEL / SUBSISTENCE	4,459	4,459	4,459	4,459	4,459	22,293
C. MATERIAL / SUPPLIES	5,534	5,534	5,534	5,534	5,534	27,872
D. EQUIPMENT MAINTENANCE	0	0	0	0	0	0
E. TRANSPORT	13,722	13,722	13,722	13,722	13,722	68,611
F. CAPITAL ASSETS	0	0	0	0	0	0
SUBTOTAL	52,604	52,604	52,604	52,604	52,604	263,020
C. ETOSHA CATCHMENT AREA (OVAMBO AND KAOKOLAND)						
1. SALARIES	88,889	88,889	88,889	88,889	88,889	444,444
2. TRAVEL SUBSISTENCE	7,407	7,407	7,407	7,407	7,407	37,037
3. MATERIALS / SUPPLIES	6,976	6,976	6,976	6,976	6,976	34,880
4. EQUIPMENT MAINTENANCE	93	93	93	93	93	463
5. TRANSPORT	27,778	27,778	27,778	27,778	27,778	138,889
6. CAPITAL ASSETS	0	0	0	0	0	0
SUBTOTAL	131,143	131,143	131,143	131,143	131,143	655,713
SUBTOTAL (A, B, +C)	462,954	460,571	460,571	460,571	460,571	2,305,237
III. PROJECT MANAGEMENT (ENVIRONMENTAL PLANNING UNIT)						
1. SALARIES	52,815	52,815	52,815	52,815	52,815	264,074
2. TRAVEL SUBSISTENCE	2,130	2,130	2,130	2,130	2,130	10,648
3. MATERIALS / SUPPLIES	2,148	2,148	2,148	2,148	2,148	10,741
4. EQUIPMENT MAINTENANCE	0	0	0	0	0	0
5. TRANSPORT	9,259	9,259	9,259	9,259	9,259	46,296
6. CAPITAL ASSETS	11,667	0	0	0	0	11,667
SUBTOTAL	78,019	66,352	66,352	66,352	66,352	343,426
TOTAL (I, II + III)	949,439	787,241	787,241	787,241	787,241	4,098,404

ANNEX R

MONITORING PROCEDURES FOR HOST COUNTRY CONTRIBUTIONS

ANNEX R

Monitoring Procedures for Host Country Contributions

In the early stages of implementation, the Project Officer will determine if there is a sound basis to conclude that host country contributions, by categories and in necessary numbers, will be forthcoming when needed to ensure the project can be implemented on a timely basis. To assist with this, USAID will contract with a local CPA firm to work with the MWCT to establish a budget, reporting format and procedures for monitoring expenditures. As soon as the host country contributions become known in greater detail, the Project Officer will issue a Project Implementation Letter (PIL) outlining the full extent of the counterpart agency's responsibility, including the manner in which these contributions will be made available. This PIL will also specify that the implementing agency should keep a separate accounting of all host country contributions to the project and report it to USAID quarterly. (See attached suggested reporting format). To lessen the accounting burden on the MWCT, a local CPA firm will be hired to prepare and verify these quarterly reports.

The Controller, with the assistance of the Project Officer, will maintain the official USAID accounting records for host country contributions. The Project Officer should, in the implementing PIL, require that the Host Government report on contributions within thirty days at the end of each quarter. Agency policy now requires "auditable" evidence that such contributions have been made as mutually agreed to between A.I.D. and the Host Government. Such evidence will be provided by the quarterly reports submitted to the Project Officer. These reports will be audited at least annually.

The Project Officer will be responsible for ensuring that the contributions are in accordance with the project agreement. If the Project Officer becomes aware that contributions are not being made as agreed to, or the implementing agency is not tracking or reporting required contributions, the Controller should be notified. The Controller will then bring the problem to the attention of the Mission Director with recommendations for appropriate actions.

TABLE VII
GOVERMENT OF NAMIBIA
HOST COUNTRY CONTRIBUTION
(RAND EQUIVALENT)

ITEM	1	2	3	4	5	TOTAL
I. PLANNING + APPLIED RESURCH (ETOSHA NATIONAL PARK)						
A. SALARIES	460,000	460,000	460,000	460,000	460,000	2,300,000
B. TRAVEL / SUBSISTENCE	36,000	36,000	36,000	36,000	36,000	180,000
C. MATERIAL / SUPPLIES	25,060	25,060	25,060	25,060	25,060	125,300
D. EQUIPMENT MAINTENANCE	9,800	9,800	9,800	9,800	9,800	49,000
E. TRANSPORT	172,000	172,000	172,000	172,000	172,000	860,000
F. CAPITAL ASSETS	400,000					400,000
SUBTOTAL	1,102,860	702,860	702,860	702,860	702,860	3,914,300
II. COMMUNITY DEVELOPMENT						
A. CAPRIVI (EAST AND WEST)						
1. SALARIES	504,000	504,000	504,000	504,000	504,000	2,520,000
2. TRAVEL SUBSISTENCE	65,000	65,000	65,000	65,000	65,000	325,000
3. MATERIALS / SUPPLIES	79,300	79,300	79,300	79,300	79,300	396,500
4. EQUIPMENT MAINTENANCE	1,625	1,625	1,625	1,625	1,625	8,125
5. TRANSPORT	97,500	97,500	97,500	97,500	97,500	487,500
6. CAPITAL ASSETS	6,435					6,435
SUBTOTAL	753,860	747,425	747,425	747,425	747,425	3,743,560
B. BUSHMANLAND						
A. SALARIES	78,000	78,000	78,000	78,000	78,000	390,000
B. TRAVEL / SUBSISTENCE	12,038	12,036	12,038	12,038	12,038	60,190
C. MATERIAL / SUPPLIES	14,943	14,943	14,943	14,943	14,943	74,715
D. EQUIPMENT MAINTENANCE	0	0	0	0	0	0
E. TRANSPORT	37,050	37,050	37,050	37,050	37,050	185,250
F. CAPITAL ASSETS	0	0	0	0	0	0
SUBTOTAL	142,031	142,031	142,031	142,031	142,031	710,155
C. ETOSHA CATCHMENT AREA (OVAMBO AND KAOKOLAND)						
1. SALARIES	240,000	240,000	240,000	240,000	240,000	1,200,000
2. TRAVEL SUBSISTENCE	20,000	20,000	20,000	20,000	20,000	100,000
3. MATERIALS / SUPPLIES	18,835	18,835	18,835	18,835	18,835	94,175
4. EQUIPMENT MAINTENANCE	250	250	250	250	250	1,250
5. TRANSPORT	75,000	75,000	75,000	75,000	75,000	375,000
6. CAPITAL ASSETS	0	0	0	0	0	0
SUBTOTAL	354,085	354,085	354,085	354,085	354,085	1,770,425
SUBTOTAL (A, B, +C)	1,249,976	1,243,541	1,243,541	1,243,541	1,243,541	6,224,140
III. PROJECT MANAGEMENT (ENVIRONMENTAL PLANNING UNIT)						
1. SALARIES	142,600	142,600	142,600	142,600	142,600	713,000
2. TRAVEL SUBSISTENCE	5,750	5,750	5,750	5,750	5,750	28,750
3. MATERIALS / SUPPLIES	5,800	5,800	5,800	5,800	5,800	29,000
4. EQUIPMENT MAINTENANCE	0	0	0	0	0	0
5. TRANSPORT	25,000	25,000	25,000	25,000	25,000	125,000
6. CAPITAL ASSETS	31,500	0	0	0	0	31,500
SUBTOTAL	210,650	179,150	179,150	179,150	179,150	927,250
TOTAL (I + II)	2,563,486	2,125,551	2,125,551	2,125,551	2,125,551	11,065,690

TABLE VII
GOVERMENT OF NAMIBIA
HOST COUNTRY CONTRIBUTION
(US DOLLAR EQUIVALENT)

ITEM	1	2	3	4	5	TOTAL
I. PLANNING + APPLIED RESURCH (ETOSHA NATIONAL PARK)						
A. SALARIES	170,370	170,370	170,370	170,370	170,370	851,852
B. TRAVEL / SUBSISTENCE	13,333	13,333	13,333	13,333	13,333	66,667
C. MATERIAL / SUPPLIES	9,281	9,281	9,281	9,281	9,281	46,407
D. EQUIPMENT MAINTENANCE	3,630	3,630	3,630	3,630	3,630	18,148
E. TRANSPORT	63,704	63,704	63,704	63,704	63,704	318,519
F. CAPITAL ASSETS	148,148	0	0	0	0	148,148
SUBTOTAL	408,467	260,319	260,319	260,319	260,319	1,449,741
II. COMMUNITY DEVELOPMENT						
A. CAPRIVI (EAST AND WEST)						
1. SALARIES	186,667	186,667	186,667	186,667	186,867	933,333
2. TRAVEL SUBSISTENCE	24,074	24,074	24,074	24,074	24,074	120,370
3. MATERIALS / SUPPLIES	29,370	29,370	29,370	29,370	29,370	148,852
4. EQUIPMENT MAINTENANCE	602	602	602	602	802	3,009
5. TRANSPORT	36,111	36,111	36,111	36,111	36,111	180,556
6. CAPITAL ASSETS	2,383	0	0	0	0	2,363
SUBTOTAL	279,207	276,824	276,824	278,824	276,824	1,386,504
B. BUSHMANLAND						
A. SALARIES	28,889	28,889	28,889	28,889	28,889	144,444
B. TRAVEL / SUBSISTENCE	4,459	4,459	4,459	4,459	4,459	22,293
C. MATERIAL / SUPPLIES	5,534	5,534	5,534	5,534	5,534	27,672
D. EQUIPMENT MAINTENANCE	0	0	0	0	0	0
E. TRANSPORT	13,722	13,722	13,722	13,722	13,722	68,611
F. CAPITAL ASSETS	0	0	0	0	0	0
SUBTOTAL	52,604	52,604	52,604	52,604	52,604	263,020
C. ETOSHA CATCHMENT AREA (OVAMBO AND KAOKOLAND)						
1. SALARIES	88,889	88,889	88,889	88,889	88,889	444,444
2. TRAVEL SUBSISTENCE	7,407	7,407	7,407	7,407	7,407	37,037
3. MATERIALS / SUPPLIES	6,976	6,976	6,976	6,976	6,978	34,880
4. EQUIPMENT MAINTENANCE	93	93	93	93	93	463
5. TRANSPORT	27,778	27,778	27,778	27,778	27,778	138,889
6. CAPITAL ASSETS	0	0	0	0	0	0
SUBTOTAL	131,143	131,143	131,143	131,143	131,143	655,713
SUBTOTAL (A, B, +C)	482,954	460,571	460,571	460,571	460,571	2,305,237
III. PROJECT MANAGEMENT (ENVIRONMENTAL PLANNING UNIT)						
1. SALARIES	52,815	52,815	52,815	52,815	52,815	264,074
2. TRAVEL SUBSISTENCE	2,130	2,130	2,130	2,130	2,130	10,648
3. MATERIALS / SUPPLIES	2,148	2,148	2,148	2,148	2,148	10,741
4. EQUIPMENT MAINTENANCE	0	0	0	0	0	0
5. TRANSPORT	9,259	9,259	9,259	9,259	9,259	46,296
6. CAPITAL ASSETS	11,667	0	0	0	0	11,667
SUBTOTAL	78,019	66,352	66,352	66,352	66,352	343,426
TOTAL (I, II + III)	949,439	787,241	787,241	787,241	787,241	4,098,404

HOST COUNTRY CONTRIBUTION
QUARTERLY EXPENDITURE REPORT

PROJECT: 690-0251.73

Budget Line-Item	Host Country	Expenditure to Date	Current Quarter Expenditures	Balance
Salaries				
Travel/Subsistance				
Material/Supplies				
Equipment maintenance				
Transport				
Capital Assets				

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ANNEX Q

DISBURSEMENT AND ACCOUNTING PROCEDURES

ANNEX Q

DISBURSEMENT AND ACCOUNTING PROCEDURES

The following procedures for disbursement and accounting will apply to the grantee/recipient in order to (1) request disbursements under the grant and cooperative agreements, (2) account for funds received, and (3) comply with the financial requirement of the agreements.

This guidance does not cover all the details and possible situations which may arise. Therefore, additional consultation between the recipient and USAID should be initiated, as necessary, during the period of the Agreement. These guidelines, supplemented by consultations, will enable the recipient and A.I.D. to effectively monitor the financial management of this Agreement.

Establishment of Bank Accounts

A separate bank account to deposit all A.I.D. funds received under this Agreement must be established, in a commercial bank. A.I.D. funds shall not be commingled with any other funds. Any interest earned on these funds shall be reported to the USAID Controller. All interest earned must be returned to USAID and will be collected by USAID through a deduction in the quarterly Disbursement Report. The recipient and sub-recipients must advise, in writing, USAID of the establishment of the account and the account number.

Approved Budget

The approved budget of the Agreement is shown in Section IV of the Agreement, entitled "Financial Plan".

Initial Advance

An initial advance of up to 90 days disbursing requirements under the approved budget may be requested by submitting a cost estimate of cash requirements by budget line item.

Subsequent Advances & Accounting of Funds Received

Reporting to USAID of expenditures generally will be performed on a quarterly basis and, in any case, not less frequently than quarterly. Reporting of expenditures and subsequent requests for Agreement funds will be accomplished by submitting the following to the USPSC and project funded accountant for review before submission to the USAID/Controller:

(1) a completed SF 1034 Voucher (sample copy attached); and

(2) a completed Disbursement Report (sample copy attached).

For the first two quarterly Disbursement Reports, photocopies must be forwarded of all paid invoices, receipts, checks, or other documentary evidence supporting each expenditure being claimed in the Disbursement Report. Unless otherwise notified by USAID, submission of this supporting documentation is only required for the first two quarterly Disbursement Reports.

Requests for payments not submitted in the above manner may be delayed. To ensure that the recipient has sufficient funds prior to obtaining the next advance, the Disbursement Report should be submitted to the USAID Controller four to six weeks prior to the end of the quarter.

In the event cash requirements have been underestimated, interim advances may be requested.

The Disbursement Report

The attached format will be used for requesting subsequent advances and reporting expenditures of Agreement funds.

NAME OF RECIPIENT: _____

AGREEMENT NUMBER: _____

PERIOD COVERED BY THIS REPORT _____ TO _____

1.	BEGINNING ADVANCE BALANCE		R
2.	PLUS:	AID FUNDS REC'D DURING THE PERIOD	R
3.	PLUS:	INTEREST EARNED DURING THE PERIOD	R
4.	LESS:	EXPENDITURES DURING THE PERIOD	R _____
5.	ENDING ADVANCE BALANCE		R

LINE ITEM	APPROVE BUDGET (R)	EXPENDITUES THIS PERIOD (R)	EXPENDITUES TO DATE (R)	ADVANCE FOR NEXT PERIOD (R)
TOTALS				

LESS: ENDING BALANCE (NO. 5 ABOVE)
LESS: AID FUNDS REQUESTED AND NOT YET RECEIVED (IN TRANSIT)
LESS: EXPENDITURES THIS PERIOD (NO. 4 ABOVE)
PLUS: INTEREST EARNED THIS PERIOD (NO. 3 ABOVE)
ADVANCE ADJUSTMENT R _____

NET AMOUNT REQUESTED BY RECIPIENT:

EXPENDITURES FOR PERIOD: R
PLUS: ADVANCE ADJUSTMENT
LESS: INTEREST EARNED (_____)
NET AMOUNT REQUESTED R

SUMMARY OF INTEREST EARNED:

PREVIOUSLY REPORTED: R
PLUS: REPORTED THIS PERIOD _____
INTEREST EARNED TO DATE: R

The undersigned hereby certifies that the payment of the sum claimed is proper and that appropriate refund to AID will be made promptly upon request in the event of disallowance of costs not reimbursable under the terms of the Agreement.

_____
(Recipient Representative

Date: _____

U.S. GPO 1986-O-212-114 90377

Standard Form 1034
Revised October 1987
Department of the Treasury
I TFM 4-2000
1034-101

PUBLIC VOUCHER FOR PURCHASES AND SERVICES OTHER THAN PERSONAL

VOUCHER NO.

U.S. DEPARTMENT, BUREAU, OR ESTABLISHMENT AND LOCATION
Agency for International Development
USAID/Windhoek
Windhoek, Namibia

DATE VOUCHER PREPARED
XXXXXXXX XX, 1992

CONTRACT NUMBER AND DATE
Grant No. 690-XXXX-X-XX XXXX

REQUISITION NUMBER AND DATE

SCHEDULE NO.

PAID BY

PAYEE'S NAME AND ADDRESS

Name and mailing address of payee
(the check will be mailed directly to this address unless otherwise specified)

DATE INVOICE RECEIVED

DISCOUNT TERMS

PAYEE'S ACCOUNT NUMBER

SHIPPED FROM | TO | WEIGHT

GOVERNMENT B/L NUMBER

NUMBER AND DATE OF ORDER	DATE OF DELIVERY OR SERVICE	ARTICLES OR SERVICES (Enter description, item number of contract or Federal supply schedule, and other information deemed necessary)	QUANTITY	UNIT PRICE COST	UNIT PRICE PER	AMOUNT (1)
		Expenditures for the period _____ through _____				SAR X,XXX,XXX
		Advance Adjustment				SAR X,XXX,XXX
		PER ATTACHED DISBURSEMENT REPORT				
		_____ Recipient Representative				
(Use continuation sheet(s) if necessary)		(Payee must NOT use the space below)			TOTAL	

PAYMENT:
- ☐ PROVISIONAL
- ☐ COMPLETE
- ☐ PARTIAL
- ☐ FINAL
- ☐ PROGRESS
- ☐ ADVANCE

APPROVED FOR =$

EXCHANGE RATE =$1.00

DIFFERENCES

BY [5]

Amount verified correct for

TITLE

(Signature or initials)

Pursuant to authority vested in me, I certify that this voucher is correct and proper for payment.

(Date) (Authorized Certifying Officer) [5] (Title)

ACCOUNTING CLASSIFICATION

PAID BY

CHECK NUMBER | ON ACCOUNT OF U.S. TREASURY | CHECK NUMBER | ON (Name of bank)

CASH $ | DATE | PAYEE [5]

PER

TITLE

[5] When signed in foreign currency, insert name of currency.
[6] If the ability to certify and authority to approve are combined in one person, one signature only is necessary; otherwise the approving officer will sign in the space provided, over his official title.
[7] When a voucher is prepared in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary", or "Treasurer", as the case may be.

NSN 7540-00-000-5534

Previous edition usable

PRIVACY ACT STATEMENT
The information requested on this form is required under the provisions of 31 U.S.C. 82b and 82c, for the purpose of disbursing Federal money. The information requested is to identify the payment creditor and the amounts to be paid. Failure to furnish this information will hinder disbursing [illegible]

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