

PD-ABL-872

Program Review and Evaluation

**Natural Resources Management Project
Zambia Component of Southern Africa Regional Project**

A Success in the Making

**Presented to
USAID/Zambia**

**by
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Figure 1

ZAMBIA'S WILDLIFE ESTATE : NATIONAL PARKS AND GAME MANAGEMENT

NATIONAL PARKS

- | | | | |
|----|---------------|----|------------------------------|
| 4 | SUMBU | 36 | LUSUSUZI |
| 5 | NGERU WANTIPA | 42 | KAFUE |
| 7 | LUSENGA PLAIN | 43 | LIOWA PLAIN |
| 10 | NYIKA | 47 | LOWER ZAMBESI |
| 12 | ISANGANO | 56 | BLUE LAGOON |
| 17 | NORTH LUANGVA | 52 | LOCHINVAR |
| 21 | LAVUSMI MANDA | 56 | SIGNA-ROWEZI |
| 25 | SOUTH LUANGVA | 57 | MUSI-O-TUNYA ZOOLOGICAL PARK |
| 27 | LUAMBE | | |
| 28 | KASANKA | | |
| 28 | WEST LUNGA | | |

GAME MANAGED

LUANGVA VALLEY

- 8 FULAZA
- 8 CHIKWA-C
- 15 MUKUNGU
- 20 MUMYANAC
- 22 LUMINDA
- 32 UPPER LL
- 33 LOWER LL
- 36 CHISOMO
- 37 SANDWE
- 40 WEST PET

LUANO AND ZAM

- 41 LUANO /
- 46 BUFUNSA
- 51 CHIANGA

WETLAND AREAS

- 13 CHAMBESH
- 14 BANGWEZUL
- 18 KAFINDA
- 48 KAFUE FL
- 18 MANSIA

KAFUE PARK AND

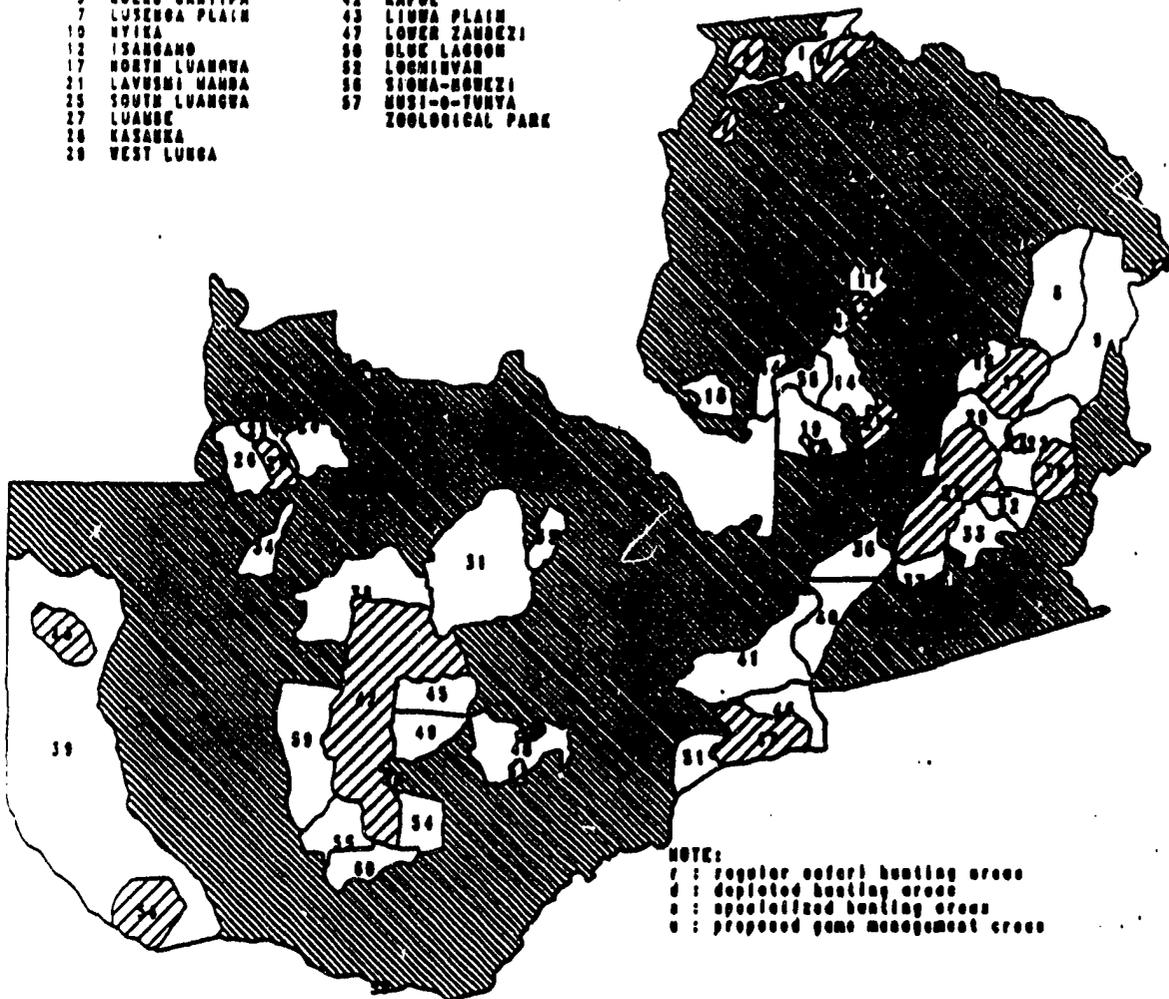
- 31 LUNDA-LU
- 34 CHIZELA
- 38 MACHISA-
- 38 KASONSU-
- 48 MUMBWA /
- 48 MAMVALA
- 52/54 BILIL
- 55 MULOBEZI
- 59 KAHALI
- 59 SICHIFUL

NORTHWEST. & NW

- 1 KAPUTA
- 6 TOROVA
- 11 LUVINDU
- 23 CHIWIKA
- 24 MUSELE
- 26 LUKWAGUA

WEST ZAMBESI

- 38 WEST ZAM



NOTE:
 / : regular safari hunting areas
 d : depleted hunting areas
 s : specialized hunting areas
 u : proposed game management areas

MAPS AND INFO ON HUNTING AREAS

AID PROJECT IDENTIFICATION DATA SHEET

1. Country: Southern Africa Regional, Zambia Component
2. Project Title: Natural Resources Management Project-ADMADE
3. Project Numbers: AID 690-0251; Zambia 0251.11; SADC 5.0.18
4. Project Dates:

Zambia Project Agreement:	8/19/89
Zambian First Amendment:	9/30/93
Zambia PACD:	8/31/95
5. AID Project Funding

Original Zambia Agreement:	\$3,000,000
First Amendment	1,800,000
Total Obligation	4,800,000
of which: AID Direct	(3,407,719)
WWF Cooperative Agreements	(1,392,281)
Earmarked as of 3/10/95 (Est)	2,999,807
Expenditures as of 3/10/95 (Est)	2,471,678
Uncommitted as of 3/10/95 (Est)	1,800,193
6. Mode of Implementation:

0251	Memo of Understanding among AID and the Governments of Zimbabwe, Zambia, Botswana and Malawi
0251.11	Agreement between AID and GRZ for direct purchase of commodities and support to Training Center
	Cooperative Agreement between AID and WWF/US for technical assistance, training, and budgetary support.
7. Project Designers - for Project Paper Supplement (Amendment One)

Murle Baker - REDSO/ESA
 Mary Picard - AID/W/WID
 Ian Games - PSC
8. Responsible Zambia Mission Officials:

Joseph F. Steponek Mission Director
 Val Mahan General Development Officer

(Note: Regional responsibility for this regional project is in consultation from USAID/Harare to USAID/Gaberone)
9. Prior Evaluations:

Reorganization and Restructuring of NPWS, Child and Lee, Nov 1992
Midterm Evaluation, Alpert and DeGeorges, July 1993
Financial Audit of WCRF, Deloitte & Touche, December 1993
Midterm Planning Assessment, Rosenthal et al, June 1994

EXECUTIVE SUMMARY

The main conclusions and recommendations of this evaluation are the following:

Conclusions

1. **From an economic development point of view, support for the hunting industry can have positive financial benefits to Zambia.** In view of the geography of the country this sector may, in the long run, be one of the countries major source of foreign exchange and government budgetary resources. Success in this industry must, of course, take place within the framework of a growing economy. At the local level, new revenues will give people economic alternatives to the consumptive use of wildlife.
2. **The concept of community based natural resources management is applicable and workable in Zambia.** While impact data is not yet firm, the program's concept is understood by most people on the ground especially those most affected. There is a dynamic tension regarding the alternate uses of land and resources which, if kept in the open and managed well, can lead to better decisions on the use of these resources. USAID can play a useful role in encouraging this dynamic.
3. Recent approval by the Cabinet of **the new Wildlife Policy**, which supports the Community based Natural Resources Management (CBNRM) concept by confirming that the ownership of wildlife and management responsibility rests with the people on the land, hastens the time when authority and responsibility for wildlife and conservation management will be devolved and decentralized to local communities and to the private sector.
4. Many of the **management issues** which were reported to be so troubling 14 months ago, specifically the operation of the Wildlife Conservation Revolving Fund (WCRF), appear to be on the mend. Other improvements have been made in such things as computerization of license fees, improvements in the system for monitoring of animals, and increases in the number of trained scouts.
5. **World Wildlife Fund (WWF) has not been able to provide overall technical leadership and coordination needed by this project.** USAID was never able to decide if it wanted WWF to exercise such leadership. The National Parks and Wildlife Service (NPWS) appears to have been content to allow technical leadership to be centered at Nyamaluma. The Cooperative Agreement has proven to be a useful mechanism to enable WWF to serve as an administrative secretariat and accounting station for the project. WWF has not completed two of the components under its Cooperative Agreement.
6. **The regular and village scouts are the heroes of the program.** They appear to be carrying out their wildlife conservation and management activities under great hardships and with insufficient material and financial support from the government.
7. **The new regional office in Gaborone** appears to understand the problems of managing the Zambia component of the regional Natural Resources Management (NRM) project (either this

one or a new one). It has agreed to commit "a minimum of one two-week visit per quarter for purposes of providing technical oversight/advice and sharing information from the perspective of regional lessons learned, upcoming regional training workshops, or meetings."

Recommendations

1. **Institutional improvement needs to be made in the structure and operations of NPWS** for it to be able to support the Administrative Management Design for Game Management Areas (ADMAGE) program. Initial indications are that the European Community (EC) will focus on improvements in management of the National Parks. One institutional change we recommend to assure proper attention to the CBNRM effort, which should be supported by USAID, would be to create a new unit or branch, probably in NPWS, but possibly outside of it, to be concerned with conservation and community co-management in the Game Management Areas (GMAs).
2. **The Research and Training Center at Nyamaluma is a valuable asset for this community-based wildlife conservation program.** But the Center needs to be strengthened, professionalized, and Zambianized for the good of the NPWS and the CBNRM program. The Center's activities in areas other than training and monitoring need to be clearly specified so that USAID can feel comfortable to continue its support, and to insure that the Center continues to support the NPWS.
3. **Wildlife management and economic development monitoring and evaluation systems need improvement** but a good start has been made in this direction on the technical side. The Technical Advisor at Nyamaluma should spend more time on this subject, rather than on community development. More needs to be done to institutionalize the monitoring and evaluation effort into NPWS in Chilanga and to train Zambians to carry out research, monitoring, and land use planning. Further, Zambians need to be trained to use this information for management decision making.
4. **More top-level and creative attention needs to be given to the efforts of the scouts in the field,** e.g. use of light planes. Additional and better targeted funds need to be found to strengthen community sanctioned anti-poaching effort. An expanded program of training visits to other programs around the world for senior management would help achieve the first goal. Reconsidering the fee and fund distribution system might help the second goal.
5. **A major new effort needs to be created and funded to assist local communities in planning and carrying out enterprise and community co-management efforts** that are both productive and beneficial from a developmental and a conservation point of view. To transform the current Government of the Republic of Zambia (GRZ) and NPWS community development function, we suggest that there be a significant grant element in any new project to contract with Private Voluntary Organizations (PVOs) and Non-Governmental Organizations (NGOs) experienced and specialized in community co-management and community enterprise development.
6. **If USAID/Zambia is serious about continuing an NRM support project, it will need to make a significant contribution in staff time to ensure that the project achieves its potential.**

ACRONYMS

ADMADE	Administrative Management Design for Game Management Areas
AID	United States Agency for International Development
ASLP	USAID/Zambia's Agriculture Sector Liberalization Program
CAMPFIRE	Communal Areas Management for Indigenous Resources
CBNRM	Community Based Natural Resources Management
Center	Nyamaluma Research and Training Center
CLO	Community Liaison Officer (under the WWF program)
Department	National Parks and Wildlife Service
EC/EU	European Community/European Union
EOP(S)	End of Project (Status)
ESRI	Earth Sciences Research Institute
Fund	Wildlife Conservation Revolving Fund
GMA	Game Management Area
GRZ	Government of the Republic of Zambia
IEC	Information, Education and Communication Program
ISA	Initiative for Southern Africa
LUPO	Land Use Planning Officer
NEAP	National Environmental Action Plan
NGO	Non-Governmental Organization
NPA	Non-Project Assistance
NPWS	National Parks and Wildlife Service
NRMP	USAID/Zambia's Natural Resources Management Project
NRTC	Nyamaluma Research and Training Center
PACD	Project Activity Completion Date
PDO	USAID Project Development Officer
PH	Professional Hunter
PID	USAID's Project Identification Document
PVO	Private Voluntary Organization
PRA	Participatory Resource Assessment (under the WWF program)
SADC	Southern Africa Development Community
SAP	Structural Adjustment Program
SARP	Southern Africa Regional Program
Scout	Regular NPWS scout- a Civil Servant
SMS	Surface Monitoring System
Team	The present two-person evaluation team
USAID	United States Agency for International Development
Unit Leader	Civil Service Head of a GMA
Village Scout	Villager-working as Scout, but paid by ADMADE
WMA	Wildlife Management Authority
WMSA	Wildlife Management Sub-authority
WMU	Wildlife Management Unit
WCRF	Wildlife Conservation Revolving Fund
WWF	World Wildlife Foundation-of United States or nternational
ZK	Kwacha-Zambian Currency-Approximately ZK 900=\$1.00

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CHAPTER I

OVERVIEW

I. ADMADE and the Larger Context

The completion of the present phase of Zambia's NRM Project and the timing of this evaluation coincide with the blossoming of political and economic stability in the SADC region. Liberal economic policy and increasingly democratic institutions are beginning to bear fruit, as witnessed by the renewed optimism about the possibilities of directing tourist revenues toward conservation objectives. This new approach is "driven by the recognition that the state and communities must develop a new co-management approach to resource utilization that offers communities clearly defined management rights and benefits in return for sustainable management of the resource" ¹

In the early 1980s, the Zambian National Parks and Wildlife Service (NPWS) established Game Management Areas (GMA) and, to capture revenues from wildlife use, it created a Wildlife Conservation Revolving Fund (WCRF). These two elements form the core of Zambia's ADMADE program, even as it evolves toward a broader multi-sectoral approach to community-based natural resource management (CBNRM). The program developed slowly and remained localized until 1990 when Zambia benefited from a \$3.0 million bi-lateral grant (later amended to \$4.8 m) made available through the Zambia component of the USAID Southern Africa Regional Program (SARP). The express purpose of the USAID project was to "test the viability and replicability of community based natural resources management and use programs, and integrate such programs into existing services" ².

In the ensuing years much has happened. The program remains vibrant as it continues to test the hypothesis implicit in the original project concept. Recent attention has been given to:

- improving governance through devolution and administration through transparency;
- capturing the strength of the private sector through partnerships among the public sector and with local communities;
- establishing a policy and legal framework that supports equitable distribution of benefits; and,
- institutional restructuring to efficiently enhance linkages between conservation and development.

¹Steiner and Rihoy 1995

²AID Project Paper 1989

In this evaluation, we assess USAID's contribution to the ADMADE program and offer several scenarios for continued USAID involvement.

The Team believes that the ADMADE concept is a success in the making. While the program is not mature, it has achieved a degree of sustainability. Even without further USAID funding, the ADMADE program, or something like it, would continue. Reflecting the GRZ's commitment to the sector and nascent recognition that conservation-dependent tourism constitutes a growth sector, NPWS may be one of the few government divisions receiving an increasing relative share of budget approvals under the IMF-imposed structural adjustment program restrictions. Public-private sector partnerships are beginning to expand under USAID-facilitated policy and legislative advances. Local implementation of these participatory processes is further enabled because of the reforms that USAID has supported in the safari licensing process, new operator leasing agreements and improved management of funds.

The development philosophy embodied by ADMADE is arguably the most significant hope for improving the well-being of the country's rural populations who remain marginally integrated into the fabric of the national economy. The empowering element of ADMADE occurs through devolving to local populations the proprietary rights to rural resources. In the context of economic and political reform, this thrust spearheads the evolution of democratic institutions of rural Zambia. The forestry and fisheries departments are embarking on strategies that emulate the NPWS by "handing over" control of fishery and forest resources to local user communities.

ADMADE makes use of the private sector to intensify economic gains from sustainable use of the resource base. As a landlocked country, one of Zambia's comparative advantages may lie in marketing vast expanses of open savanna and woodland habitat with its charismatic fauna. The potential scale of the adventure tourism and hunting economies, with their forward and backward linkages (e.g. the viability of a private sector airline) in the economy cannot be ignored. Engendering economic growth at the village level depends on effective conservation of the resource base. The program thus brings together democratic initiatives, economic growth through private sector involvement, and natural resources management.

II. Assumptions

A basic assumption of this evaluation report is a stable Zambia that becomes progressively interwoven into the fabric of a growing regional tourism market. Greater use of the private sector to encourage improvements in the game safari industry will build on earlier success. The process will provide a mechanism for local community decision making that will bring the beneficiaries into a more favorable relationship with the larger growing economy.

While these changes are taking place, we assume that the national government will exhibit the political will to continue to support local empowerment and local governance, the private sector, and an enabling environment for the tourist industry. As this process evolves, growing self-regulation and self-enforcement will lead to a leveling off, and hopefully a reduction, in the

cost for enforcement in the wildlife conservation sector. The GRZ role will shift to regulation and setting standards for the industry, carrying out research, and managing the larger habitat within which wildlife can live and increase.

On the community side, the injection of new funds will engender the growth of local cooperative businesses, of local private initiatives, the improved provision of public and private services, and GRZ and local co-management of resources that become available from the wildlife hunting and tourism industry. Diversification, including other sustainable resource uses, will reduce the vulnerability of the local economy to possible unexpected fluctuations in the flow of tourist revenues.

III. Possible Scenarios for USAID Options in the Future

USAID/Zambia has reached an important decision-point in the life of this project. NRM is not a strategic sector for the Mission, and USAID/Zambia must decide how it wishes to use its limited staffing resources and operating funds. The Mission must decide whether to continue to support the ADMADE program, chart a new course such as merging ADMADE with a broader CBNRM program, or decide that the Mission has made its contribution and will no longer work in community-based natural resources management.

This evaluation report explores the options under the following three scenarios:

A. Scenario One: No Further USAID Support to NPWS/ADMADE

Under this scenario, USAID would effectively end support for the ADMADE program as of the current August 31, 1995 PACD. A one year PACD extension to August 1996 would be used as a phase out period in which USAID funds could be channeled through the WCRF in a manner that would facilitate an orderly close-out.

B. Scenario Two: Active Support Program but No Decision on Follow-on Funding

Under this scenario, USAID would use remaining NRM funds and actively attempt to consolidate gains made to date and determine the advisability and nature of future support. Under this scenario, USAID could consider program actions including, but not limited to, those offered by the Team in the body of the evaluation report.

C. Scenario Three: One Year Extension as Bridge Funding to a New Activity Start-up

This is the preferred option. Considerations for actions are contained in the body of the evaluation report. A leadership role for USAID assistance seems indicated for legislation and policy as well as in community co-management.

One key USAID action would be to support the suggestion of the Permanent Secretary of Tourism to organize a Forum of stakeholders in the natural resources sector in Zambia to review the Zambian government's approach to conservation of wildlife and other natural resources. The conclusions of the Forum would be used to provide guidance for designing the long term USAID project, to aid in developing the action plan for the EC project coming on-line in the last quarter of 1995, and to assist in any GRZ restructuring of NPWS or other government agencies concerned with conservation and environmental management.

IV. Summary of Detailed Recommendations

Following is a list of the action recommendations contained in the body of the report. The recommendations are listed in the chapter and section order of the report.

Chapter III -- Review of Key Components of the ADMADE Program

Direction of the Program in the Context of New Wildlife Policy and Legislation

1. Support a process of public vetting of the new draft National Parks and Wildlife Act through stakeholder workshops, a public information campaign, and open legislative review.
2. The new legislation should be written in terms that provide a broad legal basis and framework for implementation of the CBNRM concept but should be flexible enough to allow for further experimentation with new institutional and process arrangements.
3. Help NPWS to participate in the development of intersectoral policies that support the CBNRM concept. Promote inter-agency collaboration through policy boards for Parks and Wildlife and for Tourism, a National Environmental Action Plan, intersectoral committees and ad hoc working groups.
4. Undertake studies aimed to clarify the political geography and the roles of the local communities, private operators and the State in community-level governance, administration and participation, i.e., issues relating to winners and losers in the ADMADE process, geographic units, power relations governing access and allocation of land and other natural resources, and jurisdictional authority.
5. Through a consultative process, develop policies and guidelines for designing and implementing community co-management agreements and management plans for GMAs.
6. Develop explicit criteria and procedures through which the Nyamaluma Center is to assist the NPWS leadership in setting national wildlife policy. This NPWS responsibility could

be assisted with continued USAID support to the policy, legislative, and governance dimensions of this community-based approach to natural resources management.

7. Periodically review the performance under the new lease agreements through the use of the NPWS Safari Monitoring System, through local fora within the GMAs, and through comparative assessments with other national programs, through cross-program visits, improved information exchange, and international workshops.

Institutional Capacity of NPWS to Administer ADMADE

1. NPWS needs to give more attention to long term planning and a future vision of what it wishes to accomplish. NPWS should establish a position called Wildlife Conservation Planning Officer in the Office of the Director. The functions of this position needs further elaboration but it should be associated with the present position of Wildlife Research Officer and have a planning function in the unit concerned with accounting and budgeting.
2. A new CBNRM unit should be created in NPWS--or elsewhere in the government--to guide and coordinate the ADMADE program and other CBNRM programs in the country. This unit should include technical positions concerned with land use planning, economic analysis, comparative environmental analysis, and information, education, and communication.
3. NPWS management should press its needs for funds from the national budget by demonstrating the positive economic benefit to the country from increases in the number of hunters and tourists who will come to Zambia if there is an improved conservation effort.
4. NPWS staff must be trained and encouraged to think creatively about how it manages its responsibilities and uses its human and financial resources. For example, would it be more effective to purchase high technology equipment instead of hiring more scouts? Visits should be organized for senior NPWS personnel, its planning staff, and the new CBNRM unit, to other park management services to observe alternate approaches.
5. Now that EU will be initiating its own assistance program to this sector, and the United States is considering its options for future support, GRZ must assume greater control of conservation management and decide what it can provide from its own resources and what it needs from donors.

Technical and Research Management Capacity of NPWS to Administer ADMADE

1. A new CBNRM unit should be created in NPWS--or elsewhere in the government--to guide and coordinate the ADMADE program and to oversee other NPWS involvement in CBNRM, e.g. IRDAs, community-based game ranching, etc.

2. **Create field positions for wildlife planners and assign them to posts located in and around critical GMAs. Previous assessments have promoted these as positions for "management biologists." NPWS cannot afford interdisciplinary teams at each rural post but can constitute an interdisciplinary capacity by assigning staff with diverse backgrounds -- natural resource economics, wildlife veterinarians, geographers, social scientists with a wildlife focus, etc. -- to what are now designated as positions for management biologists.**

Performance and Status of the Wildlife Conservation Revolving Fund

Short Term

1. **Do not institutionalize the existence of the WCRF as part of ADMADE in the new wildlife legislation being written. This may rigidify the role and status of WCRF at a time when NPWS is being restructured, when the CBNRM concept is still being understood, and new approaches are being developed.**
2. **Continue efforts to improve the operations of the Fund:**
 - **replace the civil service Coordinator with a more competent Fund Manager;**
 - **change the composition of the Board of Directors so that it better represents the local communities, which the new wildlife policy indicates are the new owners of the resources;**
 - **further computerize accounting including integration of the licensing computer system with the accounting system;**
 - **publish reports on the activities of the Fund for the general public and the stakeholders of the program to help them better understand the program, its problems, and its successes.**

Long Term

1. **Restructure the WCRF along the following lines:**
 - **independence from NPWS and the civil service permitting it to hire the best private sector financial personnel;**
 - **decentralization of policy and financial control and management to local communities by changing the make-up of the Board to more directly represent the local communities and newly defined owners of the wildlife;**

- restructure the Fund, possibly as a trust, that is part of a union or federation of local community authorities in the GMAs.
2. Based upon the new wildlife policy, reconsider the present revenue sharing agreement. Restructure it on the concept that 100% of the wildlife resources in the GMAs belong to the local communities and that the local communities should decide what services they wish to purchase from the central government or from the commercial sector and how much the commercial sector should pay for hunting rights.
 3. 100% of the earnings should be co-managed by the local communities and/or their representatives in a restructured WCRF. Communities and/or their representatives should be permitted to decide, for example, that they no longer need village scouts, that policing will become a voluntary function of the local people in a rural area, and that all the available funds would go to local development activities.
 4. Whatever form or structure the WCFR eventually takes, funds should be provided, from its own sources or from donors, to continue to upgrade Fund staff and accounting equipment, and to introduce more open and public reporting on Fund activities.

Training and the Nyamaluma Research and Training Center

1. USAID should continue to support selected elements of the Nyamaluma agenda while simultaneously assisting the Ministry of Tourism/NPWS to define Nyamaluma's role in the context of NPWS' restructuring effort.
2. ADMADE has now matured to a degree that argues for a more explicit organizational mandate and structure. In view of the restructured NPWS, WCS should assist its seconded staff member to better define his, and by extension, Nyamaluma's role in the more mature operating environment.
3. The Nyamaluma Research and Training Center is a valuable asset to the program that needs to be strengthened, professionalized, and Zambianized. Its role in areas other than research and training needs to be better defined in such a way that USAID can comfortably continue its support.
4. Assist NPWS to carry out a comprehensive study of the implications of devolving Nyamaluma into an autonomous trust. Results should be reviewed at an inter-ministerial level before a final decision is made.

GIS, Wildlife Data Collection and the NRTC

General

1. Ensure that NPWS restructuring clarifies the respective roles of Nyamaluma and Chilanga for carrying out data collection and monitoring.
2. Develop mechanisms to ensure exchange of information, systems protocols, timetables for collection, and sharing of information.
3. Determine decision points in the conservation management process where better information could help.

Short Term

4. Redefine the management biologist position more broadly as one of "wildlife management planner." Select candidates with diverse disciplinary backgrounds such as natural resources economist, ecologist, geographer, veterinary medicine.

Long Term

5. Equip wildlife resource planners (currently specified as management biologists) with sufficient equipment and transport to assure their coverage locally and to permit frequent system level workshops with their colleagues and supervisors.
6. Use consultants and technical assistance to insure that GMA management plans have clear and consistent monitoring and evaluation components that build on the existing system.
7. The monitoring and evaluation system at Nyamaluma has made a good start on the technical side but needs further improvement. The Technical Advisor should spend more time on this subject, rather than on community development.
8. Significantly more needs to be done to institutionalize the data collection effort into NPWS and to train Zambians to carry out this type of research and to use the results to make management decisions.

Community Development Support and NRTC

General

1. NPWS should determine the official name for the Nyamaluma Center and more clearly specify the Center's mandate and relationship to other institutions.

2. Nyamaluma should confine its community development and community co-management activities to a few GMAs and Sub-Authorities located in close proximity to the Center. These field sites could serve as laboratories supporting the Center's pedagogical efforts and developing more effective models for CBNRM management upon which to base training efforts.
3. Community co-management should be developed by strengthening partnerships that empower local communities to take over management and eventually the costs of maintaining their resource base. As a first step in this process, WCRF should turn over management of the 40% account to the GMA level.
4. Empower local communities to set their own development agenda. Community enterprise development and associated social investment programs are quite properly the business of the local community itself. Additional capacity building will be necessary for communities to effectively assume this responsibility.

Short Term

5. Fund a consultancy to assess the results of WWF's Cooperative Agreement efforts to carry out participatory land use planning exercises. The consultancy should examine and compare the Nyamaluma approach that relies heavily on structured resolutions and the authority of traditional chiefs to move the community development process.
6. Engage a PVO with local enterprise development experience to analyze government and NGO presence in GMAs and to suggest a plan to foster new local organizations that can launch successful economic ventures while strengthening the linkage between such development activity and the wildlife conservation.

Long Term

7. Bring in international PVOs with proven local capacity building skills to help develop local NGOs. The PVOs would:
 - help establish a national union, federation or trust that will represent local authorities in GMAs;
 - shift central funds management from the WCRF to the newly formed trust or union, or have the Fund become part of the trust or union;
 - build alliances and networks of local organizations through training, information diffusion, cross site visits, etc;

- build up local enterprise planning and management skills in active GMAs so that these groups are able to function without external assistance.
7. Develop collaborative partnership between the PVOs and Nyamaluma that would specialize in training for community based natural resources management.

Coordination and Management of USAID Funding

1. Clarify the role and position of the Nyamaluma Research and Training Center.
2. Reconstitute and make more active the existing Project Coordinating Committee.
3. USAID should work with NPWS to define a coordinated operating plan that will contain a description of the proposed activities to be carried out, objectives for the period, resources required for their achievement, and how these will be deployed.
4. USAID/Zambia must be prepared to assign at least one third of the time of one professional person if it wishes to go forward with this project.

Multi-donor Coordination and Management

1. Undertake studies, workshops, and policy dialogue related to the ownership and governance of rural resources and communally held lands. This would give USAID a broader leadership role for both crop and non-crop rural lands in Zambia from which it could provide guidance and leverage other donors.
2. Consider using USAID ASLP or NPA funds to leverage policy changes in conservation management.
3. USAID presently participates in an informal donor group that meets on a regular basis. With a new donor in this sector, this group will have to be strengthened and, with the concurrence and participation of the Zambian government, made more formal.

Chapter IV - Impact of the ADMADE Program

Short Term

1. In the short term, it is probably impossible to do anything in the NRM project to install a system to collect integrated wildlife, financial, social, conservation management and economic data that will be useful for the project.

Long Term

2. If USAID goes ahead with a new long term project, an essential component should be a new or improved unit at Chilanga to collect and analyze social and economic data, as distinct from, but related to the wildlife and management practices data now being collected and analyzed by Nyamaluma.

Chapter V -- Performance of the World Wildlife Fund

Short Term

1. Under the approved no-cost extension to the Cooperative Agreement, WWF should be asked to produce at least one draft GMA management plan. We suggest this be done for the Mumbwa GMA, because Mumbwa has a management biologist, it was the focus of WWF's in-depth workshops, and a participatory process has already been initiated. The plan should involve the GIS (Map and Data) Center of Nyamaluma, the aerial surveys, the compendium of consultant reports, the NPWS LUPO, and the range of local stakeholders laid out in the preliminary report. WWF should apply the best participatory planning and mapping capacity that Zambia currently possesses. The result should be a state-of-the-art management plan and participatory methodology.
2. Until the restructuring of NPWS becomes clarified and new technical people are trained, and until a new, long term USAID project has been approved and responsibilities agreed upon, USAID should seek no further assistance from WWF (other than the recommendation in 1, above).
3. With regard to data collection, no new USAID funding should be committed to aerial surveys until a clear procedure for integrating and calibrating them with field observations, field transects, and key informant (PHs and local hunters) data. All information should be captured by the NPWS GIS. EC and any USAID follow-on activity should establish procedures for integration of data collection and help develop applications and uses for the data. Better use by Chilanga of Nyamaluma's data base is called for.
4. Those in NPWS responsible for the improved data base should collaborate with Nyamaluma to link aerial survey, depleted area analysis, profile report, and participatory planning results with the scout surveys and the secondary treatment of the license office data.

Long Term

5. As a major part of USAID's future long term project USAID should seek competitive proposals from NGOs and/or other institutions specially skilled in community organization, community co-management, and small local enterprise development to be

responsible for operational support to local communities to conduct community development and co-management activities.

- 6. Under any future long term project a manual or lessons learned guidebook should be produced to help in the preparation of GMA plans. The guidebook and plans should be used to help guide the NPWS restructuring as it, with help of the EC project, gears up to produce a series of such plans.**

CHAPTER II

BACKGROUND OF THE PROJECT AND PURPOSE OF THIS EVALUATION

I. The ADMADE Program

A. The Concept

ADMADE (Administrative Management Design for Game Management Areas) is a national program supported by the policies of the Zambian Ministry of Tourism through its National Park and Wildlife Service (NPWS). Introduced in 1987, the ADMADE approach incorporates local communities into formal management of wildlife resources by encouraging residents of gazetted buffer zones bordering the country's national parks, termed Game Management Areas (GMA), to participate in wildlife conservation by ensuring that they benefit from improved natural resources and wildlife management.

GMAs together with adjoining National Park constitute almost one third of the land area of Zambia. ADMADE represents a specific wildlife-oriented variant of community based natural resources management, or CBNRM, as understood in the larger conservation and environmental community. ADMADE in Zambia, as it relates to game animal conservation and management, was accepted as the policy of the Zambian Government by action of The Cabinet on August 25, 1993. This policy formalizes the fundamental shift away from protectionist conservation philosophy and top-down models for human development and conservation of natural resources. This policy moves toward a more integrated approach to resource management that emphasizes broader land use issues. The implications of the policy are still unfolding. Implementing the policy will require attentive management and responsive technical assistance.

B. Institutional Framework and Management Approach

ADMADE is administered by the National Parks and Wildlife Service (NPWS) in the Ministry of Tourism. A GMA falls under the authority one of the 12 Wardens. The program itself is under the coordination of the Chief Warden in Chilanga. Each GMA that may now, or in the future, generate sufficient income from wildlife to support the costs of wildlife management, establishes a Wildlife Management Authority (WMA) at the District level of government. The WMA is further subdivided into WMA Sub-Authorities (WMSA) that conform to traditional chieftainships and sometimes to designated hunting blocks in a GMA.

To spearhead both enforcement and community development activities, the NPWS appoints one of its own wildlife police officers as "Unit Leader" in each GMA. The WMA brings together the Unit Leader, local traditional chiefs, relevant GRZ technical staff, senior government representatives, and directors of commercial companies with interests in wildlife in the GMA. The Unit Leader oversees a complement

of regular scouts and local auxiliaries known as village scouts. Village scouts are intended to provide community policing in a manner analogous to the town or neighborhood "cop."

The traditional chief ordinarily chairs the WMSA which is made up, as a general rule, of 15 appointed or elected villagers, farmers, local business people, and local government employees. The degree of democratic governance exhibited by the WMSA is an issue that will be discussed below. When revenues indicate the need, each WMSA or group of WMSA's is assisted by an ADMADE-provided bookkeeper who helps manage and account for community funds.

C. Benefits and Instruments for Management of ADMADE

In 1994 more than 90% of ADMADE's revenues came from safari hunting and concession and hunting fees. Earnings generated from wildlife management within GMA's are deposited with the Wildlife Conservation Revolving Fund. The source and nature of these earnings are discussed below in greater detail.

In 1994, total distributable earnings amounted to approximately the Kwacha equivalent of \$1,315,000, a substantial increase over previous years due to concerted international marketing effort.

II. USAID's Natural Resources Management Project

A. The Regional NRM Project

In the late 1980s, a group of countries in Southern Africa formed the Southern Africa Development Community (SADC) to coordinate the efforts of international donors in the region. The United States became one of these donors. In seeking activities that would be appropriate for funding under the SADC umbrella, a regional natural resources management project became an early choice. SADC established a headquarters office for regional NRM activities in Malawi. USAID headquarters for NRM activities were established in Zimbabwe. In 1995 USAID created a new Initiative for Southern Africa and, in the process, the USAID regional office was shifted to Botswana.

B. The Zambian NRM Project

In addition to a regional component of the NRM project at the SARP regional headquarters in Malawi, AID authorized national NRM programs in four countries- Zimbabwe, Botswana, Namibia (bi-lateral), and Zambia. The ADMADE effort of the NPWS in Zambia was determined by USAID to fit well into the regional context and a decision was made to support this national effort. Regional project players meet regularly and share information and experiences.

1. The Original Zambian Project Agreement

The Zambian portion of the regional project, which was originally authorized on January 16, 1990 and provided \$3,000,000 for the five year period ending August 31, 1995 was to:

- demonstrate the technical, social, economic, and ecological viability of community-based natural resource management programs on marginal lands for improving household and community incomes while sustaining natural resources; and to
- improve national and local capabilities to halt the decline in the wildlife and natural resource base through training, education, wildlife protection, communication, and technology transfer.

More specifically, the project component in Zambia was to:

- demonstrate wildlife utilization as a preferred and profitable land use in four NPWS command areas, and through building local capacity for sustainable management, influence changes in national policy to confer proprietorship to local communities;
- establish self-sustaining resource management programs in nine target Game Management Areas that will increase local employment opportunities and income, result in optimal sustained wildlife yields, and provide the communities with access to a renewable source of revenues for development projects;
- establish and strengthen institutions and decision-making procedures involving the local communities in sustainable resource management and distribution of economic benefits from the wildlife resource base;
- enhance social and rural welfare through increased income, increased dietary protein, community development, and expanded participation of women in the development process; and,
- build the ability of development sub-authorities to capture returns from wildlife utilization to influence policy changes supporting direct return of economic benefits to communities.

The original project was implemented both through direct USAID/Zambia managed assistance to the NPWS and the WCRF and through a Cooperative Agreement with World Wildlife Foundation. The latter utilized

\$1.1 million of the available \$3.0 million and was completed on June 30, 1994.

2. The Project Paper Supplement

On September 30, 1993, USAID/Zambia authorized an additional \$1,800,000 as the First Amendment to the Zambia NRM project. The First Amendment extended the PACD to August 31, 1995. While leaving the original project goal and purposes in place the Project Paper Supplement made more specific what was to be accomplished during the remaining life of the project. The specific outputs, were now to:

- improve the management and operations of the Wildlife Conservation Revolving Fund (WCRF);
- assist in analyzing legislative changes to provide a legal basis for community based and private sector participation in natural resources management;
- assist in land use planning, resource management planning, and stakeholder analysis to ensure that the habitat as well as game, is utilized appropriately; and,
- assist training and research to improve field level wildlife monitoring and protection, and community support and development.

The amended project was implemented by continued direct USAID/Zambia managed support to NPWS and the WCRF, through a new Cooperative Agreement with WWF in the total amount of \$535,281, and with \$300,000 of assistance to the Nyamaluma Research and Training Center.

III. Scope of the Present Evaluation

As part of a determination of an appropriate course of action at the August 30, 1995 PACD, USAID/Lusaka wished to undertake an evaluation of "the performance of the NPWS and the WWF in the execution of the project, as well as an analytical exercise to determine whether the ADMADE program as it has evolved is the optimum mechanism for further expansion of the concept of community-based natural resources management."

The Scope of Work (SOW) for the evaluation did not ask the evaluation Team to review the entire history and activity of the project, nor to cover program activities prior to the Project Paper supplement and the First Amendment to the Project Agreement, although this is important background to more recent activities. The SOW indicated that the analysis should be undertaken in a new context of new legislation relating to the wildlife estate and the recently approved

European Union/Community (EU) project aimed at supporting the restructuring of the NPWS. The SOW asked the team, specifically, to analyze:

- the key components of the ADMADE program;
- the impact of the ADMADE program; and,
- the performance of the World Wildlife Fund under its present Cooperative Agreement with USAID.

Since the PACD of the present project was only one month away at the time this evaluation was undertaken, the SOW also asked the evaluation Team to consider options for future use of funds, both those funds remaining unearmarked in the present project (estimated to be \$1.5-\$1.8 million), as well as new funds which might become available under USAID's new Initiative for Southern Africa.

During the initial meeting with USAID/Lusaka, the evaluation Team was told by the Mission Director that although the Mission was interested in supporting the NRM effort in Zambia, Mission staff resources were limited. Moreover, insufficient OE funds were available for the Mission to manage the project. There was also a freeze on the hiring of additional PSCs. The Director, therefore, asked the Team to give attention to management of the project--especially, how to reduce the need for Mission staff time. A section on USAID management and coordination has, therefore, been added to this report.

IV. Evaluation Methodology

This evaluation was carried out in Zambia over a period of only three weeks-June 27-July 19, 1995 by a small Team of two people. No time was allowed for advance preparation or review of material and only three days were provided to prepare the final report after leaving the initial draft with USAID for comment.

In Zambia, three days were spent interviewing senior personnel at NPWS headquarters in Chilanga. Eight of the 18 available work days were spent outside of Lusaka visiting the Nyamaluma Research and Training Center. Formal meetings and interviews took place in two WMSAs-including structured discussions with chiefs and members of the Sub-Authorities. The Team visited three National Parks, and five GMAs, and held discussions with over fifty NPWS and ADMADE personnel, and regular and village scouts at their posts in the parks and the GMAs.

The Team spoke with concessionaires and hunters at their field sites. Interviews were held with senior and staff level USAID and WWF personnel. Two meetings took place with the Permanent Secretary of the Ministry of Tourism. In addition to collecting this primary data, project reports and project material available at the Mission were reviewed.

This final report reflects the level of effort authorized by USAID/Zambia. Since most of the time had to be spent gathering and reviewing information that would give the Team an understanding of the project, limited time was available to analyze accounting or monitoring data, to hold in-depth discussions with officials beyond NPWS, or write and rewrite an extensive final report. Significant portions of WWF's assignments had not yet been completed at the time the Team was in Zambia, and so we could not in any event review this material.

While this report contains considerable evaluation and analysis of ongoing issues, the Team was persuaded that it would be more useful to devote much of our available time to develop options for use of funds remaining under the present project and, PID-like, to suggest ideas for designing a follow-on phase to the project.

V. The Evaluation Team

The two person Team was:

- Irving Rosenthal - Team leader, PhD, Public Administration, former senior USAID officer with long term assignments in Turkey, Tunisia, Italy (Liaison Officer to FAO and IFAD), Cote D'Ivoire, and Mission Director in Niger. Chief Operating Officer for two international development PVOs and Vice-President of an international consulting company. Leader of the Team that carried out the mid-term assessment of this project fifteen months earlier.

- Frederick W. Sowers - PhD, Geography, specializes in the analysis of human pressures on wildlife habitats. Dr. Sowers served as technical coordinator for a multi-year field assessment of the Agency's programs in protecting biological diversity carried out by USAID's central evaluation office, CDIE. Previously, he spent 11 years in Africa as a natural resources policy and program advisor.

CHAPTER III

REVIEW OF KEY COMPONENTS OF THE ADMADE PROGRAM

I. Direction of the Program in the Context of New Wildlife Policy and Legislation

A. Issue

A principal issue is the establishment of enabling policy conditions for the application of CBNRM programs (independent of their technical merit) at the field level in Game Management Areas.

Policy and legislative changes are taking place in the context of the GRZ's ADMADE Program. ADMADE represents a fundamental departure from the country's prior conservation approach that was based on enforcement backed protection. Because the program is evolutionary and experimental, it has, up to now, operated from within a top-down paradigm even as it seeks to develop a new model of participatory community based resource management. Contradictions are inevitable, and they raise policy questions. Several distinct policy areas are relevant to the success of the ADMADE program. The project objectives of the Zambia component of the SARP regional effort point specifically to two related areas of policy change:

- influencing policy change to confer proprietorship to local communities; and
- strengthen sub-authority capacity in order to influence policy changes supporting direct return of economic benefits to communities.

B. Analysis

The 1993 Project Paper Supplement calls for "assistance in analyzing legislative changes to provide a legal basis for community based and private sector participation in natural resources management." The Supplement widens the area of policy concern. Although devolution of authority over wildlife and other natural resources from NPWS to local communities remains a priority, concern extends to policies affecting:

- tourism;
- hunting relative to other resource use; and
- regulation of the hunting and safari operator industry while insuring a stable investment environment.

One of the specific outputs of this activity was to review and assist in the redrafting of the National Parks and Wildlife Policy, but, in fact, the NPWS had already incorporated many of the recommendations of an earlier consultancy (Child and Lee 1992) into a new policy statement. USAID funds through WWF were used primarily to print and distribute the policy document. More substantively, USAID financed a review of the new policy to determine whether it adequately supported the project purpose of testing the viability of CBNRM approaches through ADMADE (Billings 1994). The government, through the planned revision of its National Parks and Wildlife Act, is redefining the nature and conditionality under which ownership, in the form of prescribed proprietary rights, is being transferred from the State to the local community.

For CBNRM to prove viable under the ADMADE program, policies that support a responsible and profitable safari hunting industry require definition and in some cases formal statutory instruments. The primary instrument whereby safari operators become local actors is the Concession Agreement for commercial hunting rights in designated hunting blocks within the country's GMAs. The ADMADE program can claim considerable success in fundamentally updating the precepts and policies that guide and regulate the safari industry. USAID support has been central not only to the policy consultation and drafting of appropriate instruments, but also (as discussed in later sections of this report), in establishing transparent and effective systems for allocating concessions and monitoring operator performance.

The critical drop in safari hunting revenues in 1993 revealed how dependent the ADMADE program is on a regular, relatively predictable flow of fees from the industry. Part of the response to this drop was an effort by the government to review its hunting policies and their implementation. While the collapse of the industry was not entirely due to policy failures, the 1992 safari concession allocation process resulted in the inclusion of too many small inexperienced operators (some of questionable legitimacy). Legitimate operators, many with proven track records, and local communities appeared to be the losers. Coupled with the decline in wildlife numbers and increase in disturbances to hunting, it became clear a major revision was in order if the industry was to be salvaged.

The evaluation Team found that USAID had funded a significant stakeholder workshop attended by international players in the safari industry to address these problems. Critical to this effort was a review of the government policy governing leasing arrangements. The 1994 Workshop on "Wildlife Industries in Game Management Areas" supported a number of strategies designed to encourage government, the local and international private sector, and community members to work together to help reverse declining conditions and improve marketability and marketing efforts for the industry.

The workshop which received active support from USAID/Zambia led to work on developing a new Framework Concession Agreement and process for selecting operators for the next round of leases.

When implemented, the new lease agreements will support several policy reforms:

- increasing operator commitment to local development and resource management through longer term concessions and provision for the establishment of community co-management agreements;
- raising professional standards of operators through competitive bidding, minimum capitalization requirements, and objective performance criteria;
- democratization and local governance at the community level by leaving definition of the community partner in non-specific terms;
- recognition of the particular needs for enhancing incentives for private investment in "depleted" GMAs;
- granting of exclusive hunting rights within the concessionary block for a specified and economically rational period.

The new lease agreements are to be established between the state and the operator. Although provision exists for consultation and redress on the part of the community, the community itself is not acknowledged as owner of the wildlife resources. As such, the new conveyance will serve as an intermediary vehicle creating what the USAID Project Manager has referred to as a "five-year window of opportunity" during which time the terms of devolution, private sector roles, and appropriate local administrative structures can be established. The Regional SARP project offers a means to assess alternative models. In Zimbabwe, for example, CAMPFIRE represents one alternative in which local community authorities auction concessions, negotiate terms of agreements directly with private operators, and retain all funds for local development and management.

USAID recognizes the need for improved formal mechanisms to enable community based wildlife management. USAID, therefore, financed a review and synthesis of existing thought and writings on the subject. The resulting report intended to provide the legislative review Team with a technical compendium aimed to serve as a reference document in the revision and redrafting of the National Parks and Wildlife Act. Since the legislative review coincided with this evaluation, it is not possible to assess the utility of this input into the policy process. Nor is the evaluation Team in the position to judge the outcome of this important legislative review consultancy (based on discussions with the legal consultants, the evaluation is optimistic).

While the GRZ, through the 1993 Policy for Wildlife, sanctions the ADMADE program, it does not offer sufficient guidelines upon which to develop appropriate legislation. In this vacuum, specific policy development appears to be evolving through a series of workshops largely supported by USAID through the Nyamaluma Research and Training Center. These include the Northern and Eastern ADMADE Leadership Conferences and the National Workshop on Wildlife Industries in Game Management Areas.

These workshops have been extremely effective at raising difficult issues among groups that represent multiple stakeholders. The workshops have also enabled debate to achieve clear sets of resolutions. However, despite involving diversity of ADMADE players, these workshops do not represent all interested parties. Because workshop resolutions appear to become policy, the Team felt that the process skipped an important step to review, revise, and develop a wider ownership.

The evaluation Team counts as positive, the confirmation of advanced wildlife policy at the highest level of government and the effort now ongoing to bring legislation in line with this policy and actions on the ground. However, the Team is concerned that as ADMADE continues to mature and grow into a broader, nationwide CBNRM program, the new legislation might become a hinderance to future change. We already believe, for example, that the role and location of the Wildlife Conservation Revolving Fund should be changed to reflect a more community-based, bottom-up, program supported by the new policy. See Section D, below. We therefore think it would be restrictive and a hinderance if the new legislation "fixes" the WCRF as it now exists.

Similarly, there is much discussion on the role and authority of the chiefs. While legalizing the devolution of authority for wildlife management from the central government to the chiefs may be considered by some as a step forward, this evaluation Team believes that strengthening the chiefs will make it more difficult, in the future, to go the next step and devolve authority directly to villagers and other individuals.

C. Conclusions

1. The GRZ has shown a willingness to address areas of policy reform and has demonstrated a commitment to implement policy changes once made. ADMADE benefits from this policy support, but specificity has been *de facto* delegated to an agenda set by the Nyamaluma Center.
2. The new framework lease agreement represents a significant positive step. If implemented, the new agreement should virtually eliminate the block concession lease problems that shocked the safari industry in the early 1980s and again in 1993. It stops short of transferring full corporate responsibility and revenue to the local community partner.
3. The current practice of holding workshops with a restricted number of stakeholders to review policy and policy implementation issues and using such workshop resolutions as the basis on which to formalize national policy has been useful but insufficient and possible misleading. Participation in workshops has been confined largely to the Northern and Eastern Province GMAs. Workshop resolutions have not been debated more widely in other geographic and institutional settings.

D. Recommendations

1. Support a process of public vetting of the new draft National Parks and Wildlife Act through stakeholder workshops, a public information campaign, and open legislative review.
2. The new legislation should be written in terms that provide a broad legal basis and framework for implementation of the CBNRM concept but should be flexible to allow for further experimentation with new institutional and process arrangements.
3. Help NPWS to participate in the development of intersectoral policies that support the CBNRM concept. Promote inter-agency collaboration through policy boards for Parks and Wildlife and for Tourism, a National Environmental Action Plan, intersectoral committees and ad hoc working groups.
4. Undertake studies aimed to clarify the political geography and the roles of the local communities, private operators and the State in community level governance, administration and participation, i.e., issues relating to winners and losers in the ADMADE process, geographic units, power relations governing access and allocation of land and other natural resources, jurisdictional authority.
5. Through a consultative process, develop policies and guidelines for designing and implementing community co-management agreements and management plans for GMAs.
6. Develop explicit criteria and procedures through which the Nyamaluma Center is to assist the NPWS leadership in setting national wildlife policy. This NPWS responsibility could be assisted with continued USAID support to the policy, legislative, and governance dimensions of this community based approach to natural resources management.
7. Periodically review the performance under the new lease agreements through use of the NPWS Safari Monitoring System, through local fora within the GMAs, and through comparative assessment with other national programs and through cross-program visits, improved information exchange and international workshops.

II Institutional Capacity of NPWS to Administer ADMADE

A. Issues

Does the NPWS have in place and functioning, an overall system plan for managing the National Parks and detailed plans for the GMAs, to assure the most effective and efficient use of human and financial resources available?

Does NPWS have the management and technical capacity to carry out these plans?

B. Analysis

The effectiveness of NPWS depends first on the thrust, clarity and detail of conservation and wildlife policy and legislation and on broader national environmental action plans that may, or should, exist. These matters are active issues in Zambia at the present time and has been discussed in the section above.

At the Department level, NPWS's institutional effectiveness depends on the nature of the system-wide plan and existence of region-specific, detailed, management plans both for the National Parks and GMAs.

NPWS's institutional effectiveness depends on the existence of high quality planning and research people, systems, and equipment that provide data and action recommendations to NPWS top management and on the management skills and technology available to middle level planners, researchers, and managers who operate the system. Finally, institutional capacity and operational effectiveness depend on the availability of sufficient financial resources to carry out plans and on trained, motivated field staff on the ground to carry out the work.

1. **Planning:** The evaluation Team could find no document that sets out in detail the long term plan or vision of NPWS--a document which addresses NPWS's future activities and which provides a basis for estimating true budgets or forward manpower planning or future equipment needs. While individual thinking on these issues is no doubt taking place, a general impression is of NPWS management responding to immediate needs and crises on the ground, responding to pressures from the political level of government, and accommodating to donors. Rather than long term planning, NPWS has become proficient in what has been termed "adaptive management." While skills in the latter are important, more attention to the former is essential for long term success.
2. **Financial Management:** There are three principal sources of funding for NPWS--the regular Zambian government budget provided through the Ministry of Finance; funds provided by tourists, hunters and other in the private sector who view, consume or otherwise benefit from the wildlife industry; and donor support. NPWS activities are funded principally from the regular government budget. USAID, NORAD and ODA have been principal sources of donor assistance up to now, with major EU contributions soon to come on line.

Management of donor financial assistance is carried out largely by donors themselves and at least for USAID under the present project is not integrated with the NPWS regular budget. Hunter and private sector resources come largely through the WCRF and are somewhat integrated with the regular budget, as support provided through the WCRF for scouts in the GMAs.

Regular government funds are budgeted, managed separately, and accounted for, by staff in NPWS. Total budget figures, in Kwacha (000,000), for NPWS are:

	1993	1994	1995
Requested by NPWS	1,009	3,500	3,845
Approved by Min of Fin	1,462	2,743	3,000
Provided by Min of Fin	605	2,000	-

While the Team has not reviewed the overall economic situation in Zambia or analyzed the overall government budget, we are aware that the GRZ financial situation continues to be precarious so that program planning with certainty of future government funding is difficult, and that short term operational needs more often take precedence over longer term planning and investment. It is with that background that we observe that the amounts authorized and expended for NPWS have actually increased, although in line with inflation which in 1994 was in the 35-50% range.

In the Zambia public budgeting system, the Ministry of Finance receives and reviews budget requests from operating departments such as NPWS. The Ministry of Finance consolidates the Government's budget and presents it to the parliament which passes the budget, usually as a matter of course. If the parliament does not pass the budget there is a government crisis involving new elections, shifts of ministers, etc.

Because the Ministry of Finance recommends a budget level and the Parliament approves the budget, does not mean the agency has authority to spend the money. During the fiscal year, the Ministry of Finance issues authorizations to spend based upon availability of actual cash. In 1993, for example, although 1.462 billion Kwacha were approved by the Ministry of Finance it was only able to provide .605 billion Kwacha in actual cash during the year. 1994 was somewhat better in terms of the relationship between budget approvals and budget expenditures. It is too early to judge the 1995 outcome.

Within the total budget, the amount for salaries has gone up. This may account for the NPWS's decision to hire new regular scouts by transferring into the NPWS civil service ranks approximately 100 persons who were formerly village scouts paid out of the WCRF.

The Department does have a system for preparing budget estimates. However, the system is essentially a clerical exercise. The Department has little idea of what its real needs are on the ground.

The Department does not ordinarily request a substantial increase in funding one year over the next because the budget system builds on the basis of past allocations from which Departmental budget staff believe there can only be marginal change. A more aggressive attitude is needed on the part of budget staff who manage the system. More importantly, NPWS management needs to press its needs for funds

from the government budget by demonstrating the positive economic benefit to the country by increases in the number of hunters and tourists who will come to Zambia if there is an improved conservation effort.

The difficult situation on the ground belies the relaxed budgetary approach at headquarters. In the field, the Team was made aware that there were large unfilled needs for vehicles and funds for maintenance, gasoline, and repair of these vehicles. Patrols into the parks and GMAs were at a low level because of insufficiency of rations and even water. The effectiveness of patrols that were carried out was hindered by lack of communications, camping equipment, and even weapons and ammunition. Morale among the wildlife police officers and scouts was low in many cases because of the lack of uniforms and other supplies.

If little can be done to increase the size of the government budget made available to NPWS, actions can be taken to improve the effectiveness and efficiency of the funds that have been provided. The EU, under its upcoming grant to NPWS, is planning to address some of these issues at the process level (budget planning, accounting, use of computers and improved reporting, and perhaps training). These actions are important but the Department must also think more creatively about how it uses its funds. For example, would it be more effective to have purchased more high technology equipment instead of hiring more scouts? That is:

- does a trade-off exist between five scouts and one field radio?
- would it be more effective to purchase one additional vehicle instead of hiring 20 additional scouts?
- would there be more improvement in anti-pouching activities to purchase one small aircraft instead of hiring 50 new scouts--for whom there is not, in any event, sufficient rations to go out on patrol?

3. Administration

- a. **Command and control:** Administration by NPWS personnel in Chilanga headquarters of operations in the field is difficult, and certainly limited by the lack of telephone communication with the field. Chilanga is not even in telephone contact with Lusaka city, 30 minutes away. Daily activities in the field are generally left to the Wardens in the 12 field commands. But even Wardens only have radios for communications. They, therefore, must use their vehicles and make direct visits to scouts. While this improves communication, it is a very time consuming means of giving instructions or supervising activities. Further, this approach runs into the problem of shortage of funds for gasoline.

But Chilanga personnel and Wardens at Command headquarters do have a responsibility to establish policy and control field operations, to monitor these

operations and to step in when remedial action is necessary. An answer to this limitation must be found.

- b. Activities of scouts in the field:** The heroes of the NPWS field operation are the individual wildlife police officers and scouts in the field who go about their daily activities in lonely, often isolated camps and sites. Field personnel carry out their duties despite lack of material support from higher levels of authority and with constant danger of being killed by poachers who have better equipment and higher powered arms and ammunition.
- c. Public support of conservation activities:** The scouts do their job with seemingly little public support. We were shocked to learn of the situation in Kafue National Park where, in an encounter between poachers and a patrol in which two poachers were killed, ten of the patrol members were arrested by the regular police and put into jail. The Unit Leader was kept in jail for 54 days. At the time of the evaluation Team's visit to Kafue, two of the scouts were still in jail. As far as we could tell, the scouts went through this ordeal, with little outcry and only limited support from the Department, itself. The very fact of the scouts being jailed by another Department of Government indicates this other Department, and the general public, are not committed to the concept of wildlife management--whether community-based, or not.
- d. Activities in Parks and GMAs:** Given the difficulties with NPWS's primary responsibility for managing the National Parks, the evaluation Team heard complaints from wildlife police officers regarding the additional responsibilities given to them to help manage ADMADE activities in the GMAs. Some wildlife police officers complained that they had been promised a salary supplement for working with ADMADE because the work was considered to be outside their regular duties; but the supplement had not been paid.
- e. Need for institutional restructuring:** In response, therefore, to the specific question in the evaluation SOW, the Team believes that NPWS does not yet have the institutional capacity to administer ADMADE. The Team believes that an entirely new division or unit must be created in NPWS-- and/or elsewhere in the government--to guide, coordinate, and provide support to CBNRM programs. Senior NPWS management agrees with this recommendation. Therefore, with or without future USAID or other donor support, establishing such a unit would be an important part of the restructuring of NPWS.
- f. Need for new ideas:** NPWS and the GRZ must think of new and more creative ways to carry out wildlife conservation. Three suggestions are offered, all of which will require additional study:

 - there needs to be a nation-wide information, education and communication (IEC) program. While ADMADE targets rural communities in the GMAs,

additional work needs to be done to educate and inform the larger Zambian population, particularly those in urban areas who may foster and pay for poaching, and those in other government agencies that administer the laws associated with wildlife and natural resource conservation;

- wildlife conservation in the field, particularly in the GMAs where substantial financial benefits accrue to the private sector, should be further assisted by the private sector. This is now happening to some extent where private operators provide uniforms and rations for scouts to patrol the areas surrounding the operator's camps and hunting sites. Perhaps the concept can be extended to broader geographic areas in the GMA.

- seek cooperation between NPWS and the Zambian airforce. Might it be possible for military aircraft, as part of training activities, to fly patterns over the National Parks and GMAs, and act as spotters for the NPWS? NPWS might be able to pay part of the fuel costs, for the mutual benefit of both government Departments.

4. Commodity Management

This section is based on a June 26, 1995 report to USAID by Gina Groezinger Rees. The study was commissioned because of the Mission's concern with accountability for AID-funded commodities. Procurement of commodities for NRM has been undertaken by both USAID/Zambia and the procurement office of USAID/Washington. WWF did a small amount of procurement. Commodities were received by USAID/Zambia or by WCRF.

The major observations by Reese, were:

- items procured by USAID are often not put onto written inventories and the inventories are not maintained so that it is difficult to know the status of USAID-funded commodities;

- the files of WCRF concerning the distribution of AID- funded commodities are incomplete or do not exist. This is particularly true for vehicle spare parts, workshop tools, and office equipment;

- the Nyamaluma Research and Training Center has also received commodities. While little documentation exists at Nyamaluma on commodities received through WCRF, personnel at Nyamaluma were able to identify USAID-funded commodities and distinguish them from contributions of other donors;

- some equipment such as a Toyota Hilex Double Cab and one electric typewriter were known to have been stolen. No documentation was presented to show that the incidents had been reported to police or that the commodities were taken off the inventory;
- on the financial side, recommendations were made by Reese concerning de-earmarking of funds remaining in PIO/Cs and PIO/Ts for a long period of time. If her recommendations were followed, over \$170,000 could be available for other purposes.

5. NPWS Support to this USAID funded evaluation of the ADMADE Program and USAID's NRM Project

We wonder about NPWS's interest in having USAID know all the details about the ADMADE program. For example:

- in preparation for the evaluation Team's visits to Management Sub-authorities in the North of the country, the ADMADE Coordinator at Chilanga headquarters was supposed to radio ahead to the Game Warden in the area to assist the Team with the visit. This was not done;
- at a preliminary meeting with senior staff in NPWS headquarters in Chilanga, a series of detailed requests for data was made by the evaluation Team. When the Team returned a week later to secure the material, the request had been ignored, and the material was not available;
- following a meeting with the Director of NPWS, where the evaluation Team complained about the lack of this detailed information, and after his ordering the ADMADE Coordinator to provide the Team with data for this evaluation, the data was never provided.
- (Note: No written material or written reports were provided to the evaluation Team by NPWS except for summary budget figures from the printed national budget. Budget material was provided separately by WCRF on its own financial operations. Material was provided by the Nyamaluma Center on training and research activities and papers written at Nyamaluma for presentation by the NPWS Director.)

The approach to the USAID evaluation Team was made further apparent when, during our visit to Lochinvar National Park, we met another team evaluating the WWF Wetlands project. Along with that Team and supporting its evaluation efforts was the ADMADE Coordinator. Such assistance was never offered to the USAID evaluation Team. Since the NPWS Director, himself, gave this evaluation Team (and USAID/Botswana representative) an interview that lasted over four

hours, we can only wonder at the lack of coordination and supervision within the Department.

C. Conclusions

1. Rather than long term planning, NPWS has become proficient in what the Technical Advisor at Nyamaluma has termed "adaptive management." While skills in the latter are important, more attention to the former is essential.
2. While the Department prepares budget estimates, the Department has little idea of what are its real needs. Actual needs on the ground are probably two-three times Departmental estimates and belie the relaxed budgetary approach at headquarters.
3. NPWS does not have sufficient institutional capacity to administer itself and its responsibilities in National Parks and certainly little capacity, to administer ADMADE and its activities in the GMAs.
4. NPWS, WCRF and USAID have given insufficient attention to the details of commodity management, especially the maintenance of inventories, status of distribution and use of commodities, nor has USAID/Zambia paid attention to the status of outstanding purchase requests.

D. Recommendations

1. NPWS needs to give more attention to long term planning and a future vision of what it wishes to accomplish. NPWS should establish a position called Wildlife Conservation Planning Officer in the Office of the Director. The functions of this position needs further elaboration but should include an association with the present position of Wildlife Research Officer and a planning function in the unit concerned with accounting and budgeting.
2. A new CBNRM unit should be created in NPWS--or elsewhere in the government--to guide and coordinate the ADMADE program and other CBNRM programs in the country. This unit should have technical positions concerned with land use planning, economic analysis, comparative environmental analysis, and information, education, and communication.
3. NPWS management should press its needs for funds from the national budget. This may be accomplished by demonstrating the positive economic benefit to the country from increases in the number of hunters and tourists who will come to Zambia if there is an improved conservation effort.
4. NPWS staff must be trained and encouraged to think creatively about how it manages its responsibilities and uses its human and financial resources. For example, would it be more effective to purchase high technology equipment instead of hiring more scouts? Visits should be organized for senior NPWS

personnel, its planning staff, and the new CBNRM unit, to other park management services, to observe alternate approaches.

5. Now that EU will be initiating its own assistance program to this sector, and the United States is considering its options for future support, GRZ must assume greater control of conservation management and decide what it can provide from its own resources, and what it needs from donors.

III. Technical and Research Management Capacity of NPWS to Administer ADMADE

A. Issues

The Team identified two technical capacity issues with which NPWS is grappling:

- the ability to incorporate resource planning into an existing administrative structure that is geared largely to policy setting, revenue collection, and enforcement functions; and
- differing managements demands of National Parks on the one hand and GMAs on the other.

B. Analysis

The second issue is closely related to the first and both relate to an overriding issue that appears throughout this report--inadequate articulation between NPWS functions ascribed to Nyamaluma and those retained at headquarters in Chilanga.

The Team found consistent support by senior NPWS management for ADMADE, but recognition that NPWS staff resources for developing and running the program were minimal. They, therefore, left to the Research and Training Center at Nyamaluma to dictate the content and process of the ADMADE program.

At a more general level the geographic segregation reflects the division of NPWS responsibilities between those associated with preserving bio-diversity and those associated with its mandate "to promote and develop wildlife as a productive, profitable and environmentally friendly land use option of particular significance to rural landholders (NPWS 1993:5). In principle, this dichotomy should not exist and both preservation and sustainable use should figure along a continuum of emphasis on the planning process both inside and outside national park areas.

The evaluation Team found strong support among NPWS headquarters staff for the sustainable use formula embodied in the ADMADE concept. However, the few technical and resource management resources available at headquarters were stretched to meet the challenges posed by wildlife in GMAs and open areas. This challenge has been de

facto entrusted to external projects such as LIRD, Wetlands, North Luangwa and the USAID NRM Project.

Although the new wildlife policy spells out common guidelines for management, each externally funded and managed effort has evolved independently. This is not necessarily a problem unless the coordination and harmonization of these efforts across the vast areas encompassed by the GMAs is insufficient. A point has now been reached where headquarters needs to assert greater overall policy, management and technical leadership in project planning, research and monitoring.

Currently ADMADE administration remains under the Chief Warden at Chilanga with technical leadership formally vested in the Wildlife Research Division which nominally subsumes a Land Use Planning Unit. Land Use Planning remains somewhat theoretical because of the lack of frequent and effective collaboration between the research activities at Nyamaluma and the work of the Research Division in Chilanga. The logical bridge between headquarters and Nyamaluma would be a corps of regionally stationed wildlife planning and monitoring staff. Thus far, however, trained management biologists, a needed human resource on the ADMADE side, have largely been absorbed by the NPWS's park management effort in the field.

At the national level in Zambia, NPWS is one of several scientific and professional arms of the GRZ with mandated responsibilities over resource management. Along with the Forestry, Fisheries, Agriculture, and other departments, the NPWS, under direction of the Ministry of Tourism is beginning to seek effective means of enhancing interagency collaboration and of resolving jurisdictional questions. Specifically:

- the new Tourism Policy calls for intersectoral oversight;
- the new Wildlife Policy calls for the establishment of a National Wildlife Technical Committee of "authoritative spokespersons from all interested ministries and other government agencies, under the chairmanship of the Director of NPWS;"
- in some GMAs NPWS and village scouts have been authorized to enforce fishing regulations.

C. Conclusions

1. The ADMADE program experience over the past decade has brought an understanding of what functions are needed to support a wildlife oriented program of community based resource management. The new National Wildlife Policy specifies the government's responsibilities in this area.
2. The NPWS has grown and evolved to a point where it is becoming apparent that institutional capacity in the technical and research areas needs strengthening. The

NPWS leadership has not, however, made it clear the degree to which it wishes to decentralize, devolve, and otherwise manage CBNRM responsibilities.

3. Communication and information flow between the Research Division and its land use planning functions were less than optimal, reflecting among other factors the internal NPWS tension between national park and GMA administration.
4. When institutional responsibilities have been clarified, and staffing levels are brought up to adequate levels, the NPWS will need to explore its appropriate role in the CBNRM especially in:
 - depleted or degraded habitats;
 - situations where communities or safari operators are not maintaining their resource co-management duties;
 - the planning process -- that is supporting development of and then approving participatory land use plans;
 - dealing with multiple use issues that involve other resources and other ministries -- is the concept of "Integrated Resource Development Authorities" valid.
5. A diversified interdisciplinary staff is needed to effectively manage a wildlife oriented program of community based resource management. Problems of wildlife population dynamics, habitat size and ecology, disease transmission patterns, cartography/GIS, human pressures, social sciences and wildlife/natural resource economics all come into play.

D. Recommendations

1. A new CBNRM unit should be created in NPWS--or elsewhere in the government--to guide and coordinate the ADMADE program, to oversee the NPWS involvement in CBNRM type activities, e.g., IRDAs, community-based game ranching, etc.
2. Create field positions for wildlife planners and assign them to posts located in and around critical GMAs. Previous assessments have promoted these as positions for "management biologists." NPWS cannot afford interdisciplinary teams at each rural post but can constitute an interdisciplinary capacity by assigning staff with diverse backgrounds-natural resource economics, wildlife veterinarians, geographers, social scientists with a wildlife focus, etc.--to what are now designated as positions for management biologists.

IV. Performance and Status of the Wildlife Conservation Revolving Fund

A. Issues

How is the Fund performing as an accounting mechanism through which funds generated from the hunting industry are accumulated and plowed back into wildlife conservation and community development?

How does the Fund perform as an institution which fosters the understanding of community based wildlife management?

B. Analysis

1. Establishment of the Fund

The WCRF was established in 1983 by a Ministry of Finance directive under Section 8(2) of Finance Act No. 24 of 1960 to assist in the conservation and protection of wildlife. The Fund is headed by a Revolving Fund Co-ordinator who is also Secretary to the Fund's Board of Directors. The Fund was established to be both an accounting mechanism through which funds generated from the hunting industry were redistributed into wildlife conservation and community development but also to be an institution which fosters the understanding on the part of local communities that wildlife conservation brings economic benefits to them greater than amounts earned from poaching.

The Fund began operating in 1984 and over the first five years some 90% of the income came from the sale of raw and worked ivory, the sale of which has since been banned. Park entry fees were another source of revenues. In 1988/1989 with the advent of ADMADE the Fund assumed the more complicated task of collecting and distributing wildlife revenues. USAID was requested to assist in the management of the Fund and to provide support so that the ADMADE concept could succeed. That support was incorporated as a key element of the original AID Natural Resources Project Agreement with the Government of Zambia. The ability of the WCRF to perform its task has been one of the key issues since the inception of the ADMADE program.

2. Source and distribution of Fund revenues

Sources of income to the Fund are currently:

<u>Source</u>	<u>% of Source</u>
Game hunting license fees	50% to the GRZ Treasury 50% to the Fund
Trophy fees	100% to the Fund
Safari concession fees	100% to the Fund

Planned distribution of the revenue in the Fund is as follows:

<u>Recipient</u>	<u>% of Availability</u>
NPWS and WCFR administration	25%
Local Management Sub-Authority from which the funds originated	35%
Local field NPWS unit and vil- lage scouts serving in that local village unit	40%

The table on the following page is an example of how these revenues shares have recently been distributed.

3. Early problems with the Fund

Failure to distribute promised revenues to communities led to early hostility to NPWS and ADMADE. ADMADE personnel, particularly village scouts, were angered at not receiving salary payments for many months. Unit Leaders (managers of GMAs) became demoralized because operating funds were not forthcoming.

The failure was not all the fault of WCRF. The WCRF did not have the necessary licensing information available to allow uniform application of the revenue sharing formula. Also, in the absence of clearly defined policy there was confusion over which revenues and in what proportion go to whom. However, a major problem was the lack of appropriately trained professional accounting personnel to manage the WCRF.

In September 1992, the Internal Auditor for the Ministry of Tourism carried out an inspection of the Fund. Their overall conclusion was that the internal control of the Fund was weak and that there was little accountability of funds. In an audit report of the Fund order by USAID for the period 1/1/91 to 12/31/92, Deloitte and Touche reported:

- lack of recording or receipts rendering controls unreliable;
- lack of clearly defined policies as to what expenses were to be borne by the Fund and what by NPWS;
- lack of maintenance of records to support items of income and expenditures;

Figure 2

REVENUE SHARES FOR THE PERIOD 01/01/94 TO 31/12/94 COLLECTED BY WCRF FOR THE ADMAD PROGRAM

DESIGNATED HUNTING AREAS	SAFARI HUNTING (US dollars)				NON-SAFARI HUNTING			
		Wildlife management	Community development	NPWS share		Wildlife management	Community development	NPWS share
	100%	40%	35%	25%	100%	40%	35%	25%
Bangweulu	\$88,955	\$28,782	\$23,434	\$16,739	\$1,487	\$588	\$524	\$374
Bani/Nkala	\$2,345	\$938	\$821	\$588	\$1	\$0	\$0	\$0
Chisomo	\$6,623	\$2,649	\$2,318	\$1,668	\$32	\$13	\$11	\$8
Chizera	\$42	\$17	\$15	\$11	\$0	\$0	\$0	\$0
Kafue Flats/Blue Lagoon	\$5,510	\$2,204	\$1,829	\$1,378	\$16,837	\$6,775	\$5,928	\$4,234
Kafue Flats/Lochinvar	\$35,988	\$14,388	\$12,688	\$9,688	\$13,108	\$5,243	\$4,587	\$3,277
Kasonso	\$75,808	\$30,323	\$26,533	\$18,952	\$29	\$12	\$10	\$7
Luano	\$14,985	\$5,988	\$5,238	\$3,741	\$889	\$263	\$230	\$165
Lumimba/Chanjuzi	\$39,228	\$15,690	\$13,729	\$9,808	\$524	\$210	\$183	\$131
Lumimba/Mwarya	\$97,730	\$39,091	\$34,205	\$24,432	\$1,014	\$405	\$355	\$253
Lunga - Busanga	\$7,625	\$3,050	\$2,689	\$1,908	\$482	\$193	\$169	\$120
Lunga - Luswishi	\$277	\$111	\$97	\$69	\$0	\$0	\$0	\$0
Mulobezi	\$48,953	\$18,781	\$16,433	\$11,738	\$888	\$342	\$300	\$214
Mumbwa/Mumbwa East	\$25,434	\$10,173	\$8,902	\$6,368	\$24	\$9	\$8	\$6
Mumbwa/Mumbwa West	\$49,272	\$19,708	\$17,245	\$12,318	\$28	\$10	\$9	\$6
Munyamadzi/Luwawata	\$88,550	\$39,420	\$34,483	\$24,638	\$58	\$22	\$20	\$14
Munyamadzi/Nyampala	\$84,974	\$33,988	\$29,740	\$21,243	\$82	\$33	\$29	\$21
Musalangu/Fulaza	\$16,165	\$6,488	\$5,688	\$4,041	\$2,383	\$957	\$838	\$598
Musalangu/Chifunda	\$39,883	\$15,952	\$13,988	\$9,970	\$0	\$0	\$0	\$0
Musalangu/Chikwa	\$28,819	\$11,528	\$10,087	\$7,205	\$44	\$17	\$15	\$11
Namwala	\$870	\$288	\$235	\$168	\$28	\$11	\$10	\$7
Rufunsa	\$17,010	\$6,804	\$5,954	\$4,253	\$884	\$397	\$348	\$248
Sandwe	\$18,289	\$7,316	\$6,401	\$4,572	\$0	\$0	\$0	\$0
Sichifulo	\$35,281	\$14,112	\$12,348	\$8,820	\$641	\$256	\$224	\$160
Tondwa	\$2,826	\$1,130	\$989	\$707	\$50	\$20	\$17	\$12
West Petauke	34420	13788	12047	8805	\$745	\$298	\$261	\$186
West Zambezi	\$19,540	\$7,816	\$6,839	\$4,885	\$1,475	\$580	\$516	\$369
TOTAL:	\$871,190	\$348,469	\$304,916	\$217,788	\$41,884	\$16,678	\$14,593	\$10,424

The auditors said these difficulties arose, in part, because:

- there was no active Board of Directors responsible to, and which represented all, beneficiaries of the Fund, and which could be held accountable for its operations;
- there was a lack of a clearly defined mission and objectives of the Fund which should guide the activities of the Board of Directors. Such clarification would also help define the boundaries between NPWS and the Fund;
- there was a lack of competent staff with the necessary qualifications, experience, and motivation to carry out the day to day management of the Fund;
- no meaningful financial information was produced and, therefore, no review of such information could be carried out to assure that the organization was functioning satisfactorily.

That audit represented a fairly total condemnation of the management of the Fund-its policies, management, accounting, and certainly its creditability. The auditors urged:

- the immediate filling of the Financial Manager position;
- filling the position of Warehouse Manager;
- replacing the Co-ordinator of the Fund with an individual who, in addition to possessing skills in wildlife management, also had experience in management of commercial operations;
- restructuring of the Board to:
 - * ensure that it is fully accountable for the Fund's activities;
 - * better monitor and direct Fund activities by holding more regular meetings;
 - * review reports on all aspects of Fund operations on a regular basis.

As a result of that audit, USAID/Zambia temporarily suspended funding of the project until improvements were made. Continued USAID funding has since been approved.

A new audit of the Fund has recently been completed by Ernst & Young. It found that:

- improvements were coming, but slowly;
- control and maintenance of records needed further attention; and
- improvements with commodity maintenance would need additional attention.

Overall it was a positive audit indicating that the Fund has now come to be a well functioning body that can positively assist project activities.

4. Responses to overcome prior management problems

The new position of Financial Manager of the Fund has been filled. Mr. Watson Chisulu is a Zambian equivalent of a CPA and is very well qualified for this position. He understands the program and its problems and has been working diligently to improve the functioning of the Fund. Much of the progress toward improvement of Fund accounting, management, and its reputation must be credited to Mr. Chisulu.

The position of Warehouse Manager has been vacant off and on in the recent past. Control over commodity management is wanting. Issues of maintenance of project equipment, spare parts, and supplies was not handled well. This part of the Fund's responsibilities continues to be a problem that requires attention.

The position of WCRF Co-ordinator is still filled by the person who had been recommended for replacement. Since the arrival of the new Financial Manager the Co-ordinator has carried out few responsibility for Fund activities. But while he has been rendered harmless, he has added little to improve the operation of the Fund.

While there may have been changes to the composition of the new Board of the Fund (see Annex E for the list of present Board members), the new Board has not become more activist. The new Board continues to be a top-down instrument representing the government, hunting, and conservation communities, but not yet the local communities who are the intended beneficiaries of the Fund's resources.

An important improvement, however, is that the Permanent Secretary of the Ministry of Tourism is now the Chairman of the Board. He has provided policy leadership and support enabling the Fund to make technical improvements. He was instrumental in securing a loan for the Fund to cover the disastrous 1993 shortfall.

The Fund does not yet publish public reports on its activities. If such reports were available, perhaps there would be serious reviews of Fund activities and greater understanding of the community based approach to wildlife conservation.

In sum, while important changes have been made in Fund management so that its operations are now more transparent and professionally acceptable, more can be done to make the funding mechanism a more positive institution contributing to the success of the ADMADE program and the AID NRM project. To get a complete view on the operations of the Fund, we have included at Annex J, a paper on the Fund presented by NPWS and WCRF at the 1995 NRM regional conference.

4. Present financial status of the Fund

a. A summary of Fund activities over the past four years shows the following, (in thousands):

	<u>1991</u>	<u>In Kwacha</u> <u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1994</u> <u>\$ Equiv</u>
Annual Income	114,093	500,297	444,306	636,206	707
Annual Expend	95,909	405,861	544,516	564,349	627
End of Year	18,184	94,436	(100,130)	71,857	80

b. Detail of the 1994 annual figures are in the table on the following page. On the income side:

- the largest source of income, almost 45%, is from concession lease fees. This is the sector, therefore, that requires the greatest attention to make sure these revenues are assured and efforts are made to increase the amount;
- the next largest amount, 40%, is from hunting license fees sold directly to foreign hunters, or to them, by Safari operators. Not only does this represent a significant amount of foreign exchange, but concession and license fees together total 75%, indicating that the largest benefit to the conservation effort and to the local communities comes from overseas visitors and tourists;

c. The figures on the expenditure side also require comment:

- the amount set aside for WCRF and NPWS is just a little less (22.6%) than

Figure 3

Wildlife Conservation Revolving Fund
1994
Income and Expense

INCOME

<u>Source</u>	<u>Kwacha</u>	<u>%</u>	<u>\$ Equiv</u>
Hunting Rights	49,369,755	7.8	54,855
License Fees - Safari	250,377,660	39.4	278,807
License Fees - Local	47,365,370	7.4	52,659
Concession Fees-WCRF Hq	284,662,900	44.7	316,877
Sale of Trophies	4,282,005	.7	4,758
Sales/Cittes Tags	70,350	.0	78
Sales/Cittes Stamps	77,720	.0	86
Total	636,205,760	100.0	706,896

EXPENSES

Establishment Expenses	61,382,000	9.7	38,280
Administrative Expenses	29,753,000	4.5	33,060
General Expenses	20,000,000	3.1	22,220
Motor Vehicle Expenses	33,567,000	5.3	37,300
Sub-total		(22.6)	
Operating Expenses			
40% Account	271,960,276	42.7	302,590
30% Account	133,715,912	21.0	136,351
Nyamaluma School	260,390	.0	289
Tannery	472,150	.1	525
Research	9,403,100	1.5	10,450
Memorial Parade	4,059,033	.6	4,510
TOTAL Expenses	564,348,739	100.0	627,054
End of year surplus	71,857,019	11.3	79,842

the amount agreed upon (25.0%) for WCRF/NPWS administration. However, when the amount going to Nyamaluma is added, the total is somewhat over the 25.0%. We have seen no discussion or decision as to whether the Nyamaluma Training Center is to be a beneficiary of WCRF. While the amount for Nyamaluma is small, it could become larger. As noted a number of times in the report, the role, function, and status of the Nyamaluma Training Center requires careful definition.

- the 5.3% of the 22.3%, is for vehicle support for NPWS. As with the expenses for Nyamaluma, the Team is uncertain as to what are legitimate expenses that can be charged to the Fund. A written policy in some form is essential to the continued good opinion of the Fund;
- only 21% of the agreed upon 30% distribution was made in 1994. This fact requires further study from at least two points of view:
 - * the Team had been told during interviews in Lusaka that the accounting and management systems of the Fund were now improved and fully operational. The facts appear to belie these judgements;
 - * the Team had been told during visits to two Management Sub-Authorities that they had received the 30% due them for community development activities. Either the communities have been misinformed as to what they are due and what they have received, or the "positive" situation exists only in the Sub-authorities to which the Team was sent.
- more than the 40% agreed to for support to NPWS regular scouts and village scouts has been paid out by the Fund. This requires study in the opposite direction. Wherever the Team went in the field, we heard complaints that GMA units and local communities had not received the full amount for their 40% account. Where did the money go? Is there still a gap between financial reporting and the actual movement of money. And even on its face, who in NPWS/WCRF made the decision to make these larger payments, by in fact, borrowing from the 30% local development account.

5. Observations on the Present Operations of the Fund

- a. The Fund is still seen by some in the field as something alien to them; a government or some official agency that they can not control and that is not in place to serve them. On the other hand, local communities now feel better about the Fund because it provides them, in advance, with information on how much they will be getting from amounts paid into the Fund.

- b. It is not clear whether the Fund is a narrow accounting instrument through which money automatically "revolves" or whether it is a body that establishes program policy, e.g., how much to pay scouts; reviews community budgets before additional tranches can be made available; or supervises wildlife conservation and community development activities by monitoring work in the field.
- c. Bookkeepers in the GMAs are assuming importance not only as the people who receive and deposit money, but also as technical people who can help the Management Sub-authorities develop programs and budgets, and speak on their behalf to Fund management in Chilanga.
- d. Every improvement brings its own problems. The licensing office now carries out its work with the assistance of a computer. Computerized information from the licensing office is passed to the Fund for inclusion in the Fund's computer system. While the Team did not have sufficient time to study the computer systems in the two offices, we wonder if proper procedures have been introduced to check the accuracy of the transferred information, and whether the computer is safeguarded against tampering and configured to recover from crashes.
- e. Para 2a of Annex 1 to the First Amendment indicated that the WCRF was to prepare two reports:
 - The first report was intended to increase the confidence of government, the wildlife industry, conservation groups, and traditional authorities in the operation of the NPWS and WCRF.
 - The second report was to be an internal memorandum providing comments, suggestions, and recommendations to the Director of the NPWS on management of program related aspects of the review.

Neither report has yet been provided.

C. Conclusions

1. Due in part to earlier administrative and accounting problems with the WCRF, there were concerns that the community based approach was flawed and that the NPWS did not have the capacity to implement the program. While it has not yet been demonstrated that the concept is successful, former and some new accounting problems have made it difficult to say for sure that the concept is working.
2. Fund accounting has been substantially improved through the hiring of additional, trained, professional accounting personnel, and through the introduction of

computers and new accounting programs. WCRF is rapidly gaining a reputation in Zambia as being efficient and "above board."

3. Considerable improvements have been made in the timing and accuracy of distribution of benefits to local communities but there continues to be disparities and complaints as to what is owed and what has been distributed.
4. Despite effective central management and the placing of accounting assistants ("book keepers") at the GMA level, Fund administration and decision making remain excessively directive and not yet adequately devolved to the newly recognized "owners" of the GMA's wildlife and other natural resources.

D. Recommendations

Short Term

1. Do not institutionalize the existence of the WCRF as part of ADMADE in the new wildlife legislation being written. This may rigidify the role and status of WCRF at a time when NPWS is being restructured, when the CBNRM concept is still being understood, and new approaches are being developed.
2. Continue efforts to improve the operations of the Fund:
 - replace the civil service Co-ordinator with a more competent Fund manager, probably from the private sector;
 - change the composition of the Board of Directors so that it better represents the local communities which the new wildlife policy indicates are the owners of the wildlife resource;
 - integrate the computer licensing system with the computer accounting system;
 - publish reports on the activities of the Fund for the general public and the stakeholders of the program to help them better understand the program, its problems, and its successes.

Long Term

3. Restructure the present form of the WCRF along the following lines:
 - independence from NPWS and the civil service permitting it to hire the best private sector financial personnel;

- decentralization of policy and financial control and management to local communities by changing the make-up of the Board so that it more directly represents the local communities and newly defined owners of the wildlife;
 - restructure the fund, possibly as a trust, that is part of a union or federation of local community authorities in the GMAs.
4. Based upon the new wildlife policy, reconsider the present revenue sharing agreement. Restructure it on the concept that 100% of the wildlife resources in the GMAs belongs to the local communities and that the local communities should have the authority to decide what services they wish to purchase from the central government or from the commercial sector and how much the commercial sector should pay for hunting rights.
 5. 100% of the earnings should be co-managed by the local communities and/or their representatives in a restructured WCRF. Communities and/or their representatives should be permitted to decide, for example, that they no longer need village scouts, that policing will become a voluntary function of the local people in a rural area, and that all the available funds would go to local development activities.
 6. Whatever form or structure the WCFR eventually takes, funds should be provided, from its own sources or from donors, to continue to upgrade Fund staff and accounting equipment, and to introduce more open and public reporting on Fund activities.

V. Training and the Nyamaluma Research and Training Center

A. Issue

The overall issue is one of clarity of mandate: what is it that NRTC does?, how well does it do it?, and what should it be doing differently?

B. Analysis¹

The March 9, 1994 funding request to USAID from the Nyamaluma Research and Training Center indicated that the training objectives at that time were to:

- enhance the capacity of local communities to manage, protect, and benefit from their own natural resources, especially wildlife, through:

¹ Much of the material in this section is from the 1994 report of Nyamaluma Research and Training Center.

- * training programs at Nyamaluma;
 - * production and dissemination of training manuals,
 - * on-site training extension services;
- increase the technical, administrative, and managerial proficiency of NPWS/ADMADE officers to support effort by local communities to manage their own wildlife resources;
 - provide learning opportunities through seminars and workshops on ADMADE topics, especially those related to resource use and management.

The facilities and training courses offered at Nyamaluma have expanded well beyond the original objectives of the Center, which were originally to train local village scouts as wildlife law enforcement officers, and NPWS officers as Unit Leaders. Though this curriculum is still provided, largely in the form of advanced courses in wildlife management, Nyamaluma has broadened its curriculum and has added staff to improve its training services to a wider cross-section of communities residing in game management areas and to NPWS personnel. This effort is reflected in its 1994 program and was specifically designed to help local communities develop skills to sustainably manage renewable natural resources.

One of the strengths of Nyamaluma as a training center is its on-going research and monitoring of wildlife conservation activities. This provides a contemporary set of experiences and results to blend into lectures and the development of management methodologies to be taught at the Center. It also provides a way to quantify key indicators of management results and progress toward achieving community-based wildlife management. An appropriate technology which has been developed at Nyamaluma to help organize all of this information is the computerization of map-related data.

The March 1994 request to USAID indicated that Nyamaluma was institutionalized under NPWS as the official training center for the ADMADE program. It indicated that the Center works closely with a number of government institutions, as well as NGOs, to coordinate information and expertise that will help foster a more successful and acceptable CBNRM program. Convening workshops, producing radio programs, training community workers to broaden community understanding and local skills, and publishing educational manual are some of the ways Nyamaluma carries out its tasks.

A summary of training programs offered, and for whom, is in the Tables on the following two pages. A description of many of the programs are found in the 1994 Report and in Annex I to this report. Names and descriptions of courses for the period Jan - 31, August 1995 can also be seen in Annex I. The list of training publications and

.Figure 4

TRAINING OF VILLAGE SCOUTS, UNIT LEADERS AND DEPUTY UNIT LEADERS.

No. of intakes	No. of v/scout trainees	No. of u/leaders deputy u/leaders	GMAS UNITS	DATE
1st intake	15	11 u/leaders	Lower Lupande	1986-1987
1st NPWS/ADMADE	46		10 units	Jan - Apr. 1988
2nd NPWS/ADMADE	71		7 units	May 1988
3rd NPWS/ADMADE	67	12 u/leaders	9 units	Jan - Apr 1989
4th NPWS/ADMADE	85		13 units	Jul - Nov 1989
5th NPWS/ADMADE	20	13 Deputy u/leaders	2 - LIRDP Units	Feb - July 1990
6th NPWS/ADMADE	90	15 Unit leaders	Some-units	May - Dec 1990
7th NPWS/ADMADE	68	23 u/leaders	Some-units	Aug - Dec 1992
8th NPWS/ADMADE	75	16 Deputy u/leaders	Some-units	Aug - Dec 1993 Jan -Mar. 1994
TOTAL OF V/SCOUTS	537	61 UNIT LEADERS 29 D/LEADERS		

Figure 5

OTHER COURSES AT NYAMALUMA

Type of course	Rank of trainees	No. of trainees	GMAS	Date
Fisheries Forestry W/Data collection	Advanced with village scouts	34	Some-units	5th July - 4th April 1993
Anti-corruption	W/Police officers	20	Some commands	19th July - 4th Aug 1993
Book-keepers course	Community members	18	18 units	1st April - 4th May 1994
Community Health worker course	Wives of Admade v/scouts	22	9 units	1st - 30th July 1994
Tannery & leather craft course	Community members and v/scouts	5 5	5 units 5 units	May - Dec. 1991 Aug - Dec. 1994
S/W/V/ Scouts course	From v/scouts to s/w/v/scouts	133	Some-units	Oct-Dec 1994 Jan-Nov 1995
Well construction course	Community members	18	7 units	May-July 1995

TRAINING OF OTHER COURSES AT NYAMALUMA

Community development skills	Project organisers	45 LWF 8 Admade	8 Chief areas	23 June - 4 July 1995.

training materials is quite extensive. Some of these publications are included in the Bibliography in Annex L of this report.

To support its full range of activities, the Center has developed a computerized accounting and financial control section. This section operates under the jurisdiction of the WCRF and has established an accounting system that is acceptable for the receipt of USAID funds.

When the Center initially opened in 1988, there were only two qualified instructors without any administrative support staff. Today, Nyamaluma has 12 training staff, an administrative support staff of three and ten general workers. The annual report says that "this growth has been carefully managed to ensure Nyamaluma maintains high teaching standards with an appreciation of rural needs, management requirements for natural resources, and a participatory approach to development."

Overall administration of the Center is under the direction of the Principal and is supervised by a management committee composed of senior staff. Nyamaluma's technical program and curriculum development is supervised by the NPWS/ADMADE Technical Advisor (Training Coordinator), in cooperation with the NPWS Director and "other relevant officers supporting the implementation of ADMADE." Unfortunately, there is no Zambian counterpart to the Technical Advisor at the Center and no thought has been given to selecting and assigning a Zambian professional to such a position.

Approximately \$615,000 has been earmarked by the NRM project for support of training at NRTC-about 60% during the first 3 1/2 years of the project under the original Project Agreement and about 40% or \$270,000 under the First Amendment.

During the period of the original Project Agreement, the Training Coordinator of NRTC was funded through USAID's Cooperative Agreement with WWF. The training funds for Nyamaluma also came through the Cooperative Agreement and were to have been supervised for USAID by the WWF Project Coordinator. This arrangement did not work. During the present period of the First Amendment to the project, the Training Coordinator's salary is paid by another donor. USAID's training funds go directly to the NRTC. Full control of project training funds are therefore in the hands of the Training Coordinator of NRTC over whom USAID has no direct control. This makes defining the position and authority of the Technical Advisor cum Training Coordinator and the position of the NRTC in the GRZ structure very important.

In PIL No. 7, USAID noted that "the Center being under the Ministry of Tourism is governed by the Project Grant Agreement dated September 30, 1993. Therefore, the Center should maintain its records and implement the projects in accordance with the project grant agreement standard provisions." USAID funds were provided to NRTC on this basis.

In the June 27, 1995 request for funds, however, the name of the Center was shown as the "Nyamaluma Institute for Community-based Resource Management." While

we have no problem with the name change as such, it appears to have been done unilaterally by the Center's Training Coordinator, without official notice by NPWS.

In the June 27, 1995 request, the Center is described as a "quasi-independent institution" set up by NPWS through its WCRF. This statement is troublesome on two accounts. It is not clear who authorized the Center to become "quasi-independent." And if it is "independent" than must USAID reconsider the basis for funding the Center? And if the Center is "set up through (the) WCRF" where did the Fund get the authority to take this action?

The thrust of these comments goes to the issue, so often raised in this evaluation report, of how does the Center fit into NPWS and who gives direction to the Center and to the training program. This concern is exemplified by the Center's request for 1995 funding to USAID which contains the following line items:

<u>Item</u>	<u>Title</u>	<u>Amount</u>
1.	ADMADE Monitoring and Information Flow to Local Authorities	\$ 29,000
2.	Supporting Development Through Local Business Enterprise	40,000
3.	Establishing Local Trade Guilds for the Wildlife-based Industry	75,000
4.	Improving Governance Skills of Wildlife Management Sub-authorities	20,000
5.	Building Improved Wildlife Private Sector Partnerships with the Local Community	25,000
6.	Contingency	<u>18,800</u>
	TOTAL	\$ 206,800

Item #1 is clearly related to the Center's mandate and skills as a training institution.

Other items, however, represent movement of the Center into such activities as private sector development, democratic governance, and local institution building. While these functions are certainly important for a CBNRM program, by whose direction did the Center move into these areas, is the Center especially skilled in these areas, and how do these efforts fit into NPWS's larger responsibilities of wildlife conservation? These new thrusts certainly require further study by USAID/Zambia if they are to be funded under the present NRM project. If USAID is going to fund a follow-on to the present project, it will also have to decide how best to carry out these functions

The Center's 1995 funding request to USAID also indicates that thoughts is being given to transform Nyamaluma into a trust. The pertinent paragraph continues, as follows:

This (the trust arrangement) would give Nyamaluma increased freedom to represent more fully the interests of local communities the Center is expected to serve. Institutionalizing Nyamaluma as a trust would also give the Center the opportunity of being financially

self-supporting. Through such an arrangement Nyamaluma would be made accountable to ADMADE units, which in turn would help finance its operations or training activities through its own revenues and through funds the Center might be able to generate or secure on its own. USAID support would be catalytic in helping build this capacity for Nyamaluma to become a training/research center that really belongs to rural communities living in GMAs while fully serving their interests as new needs arise from an evolving ADMADE programme. This proposal of institutionalizing Nyamaluma as a trust is fully endorsed by NPWS, which believes a trust would allow Nyamaluma greater freedom in representing ADMADE communities while also providing an important link of understanding and cooperation among the various stakeholders of ADMADE.

This is a concept which the evaluation Team has had no opportunity to consider for USAID funding. The Team, at this time, is unaware of the legal issues of providing USAID funds to a trust. We do not know if the GRZ can give its property to a trust.

Further, while we understand the concept of Nyamaluma being accountable to local communities, there are implications for the overall structure of the ADMADE program which must be considered. This is a concept that we have proposed above for the WCRF. If Nyamaluma becomes a trust what will its relationship be to the Fund. What will its relationship be to NPWS or the Ministry of Tourism? The GRZ can certainly take any action it wishes as regards this program, but USAID must understand the implications before supporting the effort with its own funds.

The Nyamaluma Center is an evolving institution. At the beginning of the ADMADE program and before USAID's NRM project, the facility was in a fairly neglected physical state after having served as an NPWS training facility for educating school children about wildlife. Under ADMADE, it has been transformed. The changes reflect the growing need of the NPWS for a broader interdisciplinary approach to managing the wildlife estate in National Parks, GMAs and open areas. It appears that the original intent of the facility was never dropped, but new functions have progressively accumulated as the ADMADE program has grown. For example, in keeping with its original mission, a November 1994 storybook was produced to help educate schoolchildren about citizen rights and responsibilities in GMAs under ADMADE. This metamorphosis reflects the "adaptive management" of the Training Coordinator. Although the Center possesses considerable autonomy, NPWS leadership is comfortable with the role Nyamaluma has come to play.

C. Conclusions

1. Through the efforts of the Principal Technical Advisor, Nyamaluma has become the principal mechanism for translating the NPWS commitment to wildlife co-management into concrete field level programs. The Nyamaluma Research and

Training Center has established itself as the principal location to plan and carry out NPWS's wildlife monitoring and reporting system. The NRTC also makes the initial recommendations on animal quotas in all of the GMAs.

2. The Nyamaluma Center is clearly an evolving institution. At the beginning of the ADMADE program and USAID's NRM project, it was in a fairly neglected physical state after having served as an NPWS training facility for educating school children about wildlife. Under ADMADE, it has been transformed. The changes reflect the growing need of the NPWS for a broader interdisciplinary approach to managing the wildlife estate in National Parks, GMAs and open areas. The Center is now the principal site for training of village scouts, and recently regular scouts, for the National Parks and ADMADE program.
3. In the absence of capacity elsewhere in the ADMADE Program, the Nyamaluma center has undertaken a wider agenda and mandate than it can effectively administer. Greater sharing of responsibilities will be necessary in the future as the program is institutionalized under the proposed NPWS restructuring.
4. The Nyamaluma Center has accomplished a great deal and has developed important institutional momentum in such areas as ecological monitoring, advanced scout training for depleted areas, local administration and community enterprise. However, this very success forces questions of the appropriate institutional home for the overall implementation of these functions within the national ADMADE Program.
5. Although the Center possesses considerable autonomy, NPWS leadership is comfortable with the role Nyamaluma has come to play. While the Center and NPWS see this comfortable relationship as positive, the evaluation Team believes the ambitious and wide ranging set of activities has stretched the Center's staff beyond its capacity and sees this relationship in a negative light delaying the institutionalization of CBNRM as a Zambian effort.

D. Recommendations

1. USAID should continue to support selected elements of the Nyamaluma agenda while simultaneously assisting the Ministry of Tourism/NPWS to define Nyamaluma's role in the context of the NPWS restructuring effort.
2. ADMADE has now matured to a degree that argues for a more explicit organizational mandate and statute. In view of the restructured NPWS, WCS should assist its seconded staff member to better define his and by extension, Nyamaluma's role in the more mature operating environment.
3. The Nyamaluma Research and Training Center is a valuable asset to the program that needs to be strengthened, professionalized, and Zambianized. Its role in areas

other than research and teaching needs to be better defined in such a way that USAID can comfortably continue its support.

4. USAID should assist NPWS to carry out a comprehensive study of the implications of devolving Nyamaluma entirely into an autonomous trust as currently considered. Results should be reviewed at an interministerial level before a final decision is made.

VI. GIS, Wildlife Data Collection and the NRTC

A. Issue

There is a need to establish a viable wildlife information monitoring system. What is an appropriate division of responsibility between Nyamaluma Research and Training Center and other branches of the NPWS in monitoring the ADMADE Program?

B. Analysis

Sustainable management of Zambia's wildlife and its habitat requires information to establish sustainable consumptive use quotas, effective land use units, revenue allocation determinations, equitable distribution of benefits, geographic targeting of enforcement and safari operator compliance with licensing terms. Ancillary services such as analysis of quota use or monitoring of client satisfaction can augment overall performance under ADMADE's co-management arrangements. For these reasons the Project Paper Supplement called for the GIS activity at Nyamaluma to become functional and deliver information on resource availability, stakeholders' social characteristics, and revenue source and uses to interested parties, including the public. The Project Paper Supplement also called for NPWS and GMA authorities to use the monitoring system to establish and adjust hunting quotas and other offtake of wildlife.

In 1990, Nyamaluma's expatriate Technical Advisor introduced a computer mapping effort in support of the ADMADE Program. The core of what has evolved into the ambitiously titled "The ADMADE Map and Data Processing and Applications Center" is a PC-based GIS software package, ARC INFO. Over the years this facility has been supported by numerous funding sources including the Earth Science Research Institute (ESRI), the ARC INFO developer and applications service company, and USAID.

Early USAID support was furnished through the WWF Cooperative Agreement which supported the Technical Advisor's efforts to build up this GIS capacity. The Nyamaluma Technical Advisor catalyzed this support, recruited and trained several GIS operators, established digital base maps and began to geo-reference survey data for cartographic presentation and spatial analysis. Since 1994, USAID has provided direct support to Nyamaluma's evolving monitoring and information system for the ADMADE program. While operational, the unit is not yet fully integrated into the overall program. It has, however, attained a considerable level of sophistication and produced some notable and successful outputs.

The primary recipients of the GIS information are local communities, industry, and NPWS. Its applications are intended to assist in wildlife management, in community based land use planning, in monitoring ADMADE-financed community development projects, and in monitoring and supporting the safari industry.

Most products from the monitoring effort are recent and it is too early to assess their impact on the overall wildlife management effort. Setting quotas remains more an art than a science. Methods for determining the abundance and distribution of various species in GMAs are not conclusive. Aerial surveys in 1991 and 1995 were reported to be un-comparable. Game scouts use random transects but their coverage and regularity apparently serve only as a check on trend assessments.

Qualitative data is collected from various sources and this is assessed against systematic observations of game scout patrols and safari results. In some GMAs village committees are helping to set quotas based on observed abundance of desired species. The ADMADE Program has not yet seriously attempted to classify and map habitat and carry out estimates of optimal carrying capacity for individual species. There is little value in knowing the absolute numbers if there is no basis against which to judge them. Estimates of annual change coupled with client satisfaction (essentially trophy size and species availability) provide a reasonable proxy while other elements of the program are put into place.

The evaluation Team observed a functioning GIS office, active data collection, and data input and data processing effort underway. At Nyamaluma, there are three GIS technicians including the Technical Advisor. The senior technician will be leaving shortly, but a qualified candidate had been recruited to replace him. In an interview with the candidate, he expressed enthusiasm about having the opportunity to work at Nyamaluma which he considered to be the most advanced of Zambia's initiatives involving the use of GIS. The GIS covers each GMA and includes boundary files based on existing topographic maps which are overlain by a progressively more complete set of attribute data. Representative maps are included in Annex M.

The Nyamaluma facility has several microcomputers, a scanner, GIS units, a digitizing table, and a complement of software and output devices. It appeared to be well-organized and segregated from Nyamaluma's other functions. Recognizing the uncertainties in transferring this fairly advanced technology to Zambia, the GIS center pursues a three prong strategy toward sustainability:

- slowly develop qualified and dedicated resident staff;
- establish partnerships with support organizations to supply technical assistance and equipment;
- produce usable quality products for its key clients,

Village scouts are at the base of ADMADE's data collection and monitoring system. Scouts maintain data collection sheets for each patrol and when accompanying safari hunters. This information provides a continuously updated set of direct observations covering a wide range of subjects.

In addition to ocular animal counts, scouts report on law enforcement actions, patrol efforts, patrol costs, safari hunting activities and results, and on incidents of resource use conflict. Among other applications this information allows communities to see the results of the monitoring and enforcement program that their 40% funds pays for.

Data forms are passed from village scouts to Unit Leaders (and wildlife managers/management biologists) who verify the forms and, under current practice forward them to Nyamaluma for analysis. Summaries for each GMA (actually GMU) are prepared annually and are intended to be used in adjusting management decisions taken at the community level.

The Center has begun supplying maps to local communities. Examples have been included in Annex M.

At present there is no socio-economic monitoring plan. The Nyamaluma Center has begun to collect information to track the location of community development projects such as schools, wells, and clinics, but there is no system for assessing changing social dynamics of local communities. Such socio-economic information will be necessary to fully test the viability of community based approaches to resource management.

The 1994 Mid-term Evaluation identified two gaps in the monitoring system:

- only one of four (now six are envisioned) management biologists and he lacked equipment;**
- village scouts were too demoralized to gather data reliably.**

The Team found that these constraints were now being addressed.

Management biologists have not yet been posted and there is apparently still only one management biologist serving the ADMADE Program. Several others have been trained but they have been absorbed into the Research Division's efforts inside national parks.

The Nyamaluma Technical Advisor expressed frustration over ADMADE's lack of access to trained biologists since the demanding training at Nyamaluma is geared to supplying ADMADE needs. Management biologists will now be placed in National Parks and Commands which will make the posting more attractive. These individuals will have a diversity of planning and management responsibilities suggesting that disciplines other than biology may be suitable.

The program to have village scouts posted in depleted GMAs and function more like regular civil service scouts, coupled with the desire to line up private sector partnerships to speed their rehabilitation are raising scouts' morale. This was the view expressed through a focus group interview of advanced village scout trainees at Nyamaluma. The efficient flow of funds in WCRF-financed GMAs is making a difference, although salary differentials and lack of equipment and provisions continue to present problems.

In addition to the Map and Data Center, Nyamaluma has more recently used its data collection functions to develop a monitoring system to assess the performance and competitiveness of the country's safari industry. The new system, called the Safari Monitoring System (SMS), has resulted thus far in the production of a manual² which is to serve as Departmental guidance for data collection and processing and for wildlife managers to monitor specific hunting blocks. The manual reports that its procedures were developed in collaboration with industry and local groups, but the Team was unable to determine whether the industry feels that the SMS will provide useful accreditation, data on hunting conditions, material of use for marketing, etc. or whether the system is seen as burdensome or intrusive

Presumably, this new monitoring system responds to concerns raised and recommendations of the 1994 Wildlife Industries Workshop. The Team's review of the SMS was generally favorable. If implemented, the SMS should track:

- use of animals on quotas thus allowing for quota adjustments and for alternative strategies for unused quotas;
- revenues generated by the safari hunting industry which will insure consistent accounting and revenue distribution to game owners;
- help the NPWS to insure regulatory compliance of safari camp and professional hunter activity; and
- client responses to their Zambian experience which should help NPWS, industry, and local actors to pursue an approach of "continuous improvement."

The data collection is linked to, and overlaps with, the ongoing data collection activities of village scouts and unit leaders. Selected data forms are included in Annex M.

The data alone will not change the conservation results in GMAs, but if they are used to maintain a dialogue with SCI and its efforts in support of Zambia, identify committed professional hunters and operators, allow communities and their partners to

²Dale Lewis, *Safari Hunting and Monitoring Manual: An ADMADE Training and Research Publication*. NPWS/Nyamaluma Institute for Community-based Resource Management (1995).

develop multi-faceted approaches to local revenue generation through improved co-management, and promote information about the safari tourist sector among other government agencies, parliament, and the press, then Nyamaluma's GIS facility can support the SMS. But making use of it is a larger challenge. The existence of system and specific park and GMA plans, as discussed in Section B, above, would help provide a context in which SMS data needs could be articulated.

C. Conclusions

1. The GIS capability at Nyamaluma, despite locally trained technicians, remains highly dependent on the presence of the expatriate Technical Advisor trained in GIS system planning and development. Locating the facility at the NPWS's Nyamaluma Research and Training Center where it is removed from the distraction of everyday administration is a potentially sound strategy. For this strategy to succeed information flow between ADMADE components, especially Nyamaluma to Chilanga requires improvement.
2. It would be difficult to argue ecological monitoring capacity exists within the NPWS, at least in clear institutional terms. NPWS has two internal units that have ecological monitoring responsibilities: the Division of Science with its Land Use Planning Unit (LUPU) and the Nyamaluma Research and Training Center. The Department also has links to other sources of information including the University of Zambia's Department of Biology and donor projects such as North Luanga.
3. At the same time many initiatives relevant to ecological monitoring have been carried out under the auspices of the ADMADE Program. Taken as a whole, however they have not jelled into an integrated system. The pieces have not yet developed synergy that will allow NPWS, USAID, and local stakeholders to determine whether the basic ADMADE hypothesis is working to better conserve natural resources in the GMAs.
4. Like many components of the ADMADE program, the institutional basis for monitoring, especially in terms of division of responsibilities, is imprecise and in need of systematic review.
5. The current system overlooks the important area of socio-economic monitoring which makes it difficult to judge whether people sense that they are benefitting from the program. The lack of such socio-economic data also makes it difficult for USAID and other donors to know if their assistance has been having an impact on people and development. Absent such data it is difficult for project managers to judge results, i.e. are changing awareness and attitudes leading to the adoption of less destructive behavior (poaching).

D. Recommendations

General

1. Insure that NPWS restructuring clarifies the respective roles of Nyamaluma and Chilanga for carrying out data collection and monitoring.
2. Develop mechanisms to insure exchange of information, systems protocols, timetables for data collection exchange and sharing of information.
3. Determine decision points in the conservation management process where better information could help make better management decisions.

Short Term

4. Redefine the management biologist position more broadly as one of "wildlife management planner." Select candidates with diverse disciplinary backgrounds such as natural resources economist, ecologist, geographer, veterinary medicine.

Long Term

5. Equip wildlife resource planners (currently specified as management biologists) with sufficient equipment and transport to assure their coverage locally and to permit frequent system level workshops with their colleagues and supervisors.
6. Use consultants and technical assistance to insure that GMA management plans have clear and consistent monitoring and evaluation components that build on the existing system.
7. The monitoring and evaluation system at Nyamaluma has made a good start on the technical side but needs further improvement. The Technical Advisor should spend more time on this subject, rather than on community development.
8. Significantly more needs to be done to institutionalize the data collection effort into NPWS and to train Zambians to carry out this type of research and how to use the results to make management decisions.

VII. Community Development Support and NRTC

A. Issues

Community development within the ADMADE program has not come together meaningfully. Three issues seem to be at play:

- defining the locus and appropriate institutional basis and relationships for a sustained and successful community development effort;

- defining what is meant by the community and thus how it will access and manage community development funds;
- drawing an explicit distinction between community development and community co-management.

B. Analysis

This section treats the above issues but, in response to the terms of reference for this evaluation, does so with a view toward the present and possible future roles of the Nyamaluma Center.

Recently, Nyamaluma diversified its training to include community development topics. The program expanded beyond village scouts and their administrators to encompass other members of the community. A training session for Wildlife Sub-Authority committee members coincided with the Team's visit to the NRTC. New subjects that are directed to GMA residents include community leadership workshops, planning and management skills, leather craft and tanning for residents, well-building and maintenance, and "tuckshop" management.

Community development and outreach activities at Nyamaluma are not confined to training and skills development but have extended to building partnerships with local NGOs in an effort to harness their presence in villages. Nyamaluma is beginning to extend its reach beyond the surrounding GMAs to try and reach other parts of the country with this collection of community development activities.

The ambiguity in roles and conflict in mandate was underscored by the fact that one of the WMSA subcommittee trainees at the Nyamaluma training session had previously been one of 12 community development assistants in the Community development component in WWF's first Cooperative Agreement with USAID under the project. The earlier Community Development component had failed for reasons laid out in the 1993 mid-term evaluation and touched on in Chapter 4 of this report--essentially, opposition by the Nyamaluma Technical Advisor to the then WWF managed community development component. The former community development assistant was now being told to seek working relationships with Nyamaluma and the religious NGO that was operating in his community. In the meantime community development funds (the 35% account of WCRF) are entering the community and being channelled and used without clear national or local strategies, and without specialized technical assistance.

Even as the NRTC begins to elaborate this new approach, NPWS Chilanga is preparing another foray into a headquarters based community development program. Approval for the creation of a permanent Community Development Officer position in NPWS has been obtained. A lead candidate, formerly associated with the WWF Wetlands Project, has been identified to take charge of the program's reactivation. While this is not

necessarily bad, the evaluation Team found no evidence that the two endeavors were being coordinated or that specialized technical assistance was being sought.

Moreover, as the experience of the LIRD indicates, CBNRM is a sophisticated multi-sectoral activity and the lead role may not be appropriate to the mandate or skills of NPWS. Senior NPWS management has said as much. Zambia has a ministry specialized in local development issues. However, it is questionable whether the main thrust of this "community development" activity belongs under a government ministry. Evidence in other parts of the world suggests that government leadership of local development leads to a profusion of overly formalized, local organizational structures, top down in their orientation. And over-reliance on traditional chiefs' authority is a debatable short term strategy which requires further study.

At present the community development thrust is fueled by the transfer of the 35% and the 40% account funds from the WCRF. This makes the WCRF "bookkeepers" most important agents in the community development effort. The bookkeepers insure the flow of funds. They offer transparency and accountability to the local community through their audits and reporting functions. The Team understood there were cases in which the threat of this reporting had prevented certain chiefs from abusing the use of funds.

Currently, bookkeepers work for the WCRF and serve to justify expenses in the villages so that future tranches will be released by WCRF. If these funds in fact belong to local communities then the bookkeeper's role is to substantiate that such funds are effectively meeting two objectives:

- the community's responsibility for what we have termed its co-management responsibilities in relation to the natural resource base; and
- implementation of local development actions and enterprises that build constituency for conservation objectives by providing social and economic benefits.

In view of these valuable services, the role of the bookkeepers should be carefully rethought permitting them to respond more directly to the community and its needs.

The important distinction between **co-management** and **community enterprise development** is poorly understood. This is probably because the 40% funds are still being managed as NPWS funds albeit with greater local (Unit Leader) discretion as to how they are being allocated. This contributes to the confusion over who the village scouts work for and whether these scouts are primarily wildlife police officers or whether they are expected to fulfill community extension and public service roles.

In principle there is no reason that these two accounts--the 40% account and the 35% account--should be segregated. If they both belong to the community as is suggested by the ADMADE concept and confirmed by the Wildlife Policy, then the community

should decide how much is allocated to community based resource management and how much is destined to community social and economic endeavors.

In this scenario, the bookkeeper is the local authority's management consultant. The bookkeeper helps communities understand the costs of the co-management responsibilities--reflected as salary payments, gas allowances, arms and provisions for patrols, etc. As these responsibilities are progressively transferred to the local community, members will see and better understand, for example, the advantages to having effective safari operating companies and professional hunters as partners. They will more readily comprehend the advantage to reducing the costs of controlling poaching, and setting clear resource management guidelines.

Local communities will be the direct beneficiary when funds not used for conservation management are made available to them for economic and social development activities. The link between improved management that brings increased revenue transfers and the availability of local funds is unevenly perceived by GMA populations at this time. The Unit Leader in the Mumbwa GMA estimated, for example, that 40% of the population had little sense of the aim and intent of the ADMADE program.

One mechanism that has yet to be effectively employed but that promises to broaden local commitment and awareness of the benefits to adopting conservation practices is the village land use planning process. Such land use plans need to form the basis through which NPWS obtains assurance of local responsibility and can feel confident to effectively devolve development and conservation management responsibilities to the appropriate local authorities.

C. Conclusions

1. In the absence of a systematic approach to community development in support of CBNRM either through PVO/NGOs or through the NPWS itself, the Nyamaluma Research and Training Center has expanded beyond its original purpose and mandate to initiate a program of its own in community development.
2. This involvement stretches the Nyamaluma staff's beyond its technical and managerial capacity. As the ADMADE program expands, and new approaches for depleted areas are put into place, the situation will become more acute.
3. The ADMADE program has failed to adequately distinguish the components of community development between natural resource co-management arrangements and community enterprise development activities.
4. Co-management and enterprise development require overlapping but nonetheless distinct skills. Different institutional ties can best support these different areas. The residual role of the state is stronger on the co-management side while the local empowerment and autonomy of enterprise development can probably best be

fostered through capacity building relationships between local communities and PVO and NGO partners.

5. Nyamaluma may have a role in each area but its core functions should be oriented toward training for community co-management. Enterprise development and associated social investment activities will probably best be concentrated on nearby GMAs that can serve as "learning laboratories" for the center's trainees.
6. There is little reason to believe a second community development thrust based in the Chilanga headquarters will be more successful than previously. Establishing a wildlife community development extension service is probably inappropriate for the NPWS. However, expanded capacity in community based participatory approaches and appraisal methodologies are appropriate and necessary for the NPWS to effectively collaborate with donors, the private sector (operators, PHs), and local community groups to establish, refine and implement GMA management plans.

D. Recommendations

General

1. NPWS should determine the official name for the Nyamaluma Center and more clearly specify the Center's mandate and relationship to other institutions.
2. Nyamaluma should confine its community development and community co-management activities to a few GMAs and Sub-Authorities located in close proximity to the Center. These field sites could serve as laboratories supporting the Center's pedagogical efforts and in developing more effective models for CBNRM management upon which to base training efforts.
3. Community co-management should be developed by strengthening partnerships that empower local communities to take over management and eventually the costs of maintaining their resource base. As a first step in this process, WCRF should turn over management of the 40% account to the GMA/Sub-authority level.
4. Empower local communities to set their own development agenda. Community enterprise development and associated social investment programs are quite properly the business of the local community itself. Additional capacity building will be necessary for communities to effectively assume this responsibility.

Short Term

5. Fund a consultancy to assess the results of WWF Cooperative Agreement efforts to carry out participatory land use planning exercises. The consultancy should examine and compare the Nyamaluma approach that relies heavily on structured

resolutions and the authority of traditional chiefs to move the community development process.

6. Engage a PVO with local enterprise development experience to analyze government and NGO presence in GMAs and to suggest a plan to foster new local organizations which can launch successful economic ventures while strengthening the linkage between such development activity and the wildlife conservation.

Long Term

7. Bring in international PVOs with proven local capacity building skills to help develop local NGOs. The PVO would:
 - help establish a national union, federation or trust, that will represent local authorities in GMAs;
 - shift central funds management from the WCRF to the newly formed trust or union, or have the Fund become part of this trust or union;
 - build alliances and networking of local organizations through training, information diffusion, cross site visits, etc;
 - build up local enterprise planning and management skills in active GMAs so that these groups are able to function without external assistance.
8. Develop collaborative partnership between the NGO and Nyamaluma would provide training for community based resource management.

VIII.Coordination and Management of USAID Funding

A. Issue

What are USAID/Zambia staff requirements to manage the funds remaining under the present project after the August 31, 1995 PACD or to manage a new long term NRM project which might be proposed by the new USAID regional office in Gaborone?

B. Analysis

1. Limitations on staff resources

This subject was not in the original Scope of Work for this evaluation. At the initial meeting with the Director of USAID/Zambia, this was one of the foremost issues on his mind. He told the Team that AID/W had put a freeze on new hires and PSCs.

The situation is complicated by the fact that natural resources management is not presently included as one of USAID/Zambia's Strategic Objectives and the Mission feels pressed to carry out the projects which are already part of its portfolio.

2. Regional project implications

The NRM project which now exists is part of the Southern Africa Regional Program of which the U.S. government has been a principal donor. USAID responsibilities for this regional effort were formerly located in Harare with whom USAID/Zambia had to coordinate. If there were to be a new long term natural resources project in Zambia it would be from funds provided by the Initiative for Southern Africa (ISA), USAID's new regional program centered in Gaborone, with whom the Mission would have to share management responsibility.

3. Prior management problems

At least three problems existed in prior management of the project.

a. Uncertain relationship among principals

One management problem had been the uncertain relationship among USAID's principal grantee--WWF, the Technical Advisor at the Nyamaluma Research and Training Center, and the management of NPWS. This issue festered for years. If USAID had taken the initiative to resolve the problem, the management burden for the project would have been eased. The issue must be faced squarely if other contractors are brought in to assist the program in the future.

b. Ownership and leadership by the GRZ

The mid-term assessment complained about

"political will on the part of the Zambian government to follow through on existing policies as regards wildlife and conservation management, the financial commitment to provide sufficient resources to this sector, and attention by NPWS management to address aggressively the constraints to success of the ADMADE project."

By approving the new Wildlife Policy and by continuing to provide a substantial amount of its national budget to NPWS, the GRZ is demonstrating its commitment to this activity. But more needs to be done.

c. USAID/Zambia project management

The USAID Director's concern about project management may be a response to the mid-term assessment that, 15 months ago commented on the

"insufficient management attention on the part of AID--in Washington, Harare, or Zambia aggressively to follow up on project problems, to be concerned with more than project inputs, to provide substantive project leadership, and to ensure that project partners, i.e., NPWS, WWF and technical advisors cooperate in carrying out Project responsibilities."

Unfortunately, that problem was not resolved between the time of the mid-term assessment and this final evaluation. Prior to the mid-term assessment, the Mission's Agriculture officer was assigned responsibility for this project. However, he had a large portfolio of agriculture projects and could not give the NRM project the attention it needed.

More recently, the Project Development Officer (PDO) was assigned responsibility for the project. However, he, too, had a full portfolio and has estimated that he spent less than 25% of his time on this project, an amount he felt was insufficient.

If USAID/Zambia goes ahead with a future NRM project it will have to make available more and better personnel resources than it did in the past.

4. Present management environment

Many project management problems of the past appear to be improving and, therefore, will require somewhat less management time. But some USAID/Zambia management attention will be required--to assure that others carry out assigned responsibilities. Someone will need to prepare Project Implementation Letters. Thirteen were required for the project up to now.

Someone will need to follow the status of financial commitments and expenditures. See the table on the next page for a financial summary of the project. This does seem to have been a problem in the past in view of the fact that one month away from PACD 30% of the project is still un-earmarked. This indicates a problem within USAID rather than with the GRZ, contractors or grantees. Even now, the figures on the table are an estimate and will need to be confirmed. This will require a special effort between the USAID/Zambia Controller, and whichever other office, Harare or Gaborone, now has the SARP accounting books. We are also unaware of any reporting or records kept on the GRZ contribution to the project. This could be an important tool by which USAID might assist GRZ to manage

Someone will need to prepare reports to Gaborone and or Washington. This was a Mission problem in the past but that now appears to be resolved.the program.

Figure 6 - Financial Analysis
(As of March 10, 1995 from GGR)

Program Element	Budget Obligation	Committed	Expended	Available Uncommitted	Available Unexpended	Available
ADMADE Institutional Development & Sup	54,000 <u>21,800</u> 75,800	54,000	50,151			
Project Management	1,083,146 <u>305,600</u> 1,388,746	1,103,513	690,513			
Conservation and Community Development	466,400 <u>244,900</u> 711,300	324,770	8,600			
Audit and Evaluation	84,000 <u>26,000</u> 110,000	103,325	72,910			
Regional Communication and Training 513,192	<u>108,500</u> 621,692	615,279	301,565			
Commodity	(27,192) 1,720,262 <u>0</u> 1,720,262					
Inflation	45,000 <u>51,100</u> 96,100	0	0			
Contingency	34,000 <u>42,100</u> 76,100	10,000	2,879			
Totals	4,800,000	2,999,807	2,471,678	1,800,193	2,328,322	
GRZ Contribution	1,693,193					

In sum, while the present management environment is improving, the project will all require significant attention by USAID/Zambia and the regional office in Gaborone.

C. Conclusions

1. Many of the management problems of the project that had existed during the first years of the project appear to be on the way to positive resolution.
2. USAID/Zambia must agree to provide some staff resources to manage the continuation of the project or any new regional project which may be proposed by the regional office.

D. Recommendations

1. Clarify the role and position of the Nyamaluma Research and Training Center.
2. Reconstitute and make more active the existing Project Coordinating Committee.
3. USAID should work out with NPWS a coordinated operating plan that will contain a description of the proposed activities to be carried out, objectives for the period, resources required for their achievement, and how these will be deployed.
4. USAID/Zambia must be prepared to assign some time of one professional person if it wished to go forward with this project.

IX. Multi-donor Coordination and Management

A. Issue

With NPWS restructuring and the entry of a major new donor, what role should USAID play in coordinating among donors, NGOs and other players?

B. Analysis

A new consideration is the entry of the EC as a major new donor to the NPWS. The evaluation Team met with the EC representative who indicated that the EC see their role very much as a complement to USAID's involvement.

The EC approach to project design and development is somewhat different than with USAID. While USAID does most of its detailed design before a project is approved, EC prepares a logframe similar to USAID's before agreements are signed, but EC gets into implementation details after the agreement is signed.

The evaluation Team and the EC representative agreed that it would be mutually beneficial to EC and USAID, for the USAID design team coming to Zambia--presumably by the end of the year, if there was going to be a follow-on USAID project, to meet with

EC when they would be developing the details for its own project. One possible way of dividing the responsibility might be for the EC to be concerned with conservation management in the National Parks, while USAID assistance focuses on community based conservation management in the GMAs. Both donors would work together to strengthen NPWS, institutionally, so NPWS could manage both a Parks component and a GMA component. The EC representative said this was an idea worth considering.

USAID presently participates in an informal donor group that meets on a regular basis. With a new donor in this sector, this group will have to be strengthened and formalized with the concurrence and participation of the Zambian government.

The United States currently plays a lead role in providing assistance for developing policy and legislation related to wildlife. This role could be maintained and expanded to cover broader issues of access and allocation of resource rights in zones where shared access regimes are an important constituent of resource tenure. The EC, for example, is undertaking a parallel project in community based natural forest management. USAID is dealing with land tenure questions and economic expansion in the agricultural sector. By drawing on regional and central expertise, USAID could maintain a lead role in the policy area by shifting focus from wildlife alone to the more comprehensive arena of community based natural resource management.

C. Conclusions

1. USAID can play an important role in providing coordination among donors for CBNRM.
2. CBNRM's multi-sectoral nature will be raising a host of interagency issues for rural Zambia in the years to come. USAID has already begun examining land and resource ownership issues under its new Agricultural Sector Liberalization Program (ASLP). In view of the importance of non-crop rural resources, especially in those lands under shared access regimes, expansion of land tenure studies needs to be expanded to "open areas" and lands currently under public management-- fisheries, state forests, GMA's.
3. The ISA Regional interest in CBNRM offers the Zambia Mission resources and possibilities to bring other donors into fora, workshops, cross country visits, and other information sources that can support USAID policy and analytical leadership.

D. Recommendations

1. Undertake studies, workshops, and policy dialogue related to the ownership and governance of rural resources and communally held lands. This would give USAID a broader leadership role for both crop and non-crop rural lands in Zambia from which it could leverage other donors.

- 2. Consider using USAID ASLP or NPA funds to leverage policy changes in conservation management.**
- 3. USAID presently participates in an informal donor group that meets on a regular basis. With a new donor in this sector, this group will have to be strengthened and formalized with the concurrence and participation of the Zambian government.**

CHAPTER IV

IMPACT OF THE ADMADE PROGRAM

I. Issues

What data is necessary to know how well the ADMADE program is progressing?

Do systems exist to collect such data and is the data being collected?

II. Analysis

The Logframe in the USAID Project Paper Supplement listed a series of verifiable indicators and measures to help determine project progress. Unfortunately, in most cases only concepts and not hard numbers were suggested. In most cases the "means of verification" was the NPWS Annual Report. Unfortunately, such a document has not yet been published. For other indicators, the data was to be in WWF records. WWF did publish quarterly reports but the information in these reports was on input rather than output impact. The same is true for USAID's six month Project Status Reports to AID/Washington. Much of the discussion in this section regarding biophysical and socio-economic impact and sustainability and replicability of ADMADE programs, therefore, is anecdotal and based upon observations and discussion by the Team with individual informants.

A major finding in the mid-term assessment of this project that was conducted 14 months ago was that:

a monitoring and evaluation system has not been fully implemented to enable NPWS, ADMADE or the USAID Project to produce the data to determine whether the dollars invested by USAID, or the cash resources earned by GMAs from the hunting industry, has helped improve the management of wildlife and natural resources in Zambia or the lives of the people in the GMAs.

While improvements have been made to the GIS monitoring system by Nyamaluma, overall project management information continues to be scarce. Component three of the WWF's second Cooperative Agreement was specifically designed to collect data in nine GMAs. However, the results of this effort were not available during the evaluation Team's visit to Zambia; thus it is not clear whether it will provide data by which impact can be monitored and measured.

A. Data Gathering, Monitoring and Dissemination

The GIS unit at the Nyamaluma Research and Training Center has begun to have an impact in several areas. It is too early to determine whether the spatial and other analyses will produce more sustainable management of the natural resources base (the ultimate test

of its utility) but early results are promising. Analysis carried out this year by the GIS unit uncovered systematic errors in the manner in which safari operators reported trophy's taken against quotas. Essentially, in some instances operators shift animals reported from the area where they are killed to an alternative area where the operator still has available license. This distorts management decisions and affects revenue flows back to local GMAs. Improvements are being instituted that will assure that revenues are returned to the communities where management efforts are being made. This process level impact allows for better and more accurate testing of the central ADMADE hypotheses.

B. Effects on Wildlife Population and the Effective Use of Land

Have biophysical conditions improved as a result of the ADMADE program?

It is proper to focus on the question of the overall CBNRM/ADMADE program rather than specifically on USAID's NRM project because the NRM project is just a support element. In either case, the evidence for real change is inconclusive. Game counts through aerial survey undertaken in 1991 and 1994 are apparently un-comparable. Further, they often do not reflect perceptions and observations taken at the field level through systematic monitoring.

Anecdotal evidence, particularly in GMAs with little or no commercial hunting revenues, suggests that poaching continues, especially in time of drought such as was taking place at the time of the field work for this evaluation. In contrast, several GMAs such as Lumimba, appear to have internalized the link between increasing revenues and more responsible behavior, i.e., decisions to stop poaching. Management changes such as designated fishing areas for villagers and scouts are reported in some GMAs to be reducing pressure on mammal populations.

Anecdotal evidence indicates that special licenses continue to be issued, often above the quota level, and that the amounts received for these licenses are not deposited in the WCRF. Their direct impact on animal populations is probably unimportant but the signal they send to local populations may encourage widespread illegal hunting and official inattention. A Cabinet change made during the Team's work in Zambia may soon have a positive impact on reducing the issuance of special licenses.

While elephant populations were reported to have increased, stories continue to be heard of illegal poaching of elephants indicating that the issue of the ban on elephant hunting may need to be revisited. Urban based poaching schemes have not yet been adequately reduced. Development benefits coupled with more active patrolling make it more difficult for these operations but they tend to move elsewhere, e.g. from Mumbwa GMA to Mumbwa Open Area.

Fire appeared to be an enormously important factor in the ecology and most likely in the carrying capacity for species, especially the grazing ungulates. Habitat

encroachment, locally an issue, seemed to have been largely and effectively stopped under the ADMADÉ program. Sketchy accounts indicated that fisheries continue to decline. The granting by the Fisheries Department of license and regulatory control to local NPWS rangers should improve the fisheries.

Trends in game availability as measured by hunting success ratios offer promise as a proxy for wildlife populations. The program has begun to generate this information. In those areas where operators are active, indications of favorable trends outweigh the negative evidence (See Annex M). The general sense is that the situation is better, but that animal populations remain well below what they were 20 years ago. They are not coming back as rapidly as they could were the program operating at greater efficiency. In short, it is still too early to judge whether the conservation management objective is being met.

C. Community Participation Practices

Community participation efforts were attempted by WWF, under the third component of its second Cooperative Agreement in two GMAs. Efforts were instituted by the Land Use Planner who used the participatory approach to land use planning in the same two GMAs, by the Nyamaluma Training Center through training sessions and seminars on community practices for Sub-authority personnel in the north and east of Zambia, and by the people in the 10-12 other Sub-authorities which received funds from the 35% share account. There was also a Community Development Officer and 12 community development workers in the field included in WWF's first Cooperative Agreement under this project.

The Logframe suggested that data be collected on such socio-economic indicators as disposable income and child survival rates as two means of assessing the living conditions of people in the GMAs. Neither baseline data or recent data is available on these indicators. At the broad level, program related revenues are concentrated with 84% accruing to the top 10 GMAs. Benefits such as schools constructed are concentrated within these GMAs.

D. Program Management

Selected management data includes the following:

1. The USAID NRM project, on the basis of available impact data is only beginning to be able to achieve the project purpose of testing the viability and replicability of community based natural resources management and use programs, and to determine ways of integrating such programs into existing services.

2. The number of trained village scouts working in the GMAs has risen to over 600 in 1994;
3. The number of trained management biologists actively working in the NPWS has increased from one to eight over the last 12 months;
4. At least one request has been received from a Village Chief in an open area to have his community's lands gazetted as a GMA so as to be included in the ADMADE program;
5. Operation of the hunter licensing system has been computerized at Chilanga so villagers can now be sent early reports on how much money has been collected on their behalf and will be available.
6. The USAID-financed development of a new five-year lease agreements for concessionaires should go a long way to bring in a higher level of private sector operators and will foster greater transparency in the awards process.
7. The accounting operations of WCRF have been sufficiently improved so management sub-authorities are now receiving, on a quarterly basis, 100% of their community development money (the 35%) owed to them by the WCRF.
8. The equivalent of \$ 305,000 was received for local development projects by management sub-authorities in 1994.
9. Because of perceived improvements in Zambian wildlife management, openness and involvement of the private sector in the hunting industry, there has been a threefold increase in hunting safaris in Zambia from 1993 to 1994.

III. Conclusions

The lack of an overall effort to collect integrated or inter-related project data is reflective of overall lack of coherent project management. While there is anecdotal information on project progress it is difficult to use this data to determine if this experimental project concept or project implementation has been a success.

Although crucial as the principal tool for local communities to feel part of this program, community development activities has the more difficult of this project's components on which to gather data.

IV. Recommendations

Short Term

In the short term, it is probably impossible to do anything in the NRM project to install a system to collect integrated wildlife, financial, social, conservation management and economic data that will be really used for project.

Long Term

If USAID goes ahead with a new long term project, an essential component should be a new or improved unit at Chilanga to collect and analyze social and economic data, as distinct from, but related to the wildlife and management practices data now being collected and analyzed by Nyamaluma.

CHAPTER V
PERFORMANCE OF THE WORLD WILDLIFE FUND

I. Change in the Role of the World Wildlife Fund

WWF/US had a Cooperative Agreement with USAID/Zambia in the amount of \$1,145,000 under the original \$3,000,000 NRM Zambia Project Agreement. USAID reserved to itself the remaining \$1,855,000 for the purchase of commodities, and for inflation and contingencies.

The original Cooperative Agreement gave WWF the following responsibilities:

- ADMADE institutional Development and Support	\$ 26,000
- Project Management	610,408
- Conservation and Community Development	154,400
- Regional Training	327,000
- Regional Communication	<u>27,192</u>
TOTAL	\$ 1,145,000

The early years of the project were difficult from a management point of view. ADMADE was attempting to incorporate the relatively new CBNRM concept. GRZ and USAID were in an experimental mode as to how to implement the CBNRM concept.

While WWF had a Cooperative Agreement to provide advice to the Zambian government and manage grant funds for USAID, management relationships among the partners were difficult. It is not clear how much outside management advice NPWS really wanted. WWF had hired as the principal Technical Advisor, an American management biologist who had done his PhD field work in Zambia, had lived in Zambia much of the time since he was a student, and was well known and respected by senior management in NPWS before the USAID/Zambia project began. A special relationship existed between the Technical Advisor and NPWS. Partly as a result of this special relationship, WWF as an institution, was unable to direct the project.

To a large extent, USAID/Zambia also lost its ability to manage the use of its own funds. Having signed a Cooperative Agreement with WWF rather than a contract, USAID had less leverage over the funds. The situation was further complicated because the project was funded from the Southern Africa Regional Program. As such, an officer from the regional office in Harare periodically visited Zambia to exercise that office's management responsibility over the project--adding to the problem of coordinated management of the AID project in Zambia.

Work under the original Cooperative Agreement was completed on June 30, 1994. In September 1993 the Project Agreement between USAID and GRZ was amended and \$1.8 million

was added. Included in the new Project Agreement was continued work with NPWS to be carried out by an NGO.

Annex 1 to the Project Agreement Amendment made it clear that work plans, terms-of-reference, scopes of work, sub-agreements, sub-contracts, and all other implementation arrangements of the NGO to be hired would require NPWS and USAID/Zambia approval. The GRZ/USAID Project Agreement indicated that the NGO would be responsible for:

- producing an annual report on the activities of ADMADE and WCRF;
- resource inventory, stakeholders analyses, and land use plans for the GMAs;
- selected training;
- providing a Project Manager, Project Accountant, and Land Use Planner;

USAID had the choice of competing the implementation of the Project Agreement Amendment or going with WWF. USAID chose WWF. WWF signed a new Cooperative Agreement with USAID/Zambia running from July 1, 1994 to August 31, 1995 that utilized funds remaining in the earlier Cooperative Agreement plus \$147,281 of new funds for a total new budget of \$535,281.

The new Project Support Cooperative Agreement was to enable WWF to assist with the improvement of the implementation of the NPWS ADMADE program under four very specific components:

- to assist with wildlife management policy and legislative reform;
- to improve the NPWS information base in the nine USAID-funded GMAs and one depleted area;
- to assess the status of resources through a participatory approach among communities in two GMAs;
- to assist NPWS in improving implementation of ADMADE's revenue sharing system with GMAs.

However, WWF's new Cooperative Agreement was developed in a somewhat strained fashion between USAID/Zambia and WWF. While NPWS was kept informed it was rarely asked for advice or concurrence. The strained and poorly coordinated planning for the Cooperative

Agreement was ultimately reflected in a project poorly managed by WWF, by NPWS, the Ministry of Tourism, and most seriously, by USAID.

In February 1994, WWF had submitted to USAID/Zambia an outline of a project that would have focused mainly on participatory processes to facilitate community based natural resources management (CBNRM), that is, a form of component three of the Cooperative Agreement. USAID/Zambia, however, felt that priority attention needed to be given to components one and four, that is:

- developing the necessary policy and legal framework for the program; and
- improving the performance of the revenue distribution system of ADMADE.

The Project Paper Supplement of September 1993 had argued that the lack of reliable baseline data on which to assess the ADMADE program was a critical problem. Because of USAID's perception of what was urgent and important in this project, WWF's interest in participatory approaches was included in the Cooperative Agreement, but only as one of the four components.

The role of WWF under the second Cooperative Agreement differed from that exercised by WWF under its original Cooperative Agreement. WWF no longer had the institutional role of technical advisor to NPWS nor manager of funds for USAID. Under the amended Cooperative Agreement, WWF was to work more directly with community level authorities and very little with NPWS. This was intended to reduce pressure on the NPWS to institutionalize new functions generated by WWF that might not be sustainable without additional donor funding. WWF, however, was not itself expected to provide project direction to NPWS or to guide NPWS to institutionalize any new lessons learned. NPWS would continue to provide specific direction and work plan supervision to WWF.

The American management biologist, who had been the Technical Advisor under the original Cooperative Agreement, was not supported under WWF's new Cooperative Agreement. Instead, he was funded by another donor, the Wildlife Conservation Society (WCS) of New York City, and seconded to NPWS. Now, as an "employee" of NPWS, he worked as an insider rather than as an external technical advisor.

Training activities at the Nyamaluma Research and Training Center were directly funded by USAID/Zambia through an agreement with WCRF rather than through the Cooperative Agreement with WWF.

A consideration that must be taken into account in evaluating WWF's performance under the Cooperative Agreement, and indeed the performance of the other partners of the project during this phase, is that USAID felt that the extension of the project to August 1995 was a top-

gap measure. USAID wanted certain major problems addressed before it would consider long term funding to NPWS.

There were many uncertainties when this phase of the project was conceived. USAID even mentioned that one reason for extending the project to August 1995 was to tie up loose ends and then to close down USAID support to ADMADÉ altogether. The transitional nature of this phase of the project, the short time available for project implementation, and the limited funds allocated for the components were contributing constraints that limited project success and WWF's performance.

II. Performance of the World Wildlife Fund as it Relates to the Four Components of its Present Cooperative Agreement with USAID

A. Issues

- Has WWF met the term of its Agreement with USAID?
- How has WWF performed in carrying out its assignments?
- What is the quality of the product?

B. Analysis

The Table on the following page is a project implementation calendar prepared by WWF for all four components under the Cooperative Agreement. Each of the four component is discussed below.

1. Component one - Wildlife management policy and legislative reform

Substantive work under this component was covered in detail in Chapter III, Section A. Groundwork for this component was initiated under WWF's original Cooperative Agreement. Preparing new legislation was essential from both a policy and operational point of view. However, we have already noted our concern that the new legislation not become a bar to an improved approach to implementation of the CBNRM concept.

The legislation to support the new wildlife policy was still under preparation during the Teams's visit to Zambia. It was expected that the new legislation would be forwarded to the Government of Zambia well before the August 30, 1996 date to which the project had been extended (well after the evaluation Team leaves Zambia).

Figure 7

PROJECT IMPLEMENTATION CALENDER														
Objectives & Activities	Months													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Policy development and publication Legal review. Consultations and development of terms of reference. Contracting appropriate consultants.		X	X	X	X	X								
GMA Data bases: LUPO. Contracting of five local consultants: Forestry, fisheries, wildlife & tourism, mining, agriculture. Aerial survey work by NPWS research section. Cost benefit analysis of a depleted GMA.	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Experimentation with participatory methodologies. Munbwa, Chibuluma village PRA. Nanwala GMA PRA .														
ADP DE revenue sharing. Employment of WCRF introduction of new accounting systems. Up grading of licensing system. Annual report.	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Chapter III, above, also discusses the new lease concessionaire agreement that has come to be considered a part of component one although it was not included in the WWF/USAID Cooperative Agreement. A sub-grant was given to WCS by WWF with funds provided by USAID to carry out this work. Because it was not included in the new Cooperative Agreement, however, WWF initially dragged its feet when asked to fund this activity. WWF now does take some credit for this activity because of the time it invested into drawing up and administering the grant agreement as well as providing logistical support to the consultants.

2. Component two - Improve the NPWS information base on the nine USAID-funded GMAs and one depleted area

The information and monitoring system has been described in some detail in Chapter III, Section F, indicating that the problem is not one of absence of data. The issue is the need to complement and consolidate the information around a dynamic and usable management plan. The Project Paper Supplement argued that, for these plans to be useful, they should be developed through a participatory planning and mapping process.

This second component came to be divided into three activities:

- profile reports for the nine GMAs supported under the USAID project;
- a depleted area cost-benefit analysis;
- aerial surveys.

The first two activities were included in the WWF/USAID Cooperative Agreement. The third activity, the aerial survey, was later and separately negotiated between the NPWS Research Division and USAID/Zambia. The WWF Cooperative Agreement became the mechanism, as with the work on the lease agreement, through which the activity was financed. As with the lease agreement, WWF felt the aerial survey was not part of its responsibility and gave little attention to it.

The Team was unable to obtain detailed information on these three activities because information was not available. Field work on the profile reports for the nine GMAs had been completed in July (1995) at the time of the evaluation Team's visit to Zambia. Field work was completed through use of a combination of local Zambian consultants and the input of the land use planning officer (LUPO).

A major constraint to finishing the work on time was stated by WWF to be the limited time of the LUPO. Despite agreements with NPWS that the LUPO would devote her full time to the NRM project, she was the only LUPO in the Department and the demand for her time was heavy--especially for park planning.

The evaluation Team was able to see the rudiments for the participatory approach to collection of data. The LUPO had initiated a consultative process in two "focus" GMAs, one depleted, the other generating operating revenues. The resulting reports (for Mumbwa and Namwala) show promise (only the Namwala report was available to the Team) and point out that the planning information and planning process are lagging behind other components of the project.

The areas selected for collection of data under the WWF Cooperative Agreement are important. Quality data is of fundamental importance precisely because it is establishing the baseline. Early initiatives reveal the need for an informed planning process. It is not clear why the elements of this component could not have come together before the EOP. No lessons learned from the information and participatory planning activity were available.

3. Component three - Assess the status of resources through a participatory approach among communities in two GMAs

This third component of the second Cooperative Agreement produced few results. Perhaps it was a mistake in the first place to assume that much could be done in only 14 months on such a subject. This is particularly so since a major failure under the original Cooperative Agreement was in the earlier community development component.

WWF decided to hire a local Community Liaison Officer (CLO) to meet the objective of the third component of the new Cooperative Agreement. After initial advertisements for the position were not successful, WWF decided to appoint short-term consultants to facilitate the planning, organization and implementation of participatory resource assessment workshops.

Two workshops were held: one in the Mumbwa GMA in April 1995 and one in the Namwala GMA in May, 1995. The evaluation Team is still confused about the source of funding for these two workshops. We believe the Namwala workshop was funded from the Zambia NRM project as a charge to the Cooperative Agreement while the Mumbwa workshop was funded by WWF from other funding sources.

For the last four years, WWF has supported a CBNRM network in Southern Africa that draws participants from governments and NGOs. The idea

behind this network is to share information, experiences, and lessons learned. The workshop held in Mumbwa was the third in a series, the other two having been held in Zimbabwe in 1991 and 1993 around CAMPFIRE themes.

The participatory resources assessment (PRA) workshop in Chibuluma village, Mumbwa GMA was held from April 16-20. The objectives of the workshop were to:

- expose community members and NPWS/ADMADE staff to the use of participatory methodologies;
- provide an opportunity for community members to learn more about the recent ADMADE developments; and
- enable the community to assess its own natural resources and to identify the different demands made upon them.

The Mumbwa workshop was attended by thirty five participants from Botswana, Malawi, Namibia, South Africa, Zimbabwe including some from two Zambian GMA sub-authorities, and veterinary, forestry and agricultural officers from the District office, in addition to three staff from WWF/Washington who acted as facilitators.

In March 1995, nine months after the new WWF/USAID Cooperative Agreement for Zambia had been signed, a draft scope of work for a consultant to lead an NRM workshop was still being developed and site work had only just begun for the workshop that was to begin a few weeks later. The Zambia NRM funded workshop was finally held in May at Namwala GMA. It was attended by three persons from WWF/Washington in addition to the other participants.

The workshops seem to be redundant of similar workshops held around the country by other donors, including workshops funded by USAID through Nyamaluma in GMAs in the North and East of the country.

If one purpose of the WWF sponsored workshops was to learn lessons by comparing action in different areas, this purpose could have been better served by inviting the participation of USAID/Lusaka staff, staff from NPWS/Chilanga, or staff and villagers from the North and East. WWF indicates that the ADMADE program officially hosted this workshop and that NPWS staff from headquarters, including the Director, opened the workshop. Field officers attended as resource people.

We do not doubt WWF's statement, but we have conflicting statements from USAID and Nyamaluma that these invitations were not offered and that WWF carried out these workshops in isolation.

We suspect that both sets of statements and complaints are correct. That is, some people were invited; others were not. Some people knew what was going on; others did not. Some people who were invited chose not to come. This vignette is reflective of the general issue lack of coordinated and integrated management among the key players in the project.

No follow-up to the conferences was carried out and they probably had little impact on the project. In any future work of this kind, NPWS, ADMADE, USAID or other donors should provide for extension services, or establish working partnerships with local or international NGOs who have expertise and experience in this field to help implement lessons learned at the workshops.

WWF understands that it has been criticized because it could have done more, in addition to running conferences, to enhance community participation under the Cooperative Agreement. WWF's response is that their

emphasis was on involving the community in an exploratory basis to develop an approach rather than implement tangible community based activities on the ground. A major constraint to doing the latter would also appear to be the way the ADMADE program is set up. Without realigning the rest of the ADMADE program to better accommodate wider community-based activities, impact in this area will continue to be minimal.¹

The Team has the impression that, indeed, USAID did not have a coordinated, long term vision for this project. Unfortunately, neither did WWF. While WWF may have met the letter of its Agreement, it did not provide needed leadership and advocacy that is hallmark of WWF elsewhere in the world.

4. Component four - Assist NPWS in improving implementation of ADMADE's revenue sharing system with GMAs

This component involves two activities:

¹Private correspondence, Irène N. Kamu, Senior Program Officer, WWF to Irving Rosenthal, Evaluation Team Leader, August 14, 1995

- computerizing the hunting fee licensing system, and
- improving the accounting, financial reporting, and management of the WCRF.

The hunting licensing system. Early in the period of the new Agreement, indeed, beginning before the Agreement started, a computer specialist was hired in WCRF to computerize the issuance of hunting licenses. That system is now in place and functioning. The 1994 hunting season was the first year that the new computerized licensing systems were used. The system appears to be working effectively.

The computer analyst began to compile reports that provided information to NPWS management on the exact number of licenses sold, for what animals, in which GMAs, and how much earnings were generated. Valuable data was provided for quota setting and other aspects of wildlife management.

One major advantage of the new computer system is that the WCRF has accurate data on which to base revenue disbursements for the GMAs. Information is available quickly so that communities have accurate estimates of the revenues they are likely to receive. This has a major impact on the entire program. Once communities know what they are owed they demand that they receive the full amount as quickly as possible, putting pressure on the entire system to operate more efficiently.

The Table on the next page shows that the top ten GMAs earned 83% of all wildlife revenues in 1994. The Table on the following page shows the results for all GMAs during the four month period. This information serves to highlight the over dependency of the ADMADE program on a relatively small number of GMAs. For the majority of GMAs, earnings were either non-existent, or insignificant. The licensing system enabled, for the first time, the accurate collection and presentation of data related to wildlife utilization. Management now had to make decisions to address the problems which the licensing data uncovered.

Certain minor anomalies will have to be worked out. When a person buys a license the transaction is completed by giving the purchaser a computer print-out. However, the law still requires the purchaser to be issued a signed document. As a result, there is unnecessary hand duplication of the computer print-out.

A constraint has been identified in the need for a second computer as a back-up. It would provide extra capacity for issuance of licenses needed particularly at busy times. Further, it would allow the computer analyst access to

Figure 8

Total revenues earned for the period September 1, 1994 to December 1, 1994

	KWACHA	DOLLAR
GRZ	16,297,125	113,387
WCRF	16,272,625	242,772
	-----	-----
	32,569,750	356,159
	*****	*****

Revenue Distribution

	KWACHA	DOLLAR
GMA		
Bilili/Nkala	-	2,345
Chiawa	-	-
Chisomo	-	-
Chizera	-	-
Kalasa-Mukoso	33,750	-
Kasonso	-	2,115
Luano	449,750	5,715
Lumimba/Chanjuzi	117,250	7,125
Lumimba/Mwanya	91,000	16,208
Lunga-Busanga	240,250	-
Lunga-Luswishi	-	-
Mulobezi	346,000	4,275
Mumbwa/Mumbwa East	-	12,350
Mumbwa/Mumbwa West	-	17,738
Munyamadzi/Luwawata	-	12,300
Munyamadzi/Nyampala	70,000	45,989
Musalangu/Chifunda	-	13,584
Musalangu/Chikwa	-	16,100
Musalangu/Fulaza	373,500	12,065
Namwala	-	585
Rufunsa	656,000	12,205
Sandwe	-	8,086
Sichifulo	542,250	5,600
Tondwa	-	-
West Petauke	577,500	-
West Petauke/Chomba	-	345
West Petauke/Nyimba	-	322
West Zambezi	51,500	6,835
WETLANDS		
Bangweulu	400,000	29,200
Kafue Flats/Blue Lagoon	6,189,750	1,810
Kafue Flats/Lochinvar	4,329,750	9,875
OTHER AREAS		
Open Areas	1,804,375	-
	-----	-----
	16,272,625	242,772
	*****	*****

Figure 9

Top ten revenue earning GMAs from the sale of licenses for January to December 1994.

GMA	Revenue amount \$	Percentage of total revenue	Ranking position
Lumimba	186,531.30	14	1
Munyamadzi	151,818.30	11	2
Musalangu	133,986.30	10	3
Kafue Flats	133,143.84	10	4
Mumbwa	116,313.30	8	5
Bangweulu	111,401.53	8	6
Kasonso	103,370.38	6	7
Mulobezi	81,637.69	6	8
Sichifulo	53,050.00	4	9
West Zambezi	29,756.15	2	10
Total Revenue collected for top ten GMAs	1,101,008.79	84	

Total revenue earned by all GMAs and Open Areas \$ 1,312,605.38

Top five GMAs earned 54% of total revenues.

Top seven GMAs earned 71% of total revenues.

Top ten GMAs earned 83% of revenues.

another computer to develop new programs. We recommend that this issue be addressed.

Financial management of the WCRF. This subject was covered in some detail in Chapter II. D. This was no doubt the most successful WWF activity under the Cooperative Agreement and provides much of the basis for the success of the ADMADE program and continued USAID project support.

C. Conclusions

1. The attitude of NPWS toward the four components carried out by WWF was uncertain. We could not confirm whether NPWS was in favor or opposed to these components, whether NPWS understood what potential benefits they might receive from the work, or whether NPWS had asked for, or approved, the use of USAID project funds for these purposes.
2. NPWS saw WWF's role in this project under the second Cooperative Agreement as an administrative secretariat, and an accounting station. For NPWS, WWF's role is to pass through to NPWS funds for certain specific project activities. In this regard WWF has proven to be a useful financial and secretariat mechanism to carry out project support purposes.
3. USAID's expectations of WWF were similarly un- clear. Did USAID expect WWF to provide technical leadership, substantive coordination, or administrative support to this project under the second Cooperative Agreement? NPWS certainly did not want WWF to perform substantive leadership. NPWS appears to have been content to allow technical leadership to be centered at Nyamaluma.
4. WWF/Washington saw WWF's role as insuring that the specific activities in the Cooperative Agreement were carried out by providing technical support and administrative oversight. Where WWF provided consultants, the terms of reference were developed by WWF staff. WWF does not think that much funds flowed from the WWF support project directly to other sections of ADMADE except funds for salaries of five staff members. Where NPWS staff were used to implement certain activities, it was the responsibility of WWF to ensure that these activities were carried out and results documented.
5. WWF has exercised little leadership to complete and carry out at least two of the four components in its present Cooperative Agreement with USAID. That is:
 - The new wildlife legislation, although progressing, will not be completed during the period of the Agreement. Much credit for moving this component

along must go to the intervention and participation of WCS as well as of USAID/Zambia.

- As regards the effort to develop an information base for nine GMAs and one depleted area required under the second component, the results were not available to the evaluation Team during the Team's stay in Zambia.
- 6. Villagers and the conservation effort of the project benefitted little from the workshops that attempted to learn lessons about participatory approach to resource management. Without follow-up this component of the project has little potential for success.
- 7. WWF has met the conditions of its Agreement to improve the revenue sharing system, but the required reports on these matters have not yet been prepared.

D. Recommendations

Short Term

1. Under the approved one month (to September 1995) no-cost extension to the Cooperative Agreement, WWF should be asked to produce at least one draft GMA management plan. We suggest this be done for the Mumbwa GMA, because Mumbwa has a management biologist, it was the focus of WWF's in-depth workshops, and a participatory process has already been initiated. The plan should involve the GIS (Map and Data) Center of Nyamaluma, the aerial surveys, the compendium of consultant reports, the NPWS LUPO, and the range of local stakeholders laid out in the preliminary report. WWF should apply the best participatory planning and mapping capacity that Zambia currently possesses. The result should be a state-of-the-art management plan and participatory methodology.
2. Until the restructuring of NPWS is clarified and new technical people trained, and until a new, long term project has been approved and responsibilities agreed upon, USAID should seek no further assistance from WWF (other than the recommendation in 1, above).
3. With regard to data collection, no new USAID funding should be committed to aerial surveys until a clear procedure for integrating and calibrating them with field observations, field transects, and key informant (PHs and local hunters) data has been identified. All information should be captured by the NPWS GIS. EC and any USAID follow-on activity should establish procedures for integration of data collection and to help develop applications and uses for the data. Better use by Chilanga of Nyamaluma's data base is required.

4. Those in NPWS responsible for the improved data base should collaborate with Nyamaluma to link aerial survey, depleted area analysis, profile report, and participatory planning results with the scout surveys and the secondary treatment of the license office data.

Long Term

5. A major part of USAID's future long term project USAID should seek competitive proposals from PVO/NGOs and/or other institutions specially skilled in community organization, community co-management, and small local enterprise development to be responsible for operational support to local communities to conduct community development and co-management activities.
6. Under any future long term project a manual or lessons learned guidebook should be produced to help in the preparation of GMA plans. The guidebook and plans should be used to help guide the NPWS restructuring as it, with the help of the EC project, gears up to produce a series of such plans.

CHAPTER VI

POSSIBLE SCENARIOS FOR USAID OPTIONS FOR THE FUTURE

I. Scenario One: No Further USAID Support to NPWS/ADMADE

Under this scenario, USAID would effectively end support for the ADMADE program as of the current August 31, 1995 PACD. A one year PACD would be used as a phase out period in which USAID funds could be channelled through the WCRF in a manner that would facilitate an orderly close-out. Activities such as funding of project paid staff, stakeholder meetings on proposed legislation, and limited support to Nyamaluma (GIS training and capacity transfer to NPWS) might be considered as interim measures as donor leadership in this sector is passed to the European Community. USAID would continue to be involved in policy dialogue and donor coordination and would seek to use other funds (ASLP and NPA) and collaboration with the new Regional Office's Initiative for Southern Africa to support specific interventions of relevance to the Mission's strategic interests.

II. Scenario Two: Active Support Program but No Decision on Follow-on Funding

Under this scenario, USAID would use remaining NRM funds and actively attempt to consolidate gains made to date and determine the advisability and nature of future support. The Evaluation Team believes that sufficient progress has been made under the current phase to warrant a go-ahead decision at this time thereby reaffirming USAID's leadership role in this sector.

However, the Team also recognizes the considerable change and uncertainty inherent to the situation. At the program level, new wildlife legislation is being put into place, NPWS is undergoing a restructuring, new relationships with the safari industry are being worked out, and a new donor, EC, is prepared to assume an important role in the NPWS. USAID, worldwide, is undergoing re-engineering and the new Regional Office in Gaborone is being put into place. Local USAID staff resources and operating funds are constraints. Under this scenario, USAID could consider program actions including but not limited to the short-term recommendations section below. Long term options would be addressed as short term uncertainties were resolved.

III. Scenario Three: One Year Extension as Bridge Funding to a New Activity Start-up

This is the preferred option based on the evaluation results. Preliminary considerations for both the short term and longer time periods are suggested below. To ease USAID's management burden, the short-term follow-on could be implemented through a non-competitive selection of one or two of the non-profit organizations (who would bring in new perspectives) that already have a cooperative agreement with USAID. Remaining NRM funds would be programmed similarly to Scenario Two, but USAID would place greater emphasis on putting a strong project

manager into place who could represent USAID interest in legal and policy changes, donor coordination (including USAID's support through the new ISA,) and oversight of the new activity design process.

The actions recommended in the two sections, below, are a distillation of recommendations already presented in the body of this report.

A. Recommendations for Action in the Short Term with Remaining Project Funds - through 8/31/96

Extend the PACD of the present USAID/Zambia NRM project to 8/31/96 or beyond to permit continued USAID support to wildlife conservation and community development in Zambia to provide the time for USAID to mount a Team to design a Phase II, long term effort. Use the approximately \$1.5 million remaining uncommitted in the present project in following manner:

1. Work with the Permanent Secretary of Tourism to organize a Forum of selected governmental, private sector, community level, and donors interested in the natural resources sector in Zambia to review the Zambian government's approach to conservation of wildlife and other natural resources. Use the conclusions of the Forum to provide guidance for designing the long term USAID project, to aid in developing the action plan for the EC project coming on line in the last quarter of 1995, and to assist in any GRZ restructuring.
2. Continue financial support to the Nyamaluma Research and Training Center but only in conjunction with carrying out a system wide training needs assessment. Based on the results of the assessment an agreement should be prepared and agreed to among USAID and the GRZ on the function and mandate of the Research and Training Center.
3. Organize a program of training visits by senior Ministry of Tourism and NPWS officials to CBNRM projects in other countries, including the United States, such as to the Edwards Plateau region in Texas where multiple use approaches to conservation are in place, to learn more about other techniques.
4. USAID/Zambia and the USAID Regional Office in Botswana should work out an agreement on responsibilities and level of staff effort to be provided by each for continued management of the USAID contribution.
5. Provide a grant to a PVO team consisting of conservation and a local management and local private enterprise specialists, to help begin the creation and capacity building of new local NGOs.

B. Recommendations for Long Term Actions with New Project Funds

Design and approve a new long-term NRM project in Zambia with likely financing from regional funds to become available under the USAID Initiative for Southern Africa. The project should have the following characteristics and draw upon the more specific recommendations contained in the main body of the evaluation report:

1. Support the efforts for institutional improvement of the NPWS as adapted from the recommendations of the Child and Lee report. So long as USAID is providing funds to NPWS, USAID should assure that it participates fully in all discussion with the GRZ and other donors on the institutional improvements to be made in NPWS. This is especially the case with respect to community based resource management, conservation finance, and private sector involvement.
2. Based upon discussions of the evaluation Team with the EC, EC would focus its assistance on that portion of NPWS activities concerned with National Parks. USAID would focus its assistance to efforts associated with wildlife conservation and community development efforts in the GMAs. During preparation of the Project Paper and the USAID/GRZ Project Agreement, formal agreements should be worked out among EC, USAID and GRZ in this regard.
3. An important part of a larger institutionalization effort will be to develop an overall strategy and plan such as a National Conservation Strategy or the National Environmental Action Plan, of which wildlife conservation and management would be an important part, and to develop at the highest levels of government, a unit to coordinate Zambian Ministries, including the Ministry of Tourism that impact on the natural resource base.
4. Creation within NPWS of a division/unit specifically staffed and responsible for wildlife conservation and community development efforts in the GMAs, as distinct from NPWS' responsibilities in the National Parks.
5. Functions of the new NPWS CBNRM Unit would be, inter alia, to:
 - a) help catalyze, coordinate, and encourage the development and implementation of a larger, nationwide, conservation effort;
 - b) provide direction to NPWS management, conservation and commercial developments in the GMAs;
 - c) coordinate the efforts of all donors carrying out CBNRM activities in the GMAs;

- d) work with the Ministry of Information, NGOs, and others to design and implement a nationwide information, education and communication effort targeted to the whole country, in addition to those people directly effected in the GMAs. This would build on existing programs such as that of the Zambian Conservation Society.
6. Confirm that Nyamaluma is to be a conservation monitoring, research, and training center for NPWS.
 7. Eliminate the WMA level of authority in the system, that is, at the District Level. District level technical staff may still be called upon to provide specialized technical help to communities in GMAs, as they now do for all other programs. This might be formalized into a GMA advisory board as suggested in some NPWS communications.
 8. Contract with international PVO/NGOs and/or other institutions specially skilled in community organization and enterprise development to be responsible for operational support to local communities to develop national resource co-management and community level enterprise programs.
 9. Redefine the present form of the WCRF, with the view to greater decentralization of financial control and management from the NPWS to local communities. Consider making the fund a part of a larger trust, union or federation of local authorities. (Such as the Zambian Environmental Societies Trust [ZEST])
 10. Based on the new Wildlife Policy, reformulate the revenue sharing concept to better incorporate the new assumption that the value of the wildlife resource in the GMAs belongs to the local community. Following from this, the local community should decide how much it wants to purchase services from the central government, the commercial sector, or foreign donors/NGOs.

C. Qualifications for a Project Design Team

In addition to the Team Leader knowledgeable in USAID project design requirements and USAID policies and programs in conservation and environment , the USAID Project Design Team for a new long term effort, should contain experts with the following skills:

- wildlife conservation and natural resources management and monitoring and GIS;
- comparative land use economics, resource valuation and economic analysis;

- natural resources policy, legislation, and institution building;
- local community and small private enterprise development, the role of NGOs and African rural anthropology;
- participatory land use planning, resource tenure, natural resource social scientist.

IV. Implications of Termination of USAID Support

The evaluation Team has argued in this evaluation report that the ADMADE Program is a success in the making. If USAID were to withdraw support upon completion of the current cooperative agreement and pursue no further funding, the program itself would suffer but continue. Important results which USAID is in the position of coherently packaging from a management standpoint would accrue to ADMADE's post NRM Project supporters.

While the program is not mature, it has achieved a degree of sustainability. Reflecting the GRZ's commitment to the sector is the fact that the NPWS is one of the few government divisions receiving significant budget approvals under the SAP. Public-private sector partnerships supported by USAID funding (e.g. privatization initiative) are beginning to expand under USAID-facilitated policy and legislative advances. Local implementation of these participatory processes is further enabled because of the reforms that USAID has supported in the safari licensing process and management of funds.

The development philosophy embodied by CBNRM/ADMADE is arguably the most significant hope for improving the well-being of the country's rural populations who remain marginally integrated into the fabric of the national economy. The empowering element of ADMADE occurs through devolving to local populations the proprietary rights to rural resources. In the context of economic and political reform, this thrust spearheads the evolution of democratic institutions of rural Zambia.

Substantiating this far-reaching claim is the fact that traditional chiefs in the copper belt have cited the ADMADE program as a precedent in pursuing their claims for mineral rights or royalties from the copper mining industry in that region. Similarly, the forestry and fisheries departments are embarking on strategy development that emulates the NPWS in "handing over" control of fishery and forest resources to local user communities. These broad processes that include the NPWS ADMADE program are in their infancy; should USAID withdraw support at this point it would miss the opportunity to consolidate the considerable progress it has helped foster to date. Moreover, the Agency would forego its role in helping to set policy as well as the opportunity to use its expertise (acquired in Zambia and elsewhere) to help guide the country as it embarks on what is effectively a strategy of local empowerment through community based resource management.

If USAID were to withdraw, it would also miss the opportunity to develop synergy across its multiple strategic objectives. ADMADE is essentially a private sector driven program that enhances economic gains from sustainable use of the resource base. As a landlocked country with limited mineral resources, one of Zambia's comparative advantage lies in marketing vast expanses of open savanna and woodland habitat with its charismatic fauna. As world population doubles from 6 to 12 billion over the next 30-40 years, this rich heritage will only become increasingly scarce and valuable. The potential scale of the adventure tourism and hunting economies, with their forward and backward linkages (e.g. the viability of a private sector airline) in the economy cannot be ignored. Engendering economic growth at the village level represents an area of comparative USAID strength. This dimension of the program would suffer and might fail without continued USAID assistance. Achieving sustainable economic growth depends on effective conservation of the resource base. The program thus brings together strategic concerns with democratic initiative, economic growth, and natural resources management.

USAID is in at the ground floor of this important approach to integrating conservation and development, and both the EC and NPWS have expressed a strong desire to see USAID continue to play an active role in managing the process to achieve sustainable and systematic development results. We recognize the manpower implication to USAID/Zambia and Botswana of staying with CBNRM. This, of course, is a USAID management decision, but, in the long run, we think the benefit is worth the cost.

ANNEXES

Annex A

Evaluation Team's Scope of Work

ANNEX A

Terms of Reference
Program Evaluation of the NRM ADMADE Program

1. BACKGROUND

The USAID/Zambia Natural Resources Management Project 690-0251 has been supporting the Zambia National Parks and Wildlife Services (NPWS) through a co-operative agreement with World Wildlife Fund (WWF), and in turn through the WWF the NPWS ADMADE Project for the past 6 years. The ADMADE (Administrative Management Design Program) was established in 1988 as part of the NPWS to protect game populations in Game Management Areas (GMA's) through community participation and involvement in wildlife conservation. The major innovation of the ADMADE program is to bring the benefits of wildlife back to local communities.

Zambia has 35 GMAs which are legally classified as safari hunting areas. The GMAs surround the country's national parks, buffering these areas and providing corridors for wildlife movement among parks. GMAs average 3500 square km in size. Most of the area within GMAs is covered by natural vegetation, although limited areas have been converted for agriculture or pasture. GMAs contain, or have the potential to contain, significant populations of game species. GMAs are leased through a governmental agreement to safari concessionaires, at the present time for one hunting season at a time. Future leases may be up to three years in duration. Funds derived from the hunting license fees and hunting rights fees are used to support both wildlife management and community improvement projects within GMAs. 50% of the hunting fees go directly to the Central Government, and 50% go to a Revolving Fund. Of the funds deposited in the revolving fund, 25% goes to support core operations of the NPWS, 40% to support wildlife management within the GMAs, and 35% to support development projects decided by the village communities. To date, the ADMADE program has trained some 600 village scouts, who are mostly assigned to work closely with village communities. The principal activities of village scouts are to monitor hunting returns, deter illegal poaching and record village land use and wildlife sightings within each GMA.

It is anticipated that a new wildlife act will be drafted in 1995 and submitted to Government for ratification. In an August 1994 workshop which included representatives of the GRZ, the safari hunting industry and local communities it was agreed that future leasing agreements sanctioning safari hunting in GMAs should recognize the rights and responsibilities of, and include the signature of the three parties namely: NPWS, the safari concessionaire and the

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village communities within the GMAs. This is a significant change from previous leasing practice because it recognizes that local communities are stakeholders and responsible parties in the program. The workshop recommended that a neutral person be contracted to develop a general lease agreement that would be used as a template in all negotiations in individual GMAs.

In 1993 a Project Paper Supplement was authorized to extend the National Resource Management project until August 31, 1995. Simply put, the purpose of the extension was to test whether the ADMADE program was a credible mechanism for sustaining the wildlife estate and whether certain problems surrounding the management of the program by NPWS could be rectified. At first blush, both of these objectives appear to have been met, at least in the short term. Further, it appears that the concept of having communities benefit from the proceeds of wildlife marketing has evolved, in the project as well as the popular consensus of what wildlife policy should be, to one of community management of the wildlife estate. This would seem to include local community participation in the marketing.

As part of a determination of an appropriate course of action at the PACD, the Mission wishes to undertake an evaluation of the performance of the NPWS and the WWF in the execution implementation of the project, as well as an analytical exercise to determine whether the ADMADE program as it has evolved is the optimum mechanism for further expansion of the concept of community-based natural resource management. That analysis must be undertaken in a new context of new legislation relating to the wildlife estate (necessarily speaking to the role and responsibilities of the NPWS) and a recently initiated European Union Project aimed at supporting the restructuring of the NPWS.

2. SCOPE OF WORK

- * Review implementation of the ADMADE program including planning, financial management, and administration. Describe ADMADE impacts, including effects on wildlife populations, data gathering and dissemination, community participation and development practices, legal reform and institutional development.
- * Review the performance of WWF relative to the objectives of the Cooperative Agreement.
- * Analyze the components of the ADMADE Program and the NRM Project in the context of the Revised Wildlife Act and the resulting capacities of NPWS. The analysis will look specifically at: (1) appropriate directions and mechanisms of the ADMADE program in the context of new

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legislation; (2) the capacity of NPWS to administer the program; (3) the role (if any) of the Wildlife Conservation Revolving Fund; and (4) the role of Nyamaluma Training Center and the components of its program funded under the NRM project.

- * Present options for the use of funds remaining in the NRM Grant including options for further fostering community management of the wildlife estate.

3. TASKS

- * Review project documentation and other reports as provided by USAID project management, the NPWS and WWF.
- * Interview USAID/Zambia project management and program staff.
- * Interview the Permanent Secretary, Ministry of Tourism, and Director, Deputy Director, Chief Warden, and Chief of Research of NPWS in order to clarify Government's views on the project and ascertain performance in planning, budgeting, financial management (including commodity management), and administration of the ADMADE program.
- * Visit Nyamaluma Training Center. Interview Dr. Dale Lewis and NPWS staff to ascertain planning and administrative capacities, pedagogical aspects of the training program, performance and monitoring of trainees, community outreach initiatives, and other activities.
- * Visit selected Units in the GMAs to assess performance of Village Scouts, and operation of the ADMADE program and the perceptions of local residents.
- * Interview other stakeholders in the wildlife sector, including conservation groups, tourism operators, professional hunters and other donors to assess popular reaction to the program.

4. DELIVERABLES

A report in five copies containing the results of the review and evaluation and recommendations.

ANNEX C

Evaluation Team's Itinerary in Zambia

ANNEX C
Work Schedule

Contract Day	Date	Activity
1.	Wed Jun 28	Review project and work schedule with GDO; make initial appointment; arrange Nyamaluma field trip. Interview WCRF at Chilanga.
2.	Thu Jun 29	Initial visit to NPWS headquarters at Chilanga. Discuss evaluation SOW. Confirm Nyamaluma field visit.
3.	Fri Jun 30	Travel to Nyamaluma Research and Training Center with Val Mahon.
4.	Sat Jul 1	Interviews with Dale Lewis. Meetings with technical staff, training and GIS personnel. Focus group interviews with village scouts. Attend class for sub-authority members.
	Sun Jul 2	Travel through National Parks on visit to Lumimba GMA.
5.	Mon Jul 3	Visit Chief Kata, WMSA, womens' groups, NPWS, ADMADE Bookkeeper, other local personnel.
6.	Tue Jul 4	Visit Safari Camps and Lodges on return to Lusaka.
7.	Wed Jul 5	Meetings with John Townend in NCDP and Donna Stauffer, USAID Botswana Regional Office.
8.	Thu Jul 6	Interviews with USAID Mission Director; EU's Vos; Return visit with NPWS in Chilanga; Tom Ankerson and Richard Heyman at Lilayi Lodge.
9.	Fri Jul 7	Call on PS/Tourism. Continue interviews with NPWS and WWF personnel at Chilanga.
10.	Sat Jul 8	Interview Graham Child. Review documentation.
	Sun Jul 9	Travel to Mumbwa GMA (in which WWF is assessing status of participatory approach.) Meet Warden, Unit and Deputy Unit Leader. Visit private concession at Mukanda.
11.	Mon Jul 10	Meet with Chief and WMSA members of Mumbwa GMA. Visit GMA and travel to Lochinvar National Park meeting people and officials.

12. Tue Jul 11 Return travel to Lusaka.
13. Wed Jul 12 Interviews in Lusak
14. Thu Jul 13 Preliminary recommendations to USAID.
15. Fri Jul 14 Continue interviews in Lusaka
16. Sat Jul 15 Team begins preparation of draft report.
- Sun Jul 16 Preparation of draft report.
17. Mon Jul 17 Final debriefing with Mission Director.
18. Tue Jul 18 Final debriefing with PermSec, Minister of Tourism Team presents report to USAID.
- Wed Jul 19 Team departs Lusaka/returns to Washington.
- Jul 20-Jul 30 USAID reviews draft report.
- Jul 31 USAID communicates comments to Team in Washington.
- Aug 1-Aug 23 Team considers comments; prepares final report; express mails 5 copies to Mission.

ANNEX D

New Policy for Wildlife in Zambia

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ANNEX D

REPUBLIC OF ZAMBIA

MINISTRY OF TOURISM
DEPARTMENT OF NATIONAL PARKS
AND WILDLIFE SERVICE



POLICY

FOR WILDLIFE IN ZAMBIA

Approved by:
The Cabinet 25th August, 1993

*Published by: National Parks and Wildlife Service,
P/Bag 1, Chilanga, Zambia*

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POLICY FOR WILDLIFE IN ZAMBIA

Preamble

Wildlife is a renewable resource with unique economic properties that supports a massive growing global industry based on the consumptive and non-consumptive use of the resource. The advantages of a wildlife industry are that it promotes the conservation of the biological diversity essential for continued human adaptation to a world of increasing resource scarcity and changing economic forces. Wildlife management is also often more profitable than alternative uses of the land, given appropriate institutions that permit it to realise its inherent economic advantage.

The Government of Zambia recognises the high economic, cultural and biological value of National Parks and the wildlife resource. It is determined to exploit their marketability for the benefit of the resource and the people of Zambia, especially those people who share the land with the resource.

Accepting that the natural flora and fauna of Africa requires special management technique, government will adopt a management agenda that is ecologically and economically sound for the resource and is equitable under the socio-economic conditions prevailing in Zambia. This agenda will guide all elements in the wildlife sector and is fundamental to a coordinated wildlife industry.

This statement of policy for the management and use of wildlife supersedes all previous policy statements. It does not, however preclude the responsible minister from issuing supplementary policy statements to address any issue that is not adequately addressed in this document.

Commitments

In accordance with its commitment to improve sustainable human welfare and hence to conserve and use the nation's renewable resources wisely, government will implement a policy for wildlife to:

- (i) maintain the ecological and aesthetic integrity of National Parks as prime samples of the nation's biological diversity and wild ecosystems;
- (ii) provide adequate protection to other major ecological types and species and their habitats which are either not presented or are insufficiently represented in National Parks, through adoption of appropriate land management practices;

- (iii) promote the sustainable use of wildlife and its habitats in accordance with the wildlife policy for any category or area of land, through adoption of appropriate legal and economic institutions that encourage people to conserve and use the resource correctly, because it is to their advantage and that of their community and the nation for them to do so.
- (iv) promote the value of wildlife in financial terms so that it is able to realise its economic potential and can compete on favourable terms with other uses of the land. In particular to ensure that wildlife is not undervalued through inappropriate legal or financial institutions;
- (v) ensure the equitable distribution of benefits from wildlife by treating wildlife like other renewable resources on the land from which landholders are entitled to maximise their benefits from the sustainable use of the resources;
- (vi) ensure the closest possible accountability between the benefits reaped from the resource and the welfare of the resource;
- (vii) promote a viable integrated wildlife industry based on free market principles, through appropriate organisation driven by the needs of the industry with particular attention to the conservation of the resource on which the industry is based;
- (viii) promote public awareness of wildlife issues and the close relationship between wildlife conservation and the socio-economic climate in which it is practised;
- (ix) maintain and enhance government's commitment to problem driven research and monitoring of the ecological and socio-economic parameters influencing sustainable wildlife management and the growth of a viable industry based on it;
- (x) participate in those international treaties and conventions that are consistent with Zambia's policy for wildlife conservation and use;
- (xi) develop a cost effective, adaptive legal and administrative institutional framework for managing National Parks and wildlife which recognises the special ecological and economic attributes of the resources and the divergence of policy objectives inside and outside National Parks;
- (xii) draw up plans based on clear policy objectives for the management of the resource and the development of the industry based on it for approval by the minister.

POLICY

1. Definitions

1.1 For the purpose of this policy:

Wildlife is defined as all components of the ecosystems in National Parks (including all archeological and historical sites) and all wild animals and their habitats outside National Parks.

Landholder is defined as any person or persons legally entitled to the primary use of a particular area of land and all or most of the renewable resources on it.

2. General

2.1 Government accepts responsibility for conserving all wildlife, including those species that may sometimes be in conflict with human interests, and to ensure that these assets are never squandered for any short term human gain or any purpose that does not conform with the principle of environmentally sustainable development. Within this context it is recognised that many lesser species can be conserved only by protecting the ecosystems in which they occur; that certain rare or endangered species may require special measures for their protection including legal protection wherever they occur; and that species that have detrimental effects on legitimate human interests or on the integrity of ecosystems may need to be controlled under particular circumstances.

3. Responsibility for wildlife

3.1 Government recognises the intrinsic strength of the ADMADE philosophy whereby local people and other landholders, including the State and National Parks, are accepted as the best custodians of the wildlife and other renewable resources on their land. This philosophy rests on the principle that wildlife has inherent economic advantages over other uses of the land, particularly in remote or agriculturally marginal regions of the country and that realisation of this potential can be a powerful incentive to conserve and use the resource in a sustainable way.

3.2 Government will therefore manage all National Parks according to internationally accepted norms. However, outside National Parks it will promote institutions to guide the management of wildlife which encourage landholders to conserve and use the resource wisely and maximise the returns from doing so, because it is in their economic interest to do so. This will benefit not only the landholders, but, through them, their communities and the nation.

- 3.3 Legislation will be reviewed periodically to ensure that it provides for the proper protection, management and use of National Parks; to promote sound ecologically and socio-economically based conservation that incorporates free market principles and ensures the equitable distribution of the benefits earned by wildlife; and to facilitate an ethical and durable wildlife industry.
- 3.4 A Parks and Wildlife Board will advise the minister on policy and its implementation for the protection, management and use of National Parks, the management of wildlife outside National Parks and the development of the wildlife industry. The minister may also charge the Board with specific supervisory or more executive functions in order to assist the Department of National Parks and Wildlife Service (NPWS) or to augment the skills already available in the department.
- 3.5 NPWS will be the executive arm of government responsible to the minister for implementing this policy and the legislation flowing from it. The department will be made as financially self-supporting as possible, recognising that government cannot abrogate its responsibilities for protecting and managing National Parks and protecting the nation's wildlife resource and will make adequate financial appropriations for this purpose. To this end the department will maintain the Wildlife Revolving Fund. This fund will be used for:
- (i) earning revenue for the department to be used to supplement government allocations for the implementations of NPWS's mandate, and
 - (ii) collecting revenue for landholders for disbursement to them, subject to the retention of an appropriate administrative charge.
- 3.6 The Permanent Secretary of the ministry of which NPWS is part, will in consultation with all heads of ministries concerned with rural administration and development establish a National Wildlife Technical Committee of authoritative spokespersons from all interested ministries and other government agencies, under the chairmanship of the Director of NPWS. This committee will ensure full liaison between all such agencies at national, provincial and district levels in all matters relating to the conservation and management of wildlife and National Parks. In particular, it will ensure that the real value of the wildlife resource is taken fully into account in land use planning and the realisation of rural land use options.

3.7 Without prejudice to the overall authority of the department, the minister may set up Integrated Resource Development Authorities (IRDAs) outside National Parks to manage the wildlife in particular areas. This privilege will be in terms of an agreement with the minister and will be subject to a management plan approved by the Director of NPWS and may be revoked by the minister for failure to adhere to the terms of the agreement or plan.

3.8 An IRDA shall comprise the individual landholder where that person has primary usufruct of the renewable resources in a given area, or it shall comprise the traditional local authority for an area where the rights to use the resources are held communally. In the latter case the individual households represented by the local authority shall have a meaningful voice in how the community's wildlife is managed and the benefits are disbursed.

4. Functions of the department

4.1 NPWS is a scientific professional arm of government. It is mandated to preserve the biological diversity on which continued human adaptability depends; to manage National Parks, and to promote and develop wildlife as a productive, profitable and environmentally friendly land use option of particular significance to rural landholders.

4.2 Because wild animals are such a valuable fugitive resource with special qualities and are prone to illegal abuse, powerful legislation administered by a specialised agency is needed to protect it from illegal activities. NPWS is required to implement this legislation throughout the country and is a paramilitary organisation with powerful statutory powers, special indemnities and the right to bear arms. It will therefore exercise a high degree of discipline and will co-operate fully with other law enforcement agencies of government, from whom it can expect the fullest support in the execution of its duties.

4.3 Government will ensure that officers of NPWS are fully trained, commensurate with their duties, and that those holding key managerial positions in the organisation hold the necessary academic or technical qualifications.

4.4 Within National Parks, NPWS will:

4.4.1 protect wildlife against illegal use;

4.4.2 conserve and manage the ecosystems to preserve biological diversity, their natural qualities and off-set the impacts of modern man. This management will be in terms of a management plan for

each National Park and will be based on sufficient monitoring of the key elements in ecosystems;

- 4.4.3. undertake or commission any necessary biological and socio-economic research needed to achieve these objectives and those outlined below;
- 4.4.4 undertake or commission all physical developments, including roads and fire breaks, water installations, buildings and other such structures. All physical developments will be designed to blend with the natural environment and to cause the minimal ecological or visual impact and will be in terms of the plan for the Park;
- 4.4.5 determine the type and extent of tourism and tourist activities that may be permitted in terms of the plan for National Park. In terms of this plan NPWS may provide a range of tourist facilities or it may lease out the right to provide them to the private sector. So far as possible all significant development for tourism, should be located on the edge of the park, preferably just beyond its borders where it will have minimal impact on the Park and can be of maximum benefit to neighbouring communities;
- 4.4.6 where any commercial activity depends on the resources in a Park and is located in or near the Park, NPWS will ensure that an equitable share of the revenue generated is paid to the Park for the management of the area. The department will also assist on all reasonable measures to redress the flow of wealth from the rural to the urban sector and will adopt a pricing policy that does not allow commercial ventures based on Park resources an unfair advantage over similar ventures that could be based on resources outside the Parks. To the extent possible, financial opportunities, such as the offer of employment or the facility to sell local produce and goods or services, should be provided to compensate those people who traditionally had rights in the Park or who now bear the opportunity cost of having it in their region;
- 4.4.7 prevent illegal settlement and grazing by livestock and will restrict the number of domestic animals that may be retained or the extent of cultivation that may be practised within a Park where settlement within the Park is legal. It will also prevent the introduction of exotic plants, including ornamental, and exotic animals, including pets, that may spread or in other ways impact on the ecological integrity or aesthetic qualities of the wild ecosystem.

4.5 Outside National Parks NPWS will:

- 4.5.1 promote the conservation of wildlife and the development of an integrated ethical wildlife industry, while maximising the benefits that can be derived from the resource over the long term;
- 4.5.2 ensure the equitable and efficient allocation of opportunities for Zambian citizens to participate in and benefit from the wildlife industry, with particular attention to the benefits to be gained by landholders with wildlife, without prejudicing desirable foreign investment and the importation of expertise. In implementing this objective measures will be taken to give landholders the highest possible long term vested interest in the welfare and efficient use of the resource;
- 4.5.3 prepare regulations for the minister's consideration, where these are needed to co-ordinate or regulate the industry and to issue all authorities from Central Government required by law;
- 4.5.4 regulate trade in wildlife and wildlife products to curb illegal trade and its prejudicial effects on the conservation of the resource and the legal trade in wildlife;
- 4.5.5 facilitate coordinated marketing of wildlife products, including tourism and hunting, using open free market mechanisms to the maximum extent possible, so as to enable wildlife to realise its comparative economic advantage and inhibit undesirable marketing practices, including the emergence of monopolies. This may include the marketing of certain special wildlife products, such as ivory, and the organisation of marketing opportunities, such as auctions, in which both the State and the private sector can participate;
- 4.5.6 maintain a statistical data base on all wildlife related activities, including tourism and hunting, to guide the development of the industry;
- 4.5.7 undertake ecological, socio-economic and market research and monitoring in support of the wildlife sector and will co-ordinate the research activities of external researchers, to obviate unnecessary duplication and avoid the loss of useful information;
- 4.5.8 provide services to the industry, including public relations, in the setting up of ecologically sustainable and financially profitable wildlife ventures on their land;
- 4.5.9 set standards and issue authorities for wildlife operators, including people capturing and holding live animals, or offering services to the public such as safari outfitters and professional hunters and guides; and

4.5.10 encourage the formation of representative associations in wildlife sector to develop and present the industry, without permitting the emergence of undesirable trading practices such as monopolies

5. National Parks

5.1 Government has created 19 National Parks, totalling some 64 000 km² or 8 per cent of the country. Management of these areas is delegated to NPWS.

5.2 Objectives

5.2.1 National Parks exist to:

(a) protect wild ecosystems and the biological diversity contained in them, with special emphasis on the conservation of the mega-fauna and its habitats and the protection of both animate and inanimate objects of scientific, prehistoric or historical and aesthetic interest;

(b) conserve water catchments;

(c) provide opportunities for the advancement of scientific knowledge and public education, with particular emphasis on the effects that man has had on the environment;

and without prejudice to any of the above to:

(d) encourage public use related to the enjoyment and appreciation of the natural values contained in the Parks;

(e) provide animals and other seed stocks to repopulate depleted parts of the country; and

(f) generate economic activity, both within the Parks and in surrounding areas, to enhance rural development.

5.2.2 Management of National Parks:

(a) *General.* The management of a National Park is a complex issue. It involves protecting and managing large, ecologically complex areas influenced by an array of ecological and socio-economic forces inside and outside the National Park. For this reason NPWS will adopt a structured adaptive management strategy progressing, as required, from the general to the particular and based on monitoring key biological and socio-economic parameters.

(b) *Park Plans.* Each Park will be managed in terms of a Park Plan which will:

(i) Define the area of the Park and how it is to be protected,

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- (i) define the objectives for managing the biological system, set the limits of permissible change so as to preserve biological diversity, and describe the parameters to be monitored and how this will be done, and
- (ii) divide the park into zones for permissible use and will define the uses to be allowed in each zone and the extent and nature of the physical developments to be permitted to support this use.

Park Plans will adopt the standard format determined by NPWS.

- (c) *Tourism.* Where tourism is to be permitted in a Park or part thereof, this will be strictly regulated by NPWS in terms of a Tourism Development Plan for the Park. Recognising that wildlife and National Parks are the basis of most tourism in Zambia, that tourism is an efficient means of marketing wildlife, but that it depends on the maintenance of natural values, NPWS will seek to encourage domestic tourism and low density up-market foreign tourism without permitting it to erode the resources on which it is based.

The Tourism Plan will determine:

- (i) The nature and extent of the tourism to be permitted in any Park, in particular the activities in which visitors may participate and the numbers of people to be permitted to participate in any given activity at any given time anywhere in the Park.
 - (ii) The extent of any physical developments to be provided for visitor use and the standards and type of construction, and
 - (iii) standards for any services to be offered by either the department or the private sector, including any parastatal or other government agency, and the level of fees to be charged.
- (d) *Prospecting and mining.* The right to prospect or mine in a National Park shall be subject to the agreement of the Minister of Tourism which shall require:
 - (i) Minimal disturbance of the natural environment during prospecting and the restoration of any disturbance that is agreed to by the minister, at the prospector's cost and to the satisfaction of the director of NPWS; and
 - (ii) mining shall be permitted in the National Park by the

minister only when he is satisfied, on the advice of the Parks Board, that such mining is in the national interest and is justified economically, bearing in mind all environmental costs. When an area of a Park is disfigured or modified through mining activities, it will be excised from the Park. An equivalent area of land required for National Park purpose will be made available for the purpose at the cost of the mining enterprise.

6. Wildlife outside National Parks:

6.1 Game Management Areas

6.1.1 Game Management Areas shall comprise any area of land for which the minister has entered into an agreement with the landholder to manage the wildlife and its habitats in accordance with the ADMADE concept and a plan approved by the director of NPWS. In the case of land reserved or in trust for communal occupation the land affected must also be declared a Game Management Area by the President.

6.1.2 The plans for Game Management Areas will include:

- (a) How the wildlife is to be used for game viewing, Zambian resident hunting, local hunting, cropping or the like;**
- (b) how the resource is to be managed and how the use is to be organised, in particular, how abuses of the resource are to be controlled and how quotas for consumptive uses of the wildlife are to be set, subject to the approval of NPWS;**
- (c) how the products, including those associated with the non-consumptive use of the resource, are to be marketed; and**
- (d) in the case of communally held resources, how the decision relating to the apportionment of benefits between the households will be decided. As a general rule the director will favour and encourage those plans which:
 - (i) without compromising the effectiveness of resource conservation, are cost effective with regard to the expenditure on management in relation to the benefits generated;**
 - (ii) divide large Wildlife Management Areas into smaller units for the sake of apportioning benefits earned from wildlife; and**
 - (iii) provide for the equitable distribution of benefits as determined democratically by the people or have strong****

rights in the units that generate the benefits. This will provide a strong incentive for conserving the resource by linking benefits and accountability as closely as possible.

6.2 Wildlife Management in open areas:

- 6.2.1 Open areas comprise the rest of the country that is not either a National Park or Game Management Area. Wildlife in these areas will be protected in terms of the Parks and Wildlife Act and will be managed by NPWS with all benefits accruing to the state.
- 6.2.2 NPWS encourages the landholders in open areas where conditions are suitable to adopt wildlife as a land use option, to conserve and upgrade the resource and to enter into an agreement with the minister to become a IRDA.
- 6.2.3 Where a landholder shows a genuine intention to upgrade his land to the status of a Wildlife Management Area, NPWS will advise as to how to rehabilitate or develop the resource and may assist by providing stock from National Parks or other sources to accelerate the process.
- 6.2.4 Should a landholder wish to embark on a specialised wildlife venture such as crocodile or ostrich farming, this will be in terms of the ancillary Policy Document for such ventures approved by the minister. Where land is reserved or in trust for communal settlement and is ideally suited to the establishment of an intensive or semi-intensive wildlife venture under the management of a single landholder, NPWS may support the reclassification of the land for this purpose.

ANNEX E
WCRF Board of Directors

ANNEX E

BOARD OF DIRECTORS.
WILDLIFE CONSERVATION REVOLVING FUND

1. Mr. Xen E. Vlahakis - Permanent Secretary,
Ministry of Tourism.
2. Mr. M. R. B. Nair - Vice Chairman
Controller of Internal Audits.
3. Mr. D. J. Artivor - Partner, Mark Newton Audit Firm.
4. Mr. J. J. Phiri - Principal Accountant
Ministry of Tourism.
5. Mr. J. J. de Beer - Managing Director
New Capital Bank.
6. Mr. W. C. Chisulo - Financial Manager
Zambia National Tourist Board
7. Mr. J. C. Wake - Marketing Manager
Zambia National Tourist Board
8. Mr. A. N. Mwenya - Director
National Parks and Wildlife
Service
9. Mr. C. S. Mukelabai - Co-ordinator
Wildlife Conservation Revolving
Fund.
10. Hon. M. Mabuwa - M. P. and Chairman of the
Hunters Association of Zambia.
11. Ms. N. Ashley - D. B. Studios
12. Ms. M. C. Ngoma - Project Officer,
WWF Country Office.
13. Mr. A. P. Mayuka - Senior Legal Officer
Ministry of Legal Affairs.

ANNEX F

WCRF - Income and Expense Statement for 1944

ANNEX F

RUN DATE: 06/07/95
 RUN TIME: 0:21 PM

WILDLIFE REVOLVING FUND

PAGE 1

Income Statement
 AS OF 30/12/94

RATIO: INCOME	THIS PERIOD	RATIO	12 PERIODS	RATIO

INCOME				
Hunting Rights	34,786,928.20-	4630.7-	49,369,755.00	7.8
Licence fees - Safari	43,473,321.94-	5787.0-	250,377,659.68	39.4
Licence fees Local	19,985,778.38	2660.4	47,365,369.38	7.4
Concession Fees WCRF HQ	58,222,298.06	7750.4	284,662,900.00	44.7
Sales of Trophies	902,430.00	120.1	4,282,005.00	0.7
Sales/Cittes tags-	114,600.00-	15.3-	70,350.00	0.0
Sales of Cites stamps	15,545.00	2.1	77,720.00	0.0
TOTAL INCOME	751,221.30	100.0	634,205,759.04	100.0
EXPENSES				
ESTABLISHMENT EXPENSES				
Salaries & Wages	6,013,716.14	800.5	31,937,232.12	5.0
Housing Allowance	11,250.00	1.5	56,250.00	0.0
Transport Allowance	55,200.00	7.3	412,031.15	0.1
Comented Allowance	185,000.00	24.6	3,847,761.97	0.6
Overtime Pay	452,921.83	86.9	3,720,218.38	0.6
Leave/Comutation Pay	4,312,034.87	574.0	6,049,967.85	1.0
Other Allowances	175,357.50	23.3	8,383,165.92	1.3
Fund Contr. to ZMPF	34,500.00	4.6	458,378.28	0.1
Fund contr to Workmens	0.00	0.0	611,718.99	0.1
Medical Expenses	5,600.00	0.7	663,350.00	0.1
funeral Expenses	35,000.00	4.7	94,000.00	0.0
Staff Recruitam/Transf	0.00	0.0	1,440,000.00	0.2
Staff Uniforms	6,875.00	0.9	855,375.00	0.1
Staff Amenities	0.00	0.0	53,880.00	0.0
Leave travel Benefits	1,120,622.00	149.2	2,784,848.00	0.4
ADMINISTRATION EXPENSES				
Entertainment	191,520.00	25.5	489,078.00	0.1
Tour Expenses	2,579,130.29-	343.3-	6,433,299.81	1.0
Office Expenses	165,000.00	22.0	1,070,142.00	0.2
Board Expenses	198,000.00	26.4	707,800.00	0.1
Subscription/Periodicals	0.00	0.0	350,880.00	0.1
Advertisements	157,016.88	20.9	477,016.88	0.1
printing & Stationery	465,220.00	61.9	8,395,888.00	1.3
Staff Trng & Workshops	0.00	0.0	2,731,585.29	0.4
Postal Expenses	10,850.00	1.4	163,957.70	0.0
Repairs & Maint Off Equip	177,000.00	23.6	953,440.00	0.1
Rent	5,525.00-	0.7-	819,175.00	0.1
Repairs - Buildings	6,400.00	0.9	5,059,853.00	0.8
Electricity	47,561.16	6.3	781,266.29	0.1
Telephone & Telex exps	0.00	0.0	887,938.25	0.1
Cleaning Material	197,500.00	26.3	197,500.00	0.0
GENERAL EXPENSES				
Professional Fees	88,840.00-	11.8-	88,840.00-	0.0-
Bank Charges	445,173.80	59.3	1,573,120.69	0.2
Depreciation	1,366,231.33-	181.9-	18,298,096.75	2.9
MOTOR VEHICLE EXPENSES				
Fuel & Oil	995,990.00	132.6	10,154,269.00	1.6
Insurance & Licences	735,000.00	97.8	9,559,633.87	1.5
Motor Veh. Repairs	69,330.00	9.2	13,854,500.40	2.2

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WILDLIFE REVOLVING FUND

PAGE 2

Income Statement
 AS OF 30/12/94

RATIO: INCOME	THIS PERIOD	RATIO	12 PERIODS	RATIO

OPERATIONS EXPENSES				
Research Exps	219,600.00	29.2	9,403,100.32	1.5
Memorial Parade exps	2,762,390.00	367.7	3,903,033.00	0.6
M/Parade exp W/tern Comm.	0.00	0.0	156,000.00	0.0
Nyamaluwa Irq School exps	89,409.00	11.9	260,390.00	0.0
Tannery Expenses	0.00	0.0	472,150.00	0.1
402 A/c exps	32,501,212.99	4326.4	271,960,275.77	42.7
352 A/c exps	10,869,875.00	1447.0	133,715,912.11	21.0
TOTAL EXPENSES	50,872,390.33	7036.9	564,348,739.31	68.7

NET OPERATING INCOME	50,121,169.23-	7736.9-	71,837,019.75	11.3
OTHER INCOME				
Interest Income	25,941.37	3.5	66,770.87	0.0
Amout of Capital Grants	1,086,114.65-	144.6-	18,300,314.42	2.9
Donations	0.00	0.0	3,725,160.00	0.6
Revenue Grant	5,892,200.25	784.4	26,636,569.15	4.2
Miscellaneous Income	367,486.68	48.9	2,915,736.68	0.5
TOTAL OTHER INCOME	5,199,593.65	692.2	51,844,551.12	8.1
OTHER EXPENSES				
TOTAL OTHER EXPENSES	0.00	0.0	0.00	0.0

NET INCOME	52,921,575.58-	7044.7-	123,701,570.87	19.4

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WILDLIFE REVOLVING FUND

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Balance Sheet
AS OF 30/12/94

Accruals	
WPF Payable	75,000.00-
Paye Payable	2,913,297.37
Salaries Clearing	825,670.84-
Union Dues Pay	380,007.04
General Clearing	10,670,667.83-

8,278,034.26-

Creditors	
Other Creditors	41,538,000.00
Trade Creditors WCRF MO	29,964,303.22
Provision for Bad Debts	23,703,450.00
Staff Exps Provisions	5,091,549.52

102,297,303.74

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WILDLIFE REVOLVING FUND

PAGE 1

Balance Sheet
AS OF 30/12/94

FIXED ASSETS COSTS

Fixed Assets Cost	177,416,512.20
Fixed Assets - Depn	54,908,501.75-
CURRENT ASSETS	
Bank & Cash	90,242,813.38
Staff Loans & Advances	14,051,127.57
Debtors	84,271,536.60
Stocks	19,444,014.73
TOTAL CURRENT ASSETS	<u>330,519,502.73</u>
TOTAL ASSETS	<u>330,519,502.73</u> *****

LIABILITIES & RESERVES

CURRENT LIABILITIES	
Accruals	8,278,034.26-
Creditors	102,297,303.74
TOTAL CURRENT LIABILITIES	<u>94,019,269.40</u>
SHARE CAPITAL & RESERVES	
Revenue Reserves	63,936,386.61
Revaluation Reserves	15,860,430.00
Cap Grant -Plant & Mach	189,620.52-
Cap Grant - Motor Vehicle	29,194,921.64
Cap Grant - Office Equip	1,154,227.15
Cap Grant - Office Fern	2,842,317.50
TOTAL CAPITAL & RESERVES	<u>112,790,662.38</u>
Current Earnings	123,701,570.87
TOTAL LIAB. & RESERVES	<u>330,519,502.73</u> *****

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WILDLIFE REVOLVING FUND

PAGE 2

Balance Sheet
AS OF 30/12/94

*** SUBSIDIARY SCHEDULE ***

Fixed Assets Cost	
Land & Buildings - cost	4,800,000.00
Plant & Mach - Cost	4,344,396.00
Motor Vehicle - Cost	88,237,804.00
Office Equip - Cost	6,193,413.70
Office Furn - Cost	4,586,306.50
Residential Equip - Cost	739,615.00
Capital WIP	68,514,777.00

	177,416,312.20

Fixed Assets - Depn	
Land & bldgs - Depn	192,000.00-
Plant & Machinery	1,475,166.56-
Motor Vehicle - Depn	51,444,675.31-
Office equip - Depn	1,450,897.00-
Office Furniture - Depn	281,731.00-
Residential equip - depn	64,831.60-

	54,908,501.73-

Bank & Cash	
Fixed Deposits	55,000,000.00
ZINCB Kwaacha Branch A/C1	27,726,073.30
ZINCB Kwaacha Branch A/C 2	8,587,504.32
ZINCB Northend A/C 3	1,138,764.24-
Other Deposits	8,000.00
Petty Cash	60,000.00

	90,242,813.30

Staff Loans & Advances	
Staff Loans	1,674,577.23
Staff Advances	6,584,698.00
Travel Advances	5,791,852.26

	14,051,127.57

Debtors	
Trade Debtors	42,839,880.80
Prepayments	17,300,000.00
MPWS Current A/c	24,111,655.80

	84,271,536.60

Stocks	
Stationery Stock	4,317,300.00
Bldg & Maint Mate Stocks	7,572,960.00
Motor Spares Stock	7,555,754.73

	19,446,014.73

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WILDLIFE REVOLVING FUND

Income Statement
 AS OF 30/12/94

RATIO: INCOME THIS PERIOD RATIO 12 PERIODS RATIO

*** SUBSIDIARY SCHEDULE ***

	THIS PERIOD	RATIO	12 PERIODS	RATIO
Hunting Rights				
Hunting Rights MCRF HQ	34,786,928.20-	4630.7-	49,209,755.00	7.7
Hunting Rights Luangwa Co	0.00	0.0	160,000.00	0.0
	<u>34,786,928.20-</u>	<u>4630.7-</u>	<u>49,369,755.00</u>	<u>7.8</u>

Licence fees - Safari				
Licence fees - Safari MCR	42,041,608.94-	5596.4-	250,377,659.68	39.4
Licence fees - Safari Blm	263.00-	0.0-	0.00	0.0
Licence fees - Safari Loc	1,050.00-	0.1-	0.00	0.0
Licence fees - Safari Mul	24,050.00-	3.2-	0.00	0.0
Licence fees - Safari Nya	9,100.00-	1.2-	0.00	0.0
Licence fees - Safari Lea	221,850.00-	29.5-	0.00	0.0
Licence fees - Safari San	100,750.00-	13.4-	0.00	0.0
Licence fees - Safari Chi	5,850.00-	0.8-	0.00	0.0
Licence fees - Safari Mor	1,044,750.00-	139.1-	0.00	0.0
Licence fees - Safari Non	24,050.00-	3.2-	0.00	0.0
	<u>43,473,321.94-</u>	<u>5787.0-</u>	<u>250,377,659.68</u>	<u>39.4</u>

Licence fees Local				
Licence fees Local MCRF H	18,535,449.38	2467.4	44,794,574.38	7.0
Licence fees Local Blue L	263.00	0.0	263.00	0.0
Licence fees Local Lochni	1,050.00	0.1	1,050.00	0.0
Licence fees Local Malobe	24,050.00	3.2	24,050.00	0.0
Licence fees Local Nyansa	9,100.00	1.2	9,100.00	0.0
Licence fees Local Luapal	0.00	0.0	4,500.00	0.0
Licence fees Local Luangwa	240,466.00	32.0	1,356,432.00	0.2
Licence fees Local Sandwe	100,750.00	13.4	100,750.00	0.0
Licence fees Local Chikwa	5,850.00	0.8	5,850.00	0.0
Licence fees Local North	1,044,750.00	139.1	1,044,750.00	0.2
Licence fees Local Muebua	24,050.00	3.2	24,050.00	0.0
	<u>19,985,778.38</u>	<u>2660.4</u>	<u>47,365,369.38</u>	<u>7.4</u>

40% A/c exps				
40% A/c exps MCRF HQ	0.00	0.0	365,949.00	0.1
40% A/c exps Lusaka Comaa	0.00	0.0	452,000.00	0.1
40% A/c exps Chiawa	5,144,524.00	684.8	13,141,198.98	2.1
40% A/c exps Rufunsa	202,820.00	27.0	6,895,772.96	1.1
40% A/c exps Chinyonyu	0.00	0.0	2,594,840.50	0.4
40% A/c exps Luano Lower	1,011,696.05	134.7	7,614,911.19	1.2
40% A/c exps Central Coma	20,284.10	2.7	326,802.10	0.1
40% A/c exps Blue Lagoon	142,355.00	18.9	3,995,992.38	0.6
40% A/c exps Luano	0.00	0.0	982,554.00	0.2
40% A/c exps Chisomo	343,640.00	45.7	4,789,717.00	0.8
40% A/c exps Southern Com	105,500.00	14.0	10,500,145.50	1.7
40% A/c exps Lochmar	1,541,747.75	209.2	8,337,809.37	1.3
40% A/c exps Sichifulo	325,343.67	43.3	3,749,899.39	0.6
40% A/c exps Muebezi	1,600,000.00	213.0	8,884,666.68	1.4

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WILDLIFE REVOLVING FUND

Income Statement
 AS OF 30/12/94

RATIO: INCOME	THIS PERIOD	RATIO	12 PERIODS	RATIO
40% A/c exps Northern Con	2,804,640.00	373.3	10,160,855.43	1.6
40% A/c exps Tondwa	140,000.00	18.6	3,187,771.04	0.5
40% A/c exps Bangweulu HQ	4,257,320.94	566.7	17,864,280.27	2.8
40% A/c exps Nano	0.00	0.0	1,106,050.00	0.2
40% A/c exps Fulaza	0.00	0.0	3,707,794.20	0.6
40% A/c exps Bangweulu	287,320.00	38.3	9,804,909.82	1.5
40% A/c exps Mnyanazi	0.00	0.0	7,637,717.58	1.2
40% A/c exps Luapula HQ	329,044.72	43.8	1,311,090.00	0.2
40% A/c exps Kafinda	0.00	0.0	72,000.00	0.0
40% A/c exps Kalasa Mukos	24,000.00	3.2	1,222,392.38	0.2
40% A/c exps Luangwa Conn	3,757,400.00	766.4	37,860,328.79	6.0
40% A/c exps West Petauke	872,646.00	116.2	2,342,826.00	0.4
40% A/c exps Sandwe	139,318.10	18.5	3,212,786.18	0.5
40% A/c exps Mwanza	30,000.00	4.0	1,843,324.80	0.3
40% A/c exps Chanjuzi	0.00	0.0	2,964,385.00	0.5
40% A/c exps Chitwa	93,480.00	12.4	4,201,221.00	0.7
40% A/c exps Chifunda	2,446,743.95	325.7	0.00	0.0
40% A/c exps West Zaabezi	3,126,643.95	415.4	8,244,342.35	1.3
40% A/c exps Mutema	775,825.00	103.3	5,334,997.00	0.8
40% A/c exps North Wester	1,560,000.00	207.7	13,565,107.75	2.4
40% A/c exps Kansansa Bus	381,033.92	50.7	7,407,797.70	1.2
40% A/c exps Lunga Luswis	495,410.00	65.9	14,142,302.41	2.2
40% A/c exps Lunga Busang	73,872.00	9.8	499,747.00	0.1
40% A/c exps Chizera	314,570.00	41.9	3,157,870.45	0.5
40% A/c exps KPW South HQ	171,100.00	22.8	3,255,789.16	0.5
40% A/c exps Bilili	0.00	0.0	140,000.00	0.0
40% A/c exps Namuala	1,390,000.00	185.0	14,008,387.49	2.2
40% A/c exps KPW North HQ	321,050.00	69.4	1,578,204.00	0.2
40% A/c exps Nwabua East	1,630,761.10	217.1	9,460,446.39	1.5
40% A/c exps Nwabua West	0.00	0.0	4,959,993.88	0.8
40% A/c exps Halusanga	46,500.00	6.2	2,913,683.45	0.5
	32,501,212.99	4326.4	271,960,275.77	42.7
35% A/c exps				
35% A/c exps Rufunsa	0.00	0.0	3,755,050.00	0.6
35% A/c exps Blue Lagoon	0.00	0.0	3,623,088.00	0.6
35% A/c exps Chisomo	1,516,325.00	201.8	1,516,325.00	0.2
35% A/c exps Southern Con	0.00	0.0	85,150.00	0.0
35% A/c exps Lochnivar	0.00	0.0	10,635,775.00	1.7
35% A/c exps Sichifulo	0.00	0.0	4,585,100.00	0.7
35% A/c exps Tondwa	0.00	0.0	8,083,562.50	1.3
35% A/c exps Nyampala	5,198,800.00	692.0	5,198,800.00	0.8
35% A/c exps Fulaza	0.00	0.0	4,712,650.00	0.7
35% A/c exps Bangweulu	1,154,750.00	153.7	18,292,151.63	2.9
35% A/c exps Mnyanazi	0.00	0.0	30,160,128.00	4.7
35% A/c exps West Petauke	0.00	0.0	5,753,150.00	0.9
35% A/c exps Sandwe	0.00	0.0	1,409,200.00	0.2
35% A/c exps Mwanza	0.00	0.0	8,555,300.00	1.3
35% A/c exps Chanjuzi	0.00	0.0	5,070,831.98	0.8
35% A/c exps Chitwa	0.00	0.0	2,560,350.00	0.4
35% A/c exps West Zaabezi	0.00	0.0	3,435,500.00	0.5
35% A/c exps Kansansa Bus	0.00	0.0	10,087,200.00	1.6

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Income Statement
 AS OF 12/31/94

INCOME	THIS PERIOD	RATIO	12 PERIODS	RATIO
75% Arc exps Lunga Bugara	0.00	0.0	63,000.00	0.0
75% Arc exps Numbaa East	2,000,000.00	198.3	7,765,000.00	0.6
75% Arc exps Numbaa West	0.00	0.0	2,268,600.00	0.4
	<u>10,849,875.00</u>	<u>1447.0</u>	<u>133,713,912.11</u>	<u>21.0</u>
Donations				
Donation MCRF	0.00	0.0	300,000.00	0.1
Lucas Lower	0.00	0.0	300,000.00	0.1
Donation Sichifala	0.00	0.0	1,809,160.00	0.3
Donation	0.00	0.0	300,000.00	0.0
Donation - Luaisba	0.00	0.0	300,000.00	0.0
Donation - Mutanta	0.00	0.0	240,000.00	0.0
	<u>0.00</u>	<u>0.0</u>	<u>3,723,160.00</u>	<u>0.6</u>

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ANNEX G

Financial Controls on Managing the Share Accounts

ANNEX G

**FINANCIAL CONTROLS ON MANAGING THE 40% SHARE ADMADE ACCOUNT
WITH REFERENCES TO THE 35% SHARE ACCOUNT**

1. Petty Cash.

1.1 Amount to be drawn and used on a monthly basis should not exceed K50,000. This is for small but necessary and often unplanned expenses. These expenses should still be in accordance with the approved budget.

1.2 Petty cash funds are to be kept and managed by the Unit Book-keeper. The approving officer for the Petty Cash Voucher is the Unit Leader. If absent, the Deputy Unit Leader may authorize use of petty cash.

1.3 To obtain petty cash, the imprest application form is used with the appropriate authorizing officers. Retirement of petty cash requires the use of form PETTYCASH form.

2. Salary advances

2.1 Salary advances will be allowed only to ADMADE employees

2.2 Advances should not exceed 40% of the person's salary

2.3 No more than one advance salary payment will be allowed to a given person at a time before the previous one is retired.

2.4 Advance salary payments must be paid back within 3 months.

3. Imprest

3.1 Imprest for Unit operational costs cannot exceed K250,000.

3.2 No more than one outstanding imprest will be allowed at a time for unit expenditures (excluding imprest for petty cash)

3.3 Receipts to be retired must be according to budget votes and returned and checked by the Unit Book-keeper.

3.4 Imprest may be issued only to an individual approved by the unit leader.

3.5 Authorization for an imprest requires signatures from the unit leader and a respected resident appointed by the sub-authority. Such an authorization procedure ensures the community is involved in approving expenditures being incurred for the running of the Unit.

3.6 An imprest must be retired within 30 days. Failure to do that will result in a disciplinary action in terms of a letter to the Senior Book-keeper prepared by the Unit Book-keeper and copied to the WCRF Coordinator/Financial Manager. The Unit Book-keeper will implement an immediate deduction from that person's salary to repay into the Unit's account.

3.7 Any single item for Unit stores exceeding K50,000 requires 3 competitive quotations.

3.8 Any item for Unit stores exceeding K250,000 should seek approval from the Financial Manager of WCRF.

4. Signing cheques

4.1 Book-keeper is not a signatory but is required to keep all cheque books and relevant accounting documents. He represents the community's interests and those of WCRF and as the financial controller for the unit, he is required to keep expenditures in with the community approved budget for wildlife management costs.

4.2 Signatories for the 40% account should include either the unit leader or the warden as the principal signatory. The other party of signatories should consist of the sector ranger and one elected member from the sub-authority. From this party only one signatory required.

4.3 Signatories for the 35% should have as its principal signatory a local chief and the unit leader. Only one is required. The other party of signatories should comprise of one elected member from the finance sub-committee and one elected member from the projects committee. Only one is required.

4.4. No cheque should be honoured unless the above signatories are used as stipulated for each account.

4.5 The cheque book, cash book, and all relevant documents must be examined by the senior book-keeper one month before the end of each quarterly period.

4.6 Unit Leaders must approve the payment vouchers prior to issuing any cheque for the 40% and the voucher must be checked and signed by the book-keeper before the cheque is released. A similar arrangement is required for the 35% as agreed to by the concerned sub-authority.

5. Stores

5.1 All stores received, whether by purchase or through donation, will be controlled and managed by the book-keeper.

5.2 The administration of the unit leader should ensure a storeroom is available for keeping unit stores with adequate security.

5.3 A stores keeper, who may already be on the payroll and if needed, should be appointed by the unit leader and approved by the book-keeper. This person will be responsible to the book-keeper.

5.4 A stores ledger book is required for showing all entries of goods received and goods issued.

5.5 An independent person appointed by the sub-authority will be contracted at the end of each quarterly period to make an inventory audit inspection of the stores.

5.6 A stores voucher is required for the issuing of items, which must be approved by the unit leader and prepared by the book-keeper. No goods can be removed without an approved voucher.

5.7 Certain stores, including firearms and ammunition, require maximum security and should be under lock and key by the unit leader (or to a responsible uniformed officer) while all accountable documents pertaining to these stores must be administered through the unit book-keeper.

5.8 No one may receive goods from the unit stores who is not on the unit pay roll, either as an allowance earner or an a full salaried staff member.

6. Funeral grants

6.1 Funeral grants will be authorized to assist with funerals for employees and employees' children or spouse (K60,000 and K35,000).

7. Absenteeism and medical compensation

7.1 Anyone absent for more than 10 days without a proper, valid reason must be terminated from service.

7.2 Sick leave requires a valid letter from an authorized doctor to explain why the employee was unable to report to work on medical ground for a given period.

7.3 An ADMADE employed officer will only be retired on medical grounds when an approved doctor or medical officer writes an official report that the officer is unfit to continue his duties due to medical reasons.

7.4 All workers injured whilst working will be compensated according to the laid out conditions of services under the Worker's Compensation Board.

8. Travel allowance and issuance of loans

8.1 Maximum allowed days for travel allowance to Lusaka (or a destination of a similar distance) is 5 days. For junior staff, the rate is K15,000/night (or K75,000). For senior staff, including book-keepers, unit leaders, and deputy book-keepers, the rate is K20,000 per night (or K100,000). This assumes the unit has the financial capacity to pay such allowances.

8.2 Trips to Lusaka should be made with public transport when practical, using this same allowance.

8.3 Trips to Lusaka should also be approved by ADMADE Coordinator or WCRF Financial Manager for any member of the Unit's administration when such a trip is for official duties.

8.4 Trips to Command HQ's should be approved by the Command Warden.

8.5 Loans to ADMADE staff should not exceed K150,000 and this amount should be recovered by deducting 40% from his monthly salary until the total amount is repaid.

8.6 Only ADMADE staff who have worked for 2 years or more will be entitled for a loan.

8.7 Such loans are drawn from the salary line item and approval for issuing loans should come from the warden after recommendations by the unit leader are made.

9. Payment of informers

9.1 The payment for an informer who assists with a successful arrest of a wildlife law offender should be made secretly. To do this, a copy of the CASEREC data containing the details of the arrest made possible by the informer should be submitted to the Senior Book-keeper or to the Financial Manager for an amount requested by the Unit Leader but not exceeding K20,000 per informer.

9.2 A signed receipt by the informer is required to retire this

9.2 A signed receipt by the informer is required to retire this imprest which will be paid out of WCRF head office by debiting the unit's 40% account. The actual purpose of this receipt may be disguised to hide the informer's reason for being paid.

9.3 The only person in the unit to know the informer's true identity is the unit leader.

10. Time book for ADMADE employees

10.1 The office of the Unit Leader is required to keep a time book for all ADMADE employees and this information must be retired to the book-keeper for calculation of monthly salaries.

10.2 The records are also summarized for each person's personal files and could be used as a basis for awarding bonuses to those workers who have the least days for absence from work.

10.3 Personnel files should be kept on each ADMADE employee and routinely checked by the book-keeper.

11. Capital project management

11.1 Building projects should be completed in three phases: slab, window level, roofing according to fixed time tables.

11.2 Employment of workers to complete each phase should be on a contract basis and not a daily wage.

11.3 A building committee appointed by the sub-authority is required to inspect each phase before the next phase is allowed to continue. This committee is expected to make progress report to the sub-authority. These reports must be filed to the book-keeper.

12. Budget votes and financial support of these votes

12.1 No single budget vote may be exceeded by more than 15% without the written permission from one of the unit's sub-authorities authorized to make such decisions by the Wildlife Management Authority. This overexpenditure should be taken from the contingency line item to be set at 15% of the total approved budget.

12.2 Funds to finance these votes will be released in an imprest form by WCRF made on a quarterly basis and retired on a quarterly basis.

12.3 Transfer of the next quarterly funds into the unit account will be contingent on the accurate retirement of the current quarterly imprest. This retirement must follow the laid out procedures as provided in section 14. (Quarterly Financial Reports).

12.4 Provided earnings are adequate, the amount released for a given quarterly period will be based on the Wildlife Management Authority approved budget, which must also be certified and approved by the WCRF Financial Manager.

12.5 There should be a line item on the budget to cover visitation costs by the warden and the convening of Wildlife Management Authority meetings. This amount should be within the financial capability of the unit and approved by local unit authorities. It is recommended that these funds be paid as one annual payment to the

Warden and managed by the Senior Book-keeper for accounting purposes. It is further recommended that the amount be 15% of the approved budget.

13. Monthly financial reports

13.1 A monthly financial report is required each month and must include trial balance, bank reconciliation, and a cashflow statement using the approved forms for making such reports.

13.2 Copies of these completed forms should be sent to the unit leader, local chiefs, and to the senior book-keeper

14. Quarterly reports

14.1 The quarterly report should be completed by using the REPORT form. For the month ending the quarterly report, the usual monthly reporting requirements should be submitted as well.

14.2 Where line item expenditures exceeded 15% of the budgeted amount for that vote, a letter from the approving sub-authority should be appended to the Report Form.

14.3 Book-keepers are cautioned to be strict in their obedience of the community approved budget and reoccurring problems of over-spending by more than 15% without authority will result in dismissal of the unit's book-keeper.

14.4 Disbursement of the next quarterly payment will not be made by WCRF until the previous quarterly report has been received and approved by the senior book-keeper.

14.5 Should there not be a senior book-keeper for that command, quarterly report should be sent directly to the Financial Manager of WCRF.

15. Buying on credit

15.1 Buying any goods or services on credit is strictly prohibited unless with the prior written approval of the WCRF Financial Manager.

16. Use of ADMADE capital equipment, including vehicles

16.1 No equipment may be leased or rented to a private individual, public institution, or commercial enterprise without prior written authority from the Financial Manager of the WCRF.

16.2 Vehicle log books must be used at all times by drivers of ADMADE vehicles.

16.3 Commercial lifts on ADMADE vehicles are strictly prohibited and will result in automatic dismissal of any ADMADE employed driver who is responsible for the vehicle at the time lifts were being charged.

16.4 Passengers on ADMADE vehicles should be restricted to ADMADE staff, their families or to Sub-authority approved passengers.

16.5 There should be no over-loading of ADMADE vehicles.

16.6 All ADMADE owned equipment powered by combustible engines should follow a regular maintenance schedule. Failure to meet this schedule requires the Unit Leader to discontinue use of this

equipment.

16.7 The ADMADE vehicle issued to the unit shall continue to be controlled by the unit leader responsible for that particular unit and that the vehicle shall be primarily used for the following:

1. operational duties in the unit
- 2) other duties relevant to the running of the unit

16.8 Where the community or the chief requires the use of the vehicle, the unit leader will release the vehicle only after being assured the purpose of the vehicle is in conformity with the conditions set by the Wildlife Management Authority for use of the unit vehicle. Such conditions should include the requirement that the community uses its 35% share to pay for the fuel and any overtime allowance entitled to the driver.

ANNEX H

1994 Report by Nyamaluma Research and Training Center

Nyamaluma Community-based Wildlife Management
Training and Research Centre

- SUBJECTS: 1) A Review of the 1994 Program
2) Proposed Program for 1995
3) Budget and budget justifications

Prepared by Dr. D.M. Lewis, ADMADE Technical Advisor

1) Review of 1994 program

The facilities and training courses now offered at Nyamaluma have expanded well beyond the original objectives of this centre, which were to train local residents, called village scouts, as wildlife law enforcement officers, and NPWS officers as Unit Leaders. Though this curriculum is still provided, largely in the form of advanced courses in wildlife management, Nyamaluma has greatly broadened its curriculum and has added staff to improve its training services to a wider cross-section of communities residing in game management areas. This effort is very much reflected in the 1994 program and is designed to help local communities develop skills on how to sustainably manage natural renewable resources, particularly wildlife, and how to achieve development goals through more participatory, community-based approaches.

One of the great strengths of Nyamaluma as a training centre is its on-going research and monitoring of the ADMADE program. This provides a rich and contemporary set of experiences and results to blend into lectures and management methodologies for teaching at the centre. It is also providing a cost-effective way to quantify key indicators of ADMADE's management results and progress toward achieving community-based wildlife management. An appropriate technology which has been developed at Nyamaluma to help organize all of this information is the computerization of map-related information. Nyamaluma is one of the first institutions in Africa to use maps in such a way and initial results, recently published and presented at an international forum in 1994, provide much promise for this technology in helping communities visualize management problems and solutions.

Nyamaluma is fully institutionalized under the Ministry of Tourism and its National Parks and Wildlife Services to be the official training centre for the ADMADE program. It therefore works closely with a number of government institutions, as well as NGOs, to coordinate information and expertise that will help foster a more successful and acceptable ADMADE program. Convening workshops, producing radio programs, training community workers about ADMADE to broaden community understanding and local skills, and publishing educational training manuals are some of the ways Nyamaluma does this. To help support the full range of activities

the Nyamaluma program encompasses, the Centre has developed a computerized accounting and financial control section. This section operates under the jurisdiction of the Wildlife Conservation Revolving Fund and has established an accounting system that has been reviewed and accredited by USAID.

Nyamaluma staff

When the centre initially opened in 1988, there were two qualified instructors without any administrative support staff. Today Nyamaluma has 12 training staff, an administrative support staff of 3 and 10 general workers. This growth has been carefully managed to ensure Nyamaluma maintains high teaching standards with an appreciation of rural needs, management requirements for natural resources, and a participatory approach to development.

Recent additions to the teaching staff include:

- 1) James Miti: Instructor in community-based financial management
- 2) Angela Phiri: Librarian and directs information extension services to teachers and unit leaders
- 3) Rose Mary Kamfwa: Tuck Shop Management and women's role in development
- 4) L.M. Mulaisha-Nchelenge: Fisheries management and fish farming specialist and senior executive officer for administration
- 5) Grace Chulu and Anna Zulu: Community health care and family planning; supervised by Sociologist Andrew Phiri
- 6) C. Njovu: Retired teacher from M. of Education, Training facilitator for developing rural teachers as community-education officers for ADMADE
- 7) Moses Zulu, Brown Mwale and G. Phiri: Drill officers and wildlife scout instructors

Another officer recruited for Nyamaluma technical staff is Evan Changala, university graduate with an international diploma in GIS and geography. He is undergoing in-service training in computer applications in GIS using ARC/INFO, DBASE, LOTUS and ERDAS.

Remaining resident instructors provide teaching skills in wildlife ecology and management, botany, public relations, community development and rural appraisal techniques, project planning, community leadership, accounting and stores management, automobile driving and mechanical services. For more specialized training requirements, outside instructors are contracted from other Zambian-based institutions.

Overall administration of the Centre is directed by the Principal and is supervised by a management committee composed of senior staff. Nyamaluma's technical program and curriculum development supervised by NPWS/ADMADE's Technical Advisor (Training

Coordinator) in coordination with the Director, NPWS and other relevant officers supporting the implementation of ADMADE.

Nyamaluma facilities

Extensive work was undertaken in 1994 to improve and expand the physical infrastructure at Nyamaluma with the construction of a new dormitory having a 60 student capacity, a 2000 litre water tank to service toilet and washing needs of the new dormitory, two new storerooms, remodeling of an existing office into a library/study room, outdoor lecture amphitheatre, a second new guest house for workshop delegates or visiting teachers, and a community tuck shop. In addition, the existing two dormitories were renovated as were the two lecture rooms, two kitchens, and guest block. Total facilities include the following:

- a) Three dormitories
- b) Two indoor lecture rooms, one outdoor lecture hall
- c) Two guest blocks
- d) Two kitchens
- e) Two waterpumps
- f) Two generators
- g) Six vehicles
- h) Fully equipped mechanical services section
- i) Administrative office
- j) Computer/GIS laboratory
- h) Research office
- i) Library study room with over 800 books
- j) Two-way radio room and reception office

Training programs accomplished for 1994

1. Training courses:

a) **Village scout training course.** Duration was nine months. The course began in 1993 and 36 students graduated in March, 1994. Units students came from were Mufunta, Kasanka, Mumbwa, Sichifulo and Mulobezi.

b) **Unit Leader data review and analysis.** Duration averages 7 to 10 days per unit leader. A year's collection of data from FIELDPAT, CASEREC, SAFHUNT, SAFLICE, NSAFHUNT and TRANSECT are brought to Nyamaluma where computer staff sit with the Unit Leader and enter raw field data from the dataforms. Using pre-written dataprocessing programs the information is summarized in table, graphical and map formats. The following 9 units were processed for 1994: Sichifulo, Mulobezi, Kasonso-Busanga, Mumbwa, Lower Lumimba, Upper Lumimba, West Musalangu, Munyamadzi, and Sandwe. These data are stored in a database directory and copied on floppy for depositing at NPWS Chief Wildlife Research Office at Chilanga. Hard copies are made, usually about six, for use by the unit leaders to convene management meetings with staff and

members of the sub-authority.

c) **Management biologist Training Course.** Duration averages six months. Objectives for this training are to teach students to supervise the processing of unit field data using computers and appropriate computer programs, field data collection methodologies, practical skills in supervising field staff on data collection and providing quality control for such data, and how to use map information in a range of applications, including wildlife management, land use planning, report writing. A complete course was taught for Paul Zyambo, who was subsequently posted to Chunga in Kafue National Park. Two more management biologists will begin their training in November, 1994.

d) **Community-based Book-keepers course.** This was a five week course. Eighteen students were selected by their respective ADMADE Sub-authorities to learn basic book-keeping and accounting skills. The course was designed by a team of certified accountants together with staff from Nyamaluma and the Wildlife Conservation Revolving Fund. The object was to help Wildlife Management Sub-authorities manage both the community development account (35% ADMADE share) and the wildlife management account (40% share) with proper financial controls and to improve the reporting of these accounts to households in the community as well as to the Financial Manager of the Wildlife Conservation Revolving Fund.

e) **Financial planning seminar for unit leaders and unit book-keepers.** A three day seminar was convened for all unit leaders and book-keepers to develop annual budgets for their 40% share based on expected revenues for 1994. In addition, unit leaders were given a refresher training course on the correct methods for collecting field data for field patrols and for monitoring licensed hunters.

f) **Library staff training.** Nyamaluma staff (2) were trained in library management by an officer from the City Library of Lusaka. Duration of the course was 4 weeks. The object of this course was to organize the library according to acceptable international standards and to help develop staff to carry out a library outreach program for school teachers in game management areas. The library itself is a new facility introduced in 1994 and will be developed as a learning centre for visiting unit leaders and other ADMADE officers.

g) **Primary health care training for scout wives.** This course was organized in conjunction with the Ministry of Health and lasted four weeks. Twenty-six women who reside at remote wildlife camps throughout the Eastern Province and parts of Northern Province were given basic instruction in primary health care, nutrition and hygiene, post-natal care, family planning, and prevention of sexually transmitted diseases. Upon graduation, they were

presented certificates by the Ministry of Health and were also issued first aid boxes and uniforms. These women will now be able to help improve health care services for residents in their wildlife camps as well as nearby village communities.

h) **Tannery and leathercraft training.** This is a 5 month training course to provide practical skills development in the tanning of wildlife hides by using vegetable tanning techniques and in the production of marketable leathercraft products using simple hand tools. A total of five students successfully completed this course.

i) **School curriculum development and teacher training as ADMADE education extension officers.** It can be argued that much of the wildlife destruction in game management areas is attributed to poor primary school syllabus for schools in the GMAs. In general, the present syllabus does not prepare future adults with ways and reasons for how best to live on the land without spoiling their renewable natural resources. Teachers of Luangwa Valley requested Nyamaluma to facilitate a teachers training course in developing an appropriate conservation curriculum for their schools and how to engage the local community to improve household awareness about ADMADE. The course lasted 10 days and a total of six teachers participated. A curriculum was produced and published as a result of this workshop.

j) **Advanced ADMADE scout training.** A one year training of existing village scouts began in October to provide a more intensive training in both classroom and outdoor based subjects. The syllabus is intended to give graduates the basis for a more professional and well-rounded service to ADMADE and will also qualify graduates as Wildlife Police Officers in the Zambian Government. More than 20 subjects are covered in the lecture syllabus, ranging from development and leadership issues to procedures in investigations, Zambian law and natural resource sciences. Enrollment for this intake is 130.

2. Workshops:

a) **Safari hunting industry workshop**

A four day workshop with international delegates was convened to bring together a small but well balanced groups of the most informed and relevant individuals for sharing ideas and experiences on ways Zambia can increase its share of the wildlife market to better support ADMADE. Resolutions and an action plan were agreed to and are now helping serve as a framework for future designs for the restructuring of the safari hunting industry. Twenty-seven people attended and the proceedings of this workshop are now in circulation.

b) ADMADE Leadership workshop for Luangwa Command

A three day regional workshop was convened to bring together the principal players of ADMADE in the Luangwa Command to review and analyse their respective ideas and recommendations for building a more successful ADMADE program. Key issues that were examined are the level of involvement by households, leadership by chiefs and wildlife management sub-authorities, the role of Zambian-based NGOs for building local leadership and skills in development, and community responsibilities in safeguarding the safari hunting industry. Forty-five people attended and the proceedings are now being produced in both English and Nyanja.

c) ADMADE Leadership workshop for Western Command

A four day workshop was convened for local chiefs and other local leaders from West Zambezi GMA. Since this is a new ADMADE unit, the emphasis for this training seminar was to provide an informative orientation about the ADMADE program and ways local leaders and communities are being encouraged and trained to assume greater responsibilities for their wildlife resources. Considerable amount of information on past workshops and achievements of other ADMADE units was presented and lengthy discussions were encouraged to promote understanding and interest by the participants.

2) Training program planned for 1995

a) Needs and objectives

Community development

As greater responsibilities are assumed by local communities for the management of their natural resources and for the improvement of development needs in their area, Nyamaluma will respond with an increased training curriculum directed at leaders in the communities who undertake these responsibilities. Such leaders include elected councilors, members of sub-authorities, and local teachers. Several key areas of skills development have been identified from past workshops convened at Nyamaluma and include the following:

1. Concensus building and participatory methods
2. Project identification, designs and budgeting
3. Financial management and developing ADMADE as a business for meeting management costs and development needs

In addition, the basic definition of community-based management necessitates that as many households as possible representing the community be involved in management and that they recognize the benefits for doing so. To help foster this process and increase

general awareness about ADMADE at the level of households, Nyamaluma will expand its efforts to help build this awareness as a way of invoking greater involvement by more households in the ADMADE program.

To help provide these training and support services to the above needs, Nyamaluma will contract local NGOs who have already demonstrated a willingness to participate in the training programme at Nyamaluma. These NGO's include Lutheran World Federation (LWF), Africare, and Institute for Cultural Affairs (ICA). Other NGOs may be approached and are under consideration.

Nyamaluma has been faulted in the past for not involving more women in the training program. To a certain extent this has been unavoidable because of the emphasis in training ADMADE staff whose duties were strongly male-biased. When females have been included, in almost every case they were relegated to menial tasks like guarding gatecheck points. The subject of women involvement in ADMADE and the role of training to increase their relevance have been examined by Nyamaluma staff in consultation with community leaders. The need is to identify quality roles for females so they can gain a higher visibility in leadership, management and community service. In 1994 this was explored in various ways: recommending females as community-based book-keepers, scout wives course in community health care, and the recruitment of more female instructors at Nyamaluma. This need for an improved role of females in ADMADE will remain a training priority for Nyamaluma.

A final need is to engage a short-term consultancy to help consolidate the experiences and knowledge on community participation in wildlife management and development accumulated over the years from Nyamaluma's involvement with communities through surveys, courses and workshops. Such a consultancy would achieve several goals:

- 1) Production of a public document to promote a broader understanding of the issues and needs in community development through ADMADE and achievements thus far realized through efforts at Nyamaluma and by communities themselves
- 2) In-house training of community-development training staff at Nyamaluma
- 3) Assist with an evaluation of current syllabuses for the way they address community needs and the use of appropriate training methods
- 4) Recommendation for future training approaches

Wildlife Management

The need for game management areas to have competent and highly

motivated wildlife scouts is critical for a number of reasons: 1) policing wildlife resources in these areas, 2) monitoring their various uses, 3) educating local residents about wildlife issues, and 4) providing data on resource abundance and distribution. Advanced courses for existing ADMADE scouts and staff are required to improve the proficiencies and level of commitment by these officers, most of whom are local residents. The Advanced ADMADE scout started in 1994 will end in September 1995 and a second advanced course will begin in November 1995. Needed also are trained Deputy Unit Leaders to ensure NPWS has sufficient source of experienced Deputy Unit Leaders to draw from for Unit Leader replacements.

These various needs are summarized below with clearly defined objectives for 1995.

<u>Needs</u>	<u>Objectives</u>
Leadership development in the community to promote ADMADE goals	1) ADMADE leadership workshops for other Commands 2) Develop increased ties with local NGOs to help improve leadership skills
Management and administrative skills by Wildlife Management Sub-authority	1) Specialised training of headmen, counselors, and headmen in skills that can support the management and development goals of their sub-authority (project planning, implementing capital projects, budgeting, etc.) 2) Refresher book-keeping course unit book-keepers 3) Training manuals in ADMADE related duties of sub-authorities (participatory approaches in development, how to plan a meeting or review project progress, responsibilities in support of safari hunting and other wildlife industries)
ADMADE awareness at the household level	1) Continued training of teachers as ADMADE education extension officers 2) Develop appropriate literature or learning booklets for local audiences
Involvement of women in ADMADE	1) Female training course in tuck shop management 2) Continuation of scout wives course in primary health care and community services
Specialized development skills	1) Repair and construction of wells (in coordination with LWF)

- 2) Grinding mill management.
- 3) Construction and maintenance of maize storage sheds

Advanced skills in wildlife management and policing by ADMADE staff

- 1) Training of regional ADMADE biologists (six month internship)
- 2) Advanced ADMADE scout training

Research and monitoring

Review and analysis of ADMADE field data, compiled by unit leaders, is contributing to current efforts by technical staff at Nyamaluma to document ADMADE achievements in policing and monitoring of wildlife as well as the management needs of Zambia's Game Management Areas. One recent application of such data was an assessment for six depleted game management areas submitted to NPWS Director for quantifying financial needs to restore these areas to viable safari hunting areas. This work is an important use of Nyamaluma's GIS facilities and such work will continue in 1995.

Developing a more sound wildlife industry in game management areas, as well as national parks, has been an important application of data which has been analyzed from past years of ADMADE monitoring. In 1995 GIS data will be refined and packaged for helping potential investors in establishing safari hunting operations or in siting tourist infrastructures. Such data would include past years of hunting success, locations where animals were hunted, all existing roads, locations of human settlements and activities, a directory of all wildlife staff and camps, village leaders, etc. Such data could greatly assist the private sector in developing a profitable industry to sustain local development needs and resource management requirements. The responsibility of collating and analyzing these data, as well as making them presentable in an easy to interpret map form for prospective users, is a practical and important role for Nyamaluma's research services to ADMADE.

Nyamaluma has acquired an advanced GIS satellite imagery processing system called ERDAS as a donation to ADMADE for helping document and analyze changes to Zambia's ecosystems. Human activities impacting on soil erosion and watersheds or climatic changes influencing water resources and vegetation succession are two contemporary concerns ERDAS technology will address in ADMADE regions. Imagery data for such areas in Luangwa Valley have already been ordered for one scene and the processing of these data will be begin in early 1995. If this work proves successful as a pilot project (in coordination with U. of Massachusetts and US Forestry Service), additional scenes will be purchased to evaluate time changes in watershed conditions and to

assess a larger area of Luangwa Valley. Such information will be vital for long-term planning needs for managing and developing the wildlife industry in this part of Zambia.

On-going work to complete the description of 10 years of wildlife management studies and vegetation monitoring in the Lupande Research Area will hopefully be finished in 1995. This work represents a major contribution to the understanding of Luangwa Valley natural history and a number of resource management lessons will be drawn from its conclusions. It will also be compiled into a wildlife management manual for advanced course work at Nyamaluma.

All of the above activities are an excellent learning platform for internships of ADMADE management biologists. The experience will allow interns to work with real data from ADMADE units and examine the basis for how management decisions involving quota estimates and population numbers can be drawn from trend analyses using field data. GIS survey work will also give practical skills in using map data, how to collect it and access such data from the data using ARCVIEW. For 1995, at least two and possibly four management biologist recruits will undergo a six month internship. To help support their long-term professional training in a way that would be cost-effective and not disturb their work in the field, Nyamaluma will also develop a proposal in collaboration with the University of Zambia and the Chief Wildlife Research Officer for an in-training Master's degree program.

3) Budget and budget justifications

a. Expected student outputs in terms of total students in residence throughout the year for wildlife management related courses is 130. The actual number of different students to be trained in these courses during the year is approximately 279.

The breakdown of this training is as follows:

1. Advanced ADMADE scout training (131 graduate in Sept)
2. Recruitment of 2nd advanced course (130 in Nov)
3. Management biologist internships (4 / 6 months)
4. Deputy unit leader course (8 / 2 months)
5. Leathercraft & tanning course (6 / 4 months)

Cost of maintaining a student in terms of food, medical emergencies, training & administrative staff salaries, paper supplies and training manuals, field practicals, etc. is \$35/day/student (\$4550 per month) or \$54,600 per year.

Additional overhead costs required for 1995 is the construction of a shower room and toilet facilities for the new dormitory constructed in 1994, a new waterpump, and an extension to the

library to accommodate more students for reading. Total cost: \$11,000.

b. Expected student outputs in terms of training seminars, specialized courses, and workshops for addressing community development needs during 1995 will likely exceed 140.

The breakdown of this training is as follows

1. Teacher orientation courses as Education Extension Officers
2. ADMADE Regional Leadership Workshops (Kalomo & Mpika)
3. Collaboration with NGO support groups to provide improved community development skills (ie well repairs & construction, tuck shop management, grinding mill operations, project planning and budgeting, etc.)
4. Book-keeping basic and refresher course
5. (If time allows, a second scout wives course)

Estimated total cost for the above activities is \$50,000

c. Consultancy to help consolidate training and research information at Nyamaluma and provide additional services.

Estimated cost is \$8,000.

d. GIS applications: research, monitoring and training

1. Hardware support for intern computer training with ARCVIEW and GIS applications
2. GIS data survey
3. Imagery data purchase
4. Unit leader data review and analysis

Estimated cost is \$10,000

e. Nyamaluma support costs

1. Air fare for Technical Advisor and spouse
2. Staff housing improvements
3. Solar lighting for instructors' houses

Estimated cost is \$10,000

f. 10% contingency: \$13,260.

g. Total budget: \$156,860

SUMMARY OF TRAINING ACTIVITIES AT NYAMALEMA FOR 1994

A) Training courses

Course title	Number students	Date graduated
1) Village scout	36	March
2) Unit leader data review	9	multiple 2 wk course
3) Management business internship		May
4) Community based bk keepers	18	May
5) Library staff training	2	July
6) Scout wives training/ health care, etc.	26	August
7) Tanning and leathercraft	5	December
8) Rural teachers as ADMADE education extension officers	6	September
9) Advanced ADMADE seminar	131	(Oct 94 - Oct 95)
	===	
Totals:	193	graduated
	131	still in training
	===	
	234	total enrolled for year

B) Workshops / seminars

Title	Participants
1) Wildlife Industries in GMAs	24
2) ADMADE Leadership Seminar (Eastern P)	45
3) ADMADE Orientation Seminar (Western P)	16
	==
Totals:	85

ANNEX I
Nyamaluma Training Material

ANNEX I

**COURSE DESCRIPTION FOR TRAINING COURSES OFFERED AT NYAMALUMA
(1 JAN - 31 AUGUST)**

1. **Advanced ADMADE Scout course.** Comprehensive course in community-based wildlife management to give existing village scouts more advanced skills. Grade 7 minimum requirement for entry.
2. **Management biologist internship.** Applied training in computer skills and data processing, survey techniques, map reading, GIS data collection, safari monitoring, ADMADE programme monitoring, range management, vehicle driving, and management of a research office.
3. **Leathercraft and tanning.** Applied skills in utilizing wildlife skins for the purpose of making marketable leathercraft products. Appropriate technologies for a village-based industry are taught. Marketing and simple book-keeping skills are also taught.
4. **Well building and maintenance.** Both theoretical and practical field training is offered to enable villagers to become qualified in siting, constructing and repairing wells to help maintain adequate water resources for human consumption. This will have the desired effect of reducing human conflicts with wildlife at natural water holes.
5. **Satellite imagery training.** Specialized course for ADMADE technical staff to learn computer processing of satellite imagery data for production of vegetation maps, land use classification maps, etc.
6. **Community visits for advisory assistance in promoting self-reliance in development.** Qualified field instructors will visit sub-authorities and community representatives to assist in advising how to achieve community-based development goals.
7. **Tuckshop management.** Preferably for women. This course is offered to ADMADE residents to help them learn how to set up and run a small shop in their community.
8. **Teachers in ADMADE education.** This is a training seminar designed to help guide teachers on ways to introduce ADMADE into their school curriculum as well as their PTA committees.
9. **Book-keeper refresher course.** This is offered only to those community book-keepers who were taught in 1994 and will be a week long refresher course. The basic course will be taught later in the year.

Other courses being planned but not yet officially offered:

1. Training tour of ADMADE chiefs and local leaders to other training institutions in applied community development skills
2. CITES regulations and investigative techniques
3. Fisheries management through local village committees.
4. Barotse thatching techniques: improved maintenance of thatched roofing

**COURSE DESCRIPTION FOR TRAINING COURSES OFFERED AT NYAMALUMA
(1 JAN - 31 AUGUST)**

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ANNEX J

**Paper Presented by WCRF
at NRM Regional Conference-1955**

**Wildlife Conservation Revolving Fund:
The Zambian Approach to the Distribution of Wildlife Revenue**

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WILDLIFE CONSERVATION REVOLVING FUND:
THE ZAMBIAN APPROACH TO THE DISTRIBUTION
OF WILDLIFE REVENUE

Presented by: Mr Walter Chisulo
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Introduction

The Wildlife Conservation Revolving Fund (WCRF) was created in 1984 for the purpose of supplementing Government funding to the Department of National Parks and Wildlife Service (NPWS), in an effort to improve conservation and protection of wildlife in Zambia.

The primary source of income was the processing, marketing and selling of ivory both nationally and internationally. Additional income was realized from fees collected for game viewing and safari hunting in Game Management Areas (GMAs).

Dealing in ivory was then banned by the Zambian Government, resulting in the need to find other sources of revenue in order to be able to continue to meet the original objective of the WRCF.

The NPWS realised that with the limited financial resources obtained from the Government, coupled with the dwindling incomes from WCRF, the management of wildlife, particularly involving combating poachers, was going to become an enormous task. What was required urgently was additional manpower, particularly for anti-poaching, but this could not be achieved in the short term.

The Initiative

The problem, though requiring a lot of financial resources, had to be solved and NPWS had to provide the answer to it. The solution NPWS opted for lay in involving the local people living within and around the Game Management Areas (GMAs), in the management of their wildlife and in particular in the fight against poaching. This solution gave birth to the Administrative Management Design programme (ADMADE).

Theoretically the ADMADE concept appeared as if it would be easy to implement. The local communities were to gain benefit from the approach in two ways. Firstly, the programme was to provide employment to the local young men and women as village scouts. Secondly, the communities were to benefit directly from a share of the income arising from fees charged from both consumptive and non-consumptive uses of the wildlife resource in their areas.

The ADMADE programme managed to initiate a scenario where funds arising from the wildlife resource were to be shared with the local communities instead of going entirely to the central treasury.

In line with the current legislation, central Government, as the owners of the wildlife resource, gained 50% of the income arising from it, the remaining 50% was paid direct to the WCRF. The 50% going to the WCRF was then distributed as follows:-

- 40% - for meeting wildlife management costs in the GMA and neighbouring National Park from which the money was raised, including paying the community game scouts salaries
- 35% - for community development in the locale where the money was raised
- 25% - for NPWS to cover ADMADE administrative costs at the national level.

This distribution appeared fair to all parties and when it was implemented it worked well.

Teething Problems

The ADMADE programme initially required heavy capital investment, which was made available by USAID funding through the NRMP.

Initially the programme encountered few problems, the local young men and women were given jobs as agreed and the communities 35% was released. As the programme progressed more problems became manifest, not least because of the heightened expectations that the communities now had.

In 1993 the problems were further aggravated by the low incomes generated from safari hunting, the main incoming generating activity. The low levels of clients is partly attributed to disgruntled Safari Operators, who are being unsuccessful in their bids for hunting concession areas, then proceeded to undermine Zambia as a destination for hunting amongst their international colleagues and clients in the industry. The resulting decrease in funds available to the communities meant that their expectations could no longer be met.

The problem was further compounded by poor financial management at the WCRF. When specific communities wanted to know how much was due to them, the WCRF could not make available this information and so most of the communities felt cheated. When audits revealed serious inadequacies in the record keeping at the WCRF, the initial confidence placed in the ADMADE programme was undermined.

Addressing the problem

The NPWS realised that urgent action was required in order to restore the confidence in the ADMADE programme, particularly as it was the only option open to them to manage their wildlife and curb poaching in the absence of large scale funding from central Government. The NPWS decided to undertake certain measures. The first was to get directly involved in the marketing of Zambia's safari potential to the hunting community, rather than leaving it entirely up to the private safari operators. Secondly, the accounting department at WCRF was strengthened by employing two accountants from the private sector.

These moves have proved successful. The number of safari hunters rose from 60 in 1993 to 186 in 1994, with a corresponding increase in income. Whilst the records at the WCRF were all computerized and improved financial management systems were put in place, resulting in up to date information now being immediately available on financial aspects.

The way ahead

The NPWS is now confident that with the measures described above having been taken, the ADMADÉ programme will champion wildlife conservation until such a time as when ownership of the wildlife resource is eventually transferred to the local communities.

ANNEX K
People Contacted During the Assessment

ANNEX K

People Contacted During the Evaluation

Government of the Republic of Zambia

Xenophon E. Vlahakis Permanent Secretary, Ministry of Tourism
Mundia L. Mbomena Senior Economist, Ministry of Tourism
John Townsend Technical Advisor, Office of the President

National Parks and Wildlife Service (NPWS) - Chilanga

Akim N. Mwenya Director, NPWS
Edward Lungu Chief Accountant
Henry K. Mwima Chief, Wildlife Research Division
Caleb C. Nkonga Senior Wildlife Warden (acting)
Lewis M. Saiwana Chief Warden and ADMADE Coordinator
Akim Tembo Project Manager, Zambia Wetlands Project

Wildlife Conservation Revolving Fund

Watson Chisubo Financial Manager
Clement S. Mukelabai Co-ordinator
Elvis Simbile Accountant

Nyamaluma Research and Training Center

(Institute for Community Based Wildlife Management)

Evan Changala Computer Operator-GIS
Robisa Kamfua Unit Leader (Training)
James Katumbi Computer Operator-GIS
Pius Lilanda Principal, Administrative Coordinator
Dale Lewis Technical Advisor
Moses Mwalasia Administrator
Douglas Nyendwa Tannery Manager and Instructor
Andrew Phiri Sociologist
Henry Phiri Drill Instructor
Lazalous Chibanga Village Scout in training-East Mugalangu GMA
Chaltones Mizi " " -Sichifulo GMA
Adrone Mumba " " -West Petuke GMA
Frederick Shamolenge " " -Lower Luano GMA
John Phiri In training-Member Lumimba GMA MSA

Lumimba GMA-NPWS and ADMADE

Alfred M. Nawa Wildlife Police Officer
Aaron Phiri Wildlife Police Officer
Skaz Banda ADMADE Bookkeeper
Lameck Kata Village Chief
Dumase Banda Member, Peter Henkins Womens Club
B. Kachepa " "
A. Kanpike " "
C. Misandila " "
P.C. Ndonyo " "
Ired Sakala " "

Lochinvar National Park

Henry Kaholo Wildlife Police and Research Officer

Kafue National Park (At Gawa's Gate)
Gawa Nelson Salwana Unit Leader
Deputy Unit Leader
Jackson Mwenya Game Warden at Chunga
Paul Zzyambo Management Biologist

Mokambi Lodge (In Mumbwya GMA)
France Favard Owner and Honorary Scout
Michael R. Mwanza Wildlife Police Officer for the Lodge
David M. Nyembo Owner and Honorary Scout

Chubuwma WMSA
Chubuwya Village Chief
Members of WMSA Two headmen, four farmers, three villagers,
school headmaster and one (female) teacher,
two Council officers (health and livestock).

Others in Zambia

Howard Aller Cabmont Investment Corporation
Joey J de Beer General Manager, New Capital Bank
Graham Child Zimbabwean writer/evaluator on CBNRM
Hal Cope American Wildlife Conservationist
George Miller Owner, Lilayi Game Ranch
John Msamba Country Coordinator, Luthern World Foundation
Edwin Vos Rural Development Advisor, European Union
P.J. Fouche Grantee, U.S. Park and Wildlife Service

World Wildlife Fund

Richard Jeffrys WWF/International, Zambia Country Director
Cynthia Jensen WWF/Washington, Director for Southern Africa
Alexander Pope WWF/Zambia, Wetlands Project
Peter Tilley WWF/USAID Cooperative Agreement/Zambia

USAID/Lusaka

Cynthia Bryant Executive Officer
Val Mahon General Development Officer
Charles Mohan Program Economist
Joe Stepaneck Mission Director
Rudy Thomas Deputy Mission Director
Jim Polhemus Democratic Initiatives Officer
Steven Wiersma Health Project Advisor

University of Florida

Thomas T. Ankersen Staff Attorney, College of Law
Richard Hamann Center for Governmental Responsibility

IUCN/Washington

Achim Steiner Director, Washington Office
Elizabeth Rihoy Consultant

USAID/Washington

Tony Pryor Global Bureau, Natural Resources Officer
Lynn Keyes Desk Officer, Africa Regional Programs
Tim Resch Global Bureau, Natural Resources Officer

ANNEX L
Documentation Reviewed

ANNEX I.

DOCUMENTS REVIEWED

- ADMADE, Adventures in Luminda Game Management Area with Chifunda and Myanya, Nyamaluma Community-based Wildlife Management Center, November 1994.
- Billings, J, A Report to USAID and the Ministry of Tourism's Department of National Parks and Wildlife Services on a Sustainable Community-based wildlife management mechanism, Unpublished, Lusaka, October 1994.
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- _____, NPWS Safari Hunting Monitoring Manual, Ministry of Tourism, NPWS, Zambia, March 1995.
- Lewis, D.M. and Peter Alpert, International Safari Hunting: Aiming a Green Bullet at African Wildlife, Unpublished paper, undated.
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- Nyamaluma Training and Research Center, Understanding Your Safari Hunting Industry: A Training Manual for Local Residents in ADMADE areas, NPWS, Zambia April 1994.
- _____, 3 Papers, A review of the 1994 Program, Proposed Program for 1994, Budget and Budget Justification, undated.
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- _____, Information Bulletin: ADMADE Scout Safari Monitors: The who's, the why's, the how's and results, 1995.
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Simasiku, P.A., Report of the Community Land Use Planning Workshop for the Namwala Game Management Area, Ministry of Tourism, NPWS, Zambia. July 1994.

_____, Report of the Community Land Use Planning Workshop for the Mumbwa Game Management Area, Ministry of Tourism, NPWS, Zambia, August 1994.

Steiner, Akim and Elizabeth Rihoy, The Commons Without the Tragedy? Strategies for Community Based Natural Resources Management in Southern Africa, SADC Wildlife Technical Coordination Unit, Malawi, March 1995.

ULG Consultants, Southern African Regional NRM Project of USAID: Mid-term Planning and Assessment of Zambia Component, Rosenthal, I - Team Leader, Harare, June 1994.

University of Florida, Letter to Mr. Ackim Myenya, Director, NPWS, Framework Concession Agreement and Selection Process for the Safari Industry in Zambia, May 30, 1995, Gainesville.

USAID, Natural Resources Management, Project Paper 690-0251, Washington, D.C., August 1989.

_____, Natural Resources Management Project, Project Paper 690-0251.11, Lusaka, September 1993.

_____, Project Status Reports, Regional Natural Resources Management Project - Zambia Component, USAID/Zambia, Quarterly through March 31, 1995.

_____, Project Implementation Letters, Zambia NRM Project, Lusaka, File through PIL No. 13 - April 28, 1995,

USAID/Zambia, FY 1997 Action Plan, undated, Lusaka

WWF Support to National Parks and Wildlife Service: ADMADE Program, Project Proposal Submitted to USAID/Lusaka, WWF Washington, D.C., August 1994.

Programme Development Strategy, (Draft) World Wide Fund for Nature, Zambia Country Program, Lusaka 1995.

WWF Support Project to the NPWS ADMADE Program, Quarterly Report(s), through January 1 to March 31, 1995.

Zambia, Republic of, The GRZ Policy for Wildlife in Zambia, approved by the Cabinet, August 25, 1993.

ANNEX M

Examples of Material Developed for Wildlife Monitoring

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ANNEX M

Database design structure for storing data files

Database directory path: \GLUANG\LUMIMBA\MWANYA YR_94\filename.ext (example)

REGION	GMA	HUNTING BLOCK (if more than one)	YEAR OF DATA	DATA FILES	(Computer program application)
LUANGWA					
	SANDWE				
	LUMIMBA				
		CHANJUZI			
		MWANYA			
			YR 93		
			YR 94		
				NPWS13	LOTUS
				FXA	LOTUS
				REPRT(1-9)	LOTUS
				SAFHUNT	LOTUS
				SAFLICE	LOTUS & ARC/INFO
				TROPHY	LOTUS
				CLIENT	LOTUS
				ACCOUNT	LOTUS
				PRIVATE	DBASE & ARC/INFO
				ADMADE	DBASE & ARC/INFO
				SUPLICE	LOTUS
				CUSTOMER	LOTUS
				HUNTER	LOTUS
				EARNINGS	LOTUS
				QUOTA	LOTUS

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**TABLE 3. NPWS13 data on species hunted summarized
(all measurements given in inches, SCI methods)**

SPECIES HUNTED	NUMBER KILLED	TROPHY LENGTH	Sample size
Baboon	2		
Buffalo	15	39.4	14
Bushbuck	9	14.9	9
Crocodile	4		
Duiker	1	4.4	1
Eland	4	34.9	4
Grysbok	2	1.3	
Hippo	9	25.7	8
Hyaena	4	17.8	2
Impala	9	20.1	8
Klipspringer	2	3.6	2
Kudu	3	50.8	3
Leopard	5	16.3	1
Lion	6	23.0	1
Puku	13	17.8	12
Roan	1	23.0	1
Warthog	12	11.7	12
Waterbuck	2	24.4	2
Wildebeest	11	27.2	10
Zebra	8		
TOTAL:	122		

TABLE 4. NPWS13 summary of PH & client information

Total profess. hunters: 6

Total clients: 13

PH	CLIENT	LICENSE
J. Plody	A. Sanchez	42
J. Plody	P. Majbamo	45
N. Comson	M. Percy	467
A. Wilford	B. Sippleton	2034
L. Higgle	D. Quonson	2036
N. Comson	J. Sinsom	11
N. Comson	L. Portal	4
N. Comson	D. Fogle	491
A. Wilford	J. Bason	2005
S. Reemos	R. Morse	70
L. Higgle	S. Janos	74
F. Randale	S. Ricardo	88
L. Higgle	S. Janos	69

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TABLE 5. Dollar payments made by Njovu Safaris as per ECX receipts for Mwanya area

RECEIPT NO.	DATE of PAYMENT	DOLLAR PAYMENTS	CASH or CHEQUES
1751	12-May-94	\$13,100	T
1757	19-May-94	\$850	T
1766	27-May-94	\$3,500	C
1771	02-Jun-94	\$10,090	T
1795	21-Jun-94	\$87	C
1796	21-Jun-94	\$11,810	C
1417	30-Jun-94	\$255	C
1423	01-Jul-94	\$3,620	T
1430	06-Jul-94	\$15,980	T
1431	07-Jul-94	\$5,050	T
1412	13-Jul-94	\$1,500	C
1445	13-Jul-94	\$2,490	T
1448	15-Jul-94	\$82	T
1449	15-Jul-94	\$570	T
1458	19-Jul-94	\$52	C
1489	03-Aug-94	\$950	T
1314	10-Aug-94	\$850	T
1321	12-Aug-94	\$2,000	T
1328	15-Aug-94	\$10,370	T
1348	22-Aug-94	\$1,475	T
1366	01-Sep-94	\$263	T
1378	06-Sep-94	\$5,600	T
1384	07-Sep-94	\$1,240	C
1384	07-Sep-94	\$1,384	C
1439	08-Sep-94	\$1,270	T
1203	16-Sep-94	\$2,710	T
1220	27-Sep-94	\$2,550	T
1235	08-Oct-94	\$5,100	T
1246	11-Oct-94	\$3,095	T
1248	12-Oct-94	\$300	T
1250	13-Oct-94	\$1,210	T
1280	01-Nov-94	\$1,090	T
1287	07-Nov-94	\$320	T
1112	07-Dec-94	\$174	C
TOTAL:		\$110,987	

TABLE 6. Summary of ADMAD unit data on hunting returns compiled from SAFHUNT and SAFLICE (TROPHY form was not used in 1994)

SPECIES HUNTED	TOTAL HUNTED	TOTAL MALES	TROPHY LENGTH (Sample size)	EFFORT (days hunted)	(Sample size)	NUMBER WANTED	FROM WANTED # KILLED	HUNTING SUCCESS	
Buffalo	13	13	54.1	6	5.6	13	10	9	90.0%
Bushbuck	7	7	14.8	4	6.0	6	8	6	75.0%
Duiker	1	1	3.9	1	4.0	1	1	1	100.0%
Eland	4	4	40.5	1	1.0	1	5	4	80.0%
Hippo	9	9	26.5	4	2.8	9	8	8	100.0%
Hyaena	4	3			7.0	4	3	3	100.0%
Impala	9	9	20.7	4	3.9	8	8	7	87.5%
Klipspringer	2	2	3.8	2	11.5	2	2	2	100.0%
Kudu	3	3	50.3	2	9.7	3	4	3	75.0%
Leopard	5	5	11.8	1	6.4	5	5	5	100.0%
Lion	6	5			7.2	6	4	4	100.0%
Puku	13	13	17.0	6	4.5	12	9	9	100.0%
Roan	1	1			12.0	1	1	1	100.0%
Warthog	12	12	8.7	7	3.5	10	11	10	90.9%
Waterbuck	2	2			6.5	2	5	2	40.0%
Wildebeest	11	11	39.2	5	3.7	9	8	8	100.0%
Zebra	8	4			3.0	6	7	5	71.4%

Summary of clients who hunted in Kalungu for 1994

PH	CLIENT	GMA/PMT	WCRF/FEE	BEGIN	END	DAYS HUNTED	SAFARI TYPE
F. Randale	S. Ricardo	59464	10380	05-Nov	09-Nov	5	mini
J. Plody	A. Sanchez	9445		03-Aug	09-Aug	7	mini
J. Plody	P. Majbano	9447	7807	03-Aug	16-Aug	14	classical
A. Wilford	J. Bacon	7758	8737	23-Jun	06-Jul	14	classical
A. Wilford	B. Sippleton	7797	7566	08-Jul	21-Jul	14	classical
L. Higgle	S. Janos			08-Oct	15-Oct	8	mini
L. Higgle	S. Janos			08-Oct	15-Oct	8	mini
L. Higgle	D. Quonson	7796	7565	08-Jul	22-Jul	15	classical
N. Comson	L. Portal	8467	6693	17-May	27-May	11	classical
N. Comson	M. Percy	9451	7642	17-Aug	30-Aug	14	classical
N. Comson	D. Fogle	9495	10334	08-Sep	15-Sep	8	classical
N. Comson	J. Simsom	8478	8703	07-Jun	15-Jun	9	classical
S. Reemos	R. Morse	57408	10287	08-Oct	14-Oct	7	mini

Anomalies:

1. Field records for Janini only in name of husband
2. Portal may have shot buffalo on pot license #17793 according to SAFHUNT data. PH was Comson.
3. More than one animal was shot on a single license. This was documented for the following PH:
F. Randale, who hunted buffalo, wildebeest and crocodile on license #3035.
4. More than one buffalo are being shot on mini safaris (Reemos & Higgle)

TABLE 7 Client questionnaire data summary for Kalungu area / 1994

Sample size is 9 clients.

1. How would you rate your hunting experience in this hunting area?
 - 78% excellent
 - 22% good
 - 0% moderate
 - 0% poor
 - 0% very poor

2. What was the most positive quality about this hunt?
 - 67% abundance of animals
 - 78% good quality of trophies
 - 89% good hunting area
 - 89% good professional hunter
 - 89% good hunting camp (services, facilities, & staff)

3. What was the most negative quality about this hunt?
 - 22% land use disturbances (poaching, fires, snaring, etc.)
 - 22% difficulties in finding desired species of quality trophies
 - 0% poor standards of hunting camp
 - 22% bad licensing regulations
 - 11% bad hunting roads
 - 0% bad professional hunter

4. How would you compare Zambia's safari hunting rates to other African countries?
 - 0% very low
 - 0% low
 - 44% reasonable
 - 11% high
 - 44% very high

5. What is your impression of the wildlife management effort executed in ADMADE?
 - 75% excellent
 - 25% good
 - 0% moderate
 - 0% poor
 - 0% very poor

6. Did your professional hunter explain to you what the ADMADE programme is and how safari hunting revenues are supporting conservation programmes in the areas you hunted?
 - 100% yes
 - 0% no

7. Were you sufficiently satisfied with the quality of your safari hunt to return to Zambia and hunt again?
 - 100% yes

TABLE 9. Safari hunting quota for Mwanja's area and its utilization for 1994.

DATA NAME: QUOTA
 DATA SOURCE: LICENSING OFFICE
 SAFARI COMPANY: Nyumbu Safari

SPECIES	QUOTA	TOTAL VALUE(\$)	ISSUE	SALES VALUE(\$)	REMAINING	BALANCE VALUE(\$)
Baboon	100	\$3,000	2	\$80	98	\$2,940
Buffalo	23	\$17,250	11	\$8,250	12	\$9,000
Crocodile	15	\$8,100	3	\$1,620	12	\$6,480
Duiker, Common	6	\$1,020	1	\$170	5	\$850
Eland	2	\$1,760	1	\$850	1	\$850
Grysbok	6	\$720	3	\$360	3	\$360
Hartebeest	6	\$2,280	0	\$0	6	\$2,280
Hippopotamus	15	\$10,650	9	\$6,390	8	\$4,260
Hyaena	10	\$1,400	5	\$700	5	\$700
Impala	15	\$2,550	9	\$1,530	6	\$1,020
Klipspringer	3	\$1,200	1	\$400	2	\$800
Kudu	6	\$4,500	3	\$2,250	3	\$2,250
Leopard	6	\$9,000	5	\$7,500	1	\$1,500
Lion	7	\$10,850	7	\$10,850	0	\$0
Roan Antelope	5	\$8,750	2	\$2,700	3	\$4,050
Waterbuck	6	\$2,100	6	\$2,100	0	\$0
Wildebeest, Cookso	10	\$3,500	10	\$3,500	0	\$0
Zebra	10	\$5,000	7	\$3,500	3	\$1,500
Bushbuck	8	\$1,840	7	\$1,610	1	\$230
Bushpig	100	\$18,000	1	\$190	99	\$18,810
Puku	12	\$2,760	12	\$2,760	0	\$0
Warthog	12	\$2,400	9	\$1,800	3	\$600
TOTALS:	383	\$117,570	114	\$58,080	269	\$58,480
(W/O Bushpig)	283		113		170	

Measurement Records for Harvested Trophy Animals

SAFH/NE/ADMADE/NEWS

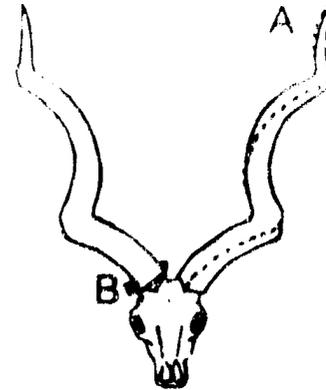
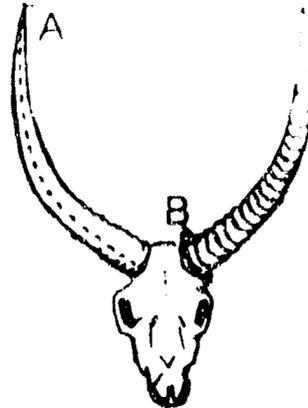
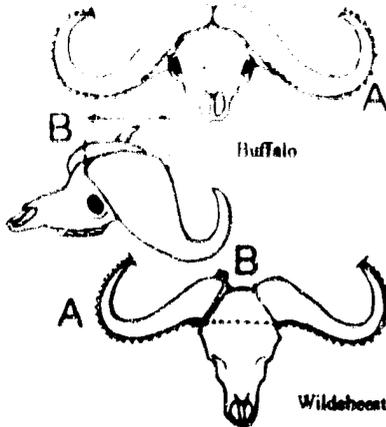
ADMADE Unit

Recorder

Professional Hunter

Client

Units for measuring (check one)
 inches _____
 centimetres _____



Straight or curved horned trophy species

Spiral horned trophy species

<p>Species _____ Date ___/___/___</p> <p>A. Tip to Tip _____</p> <p>B. Width (if buffalo) Circumference (if wildebeest)</p> <p>Left boss _____</p> <p>Right boss _____</p>	<p>Species _____ Date ___/___/___</p> <p>Left Right</p> <p>A. Length of horn _____</p> <p>B. Boss circumference _____</p>	<p>Species _____ Date ___/___/___</p> <p>Left Right</p> <p>A. Length of horn _____</p> <p>B. Boss circumference _____</p>
<p>Species _____ Date ___/___/___</p> <p>A. Tip to Tip _____</p> <p>B. Width (if buffalo) Circumference (if wildebeest)</p> <p>Left boss _____</p> <p>Right boss _____</p>	<p>Species _____ Date ___/___/___</p> <p>Left Right</p> <p>A. Length of horn _____</p> <p>B. Boss circumference _____</p>	<p>Species _____ Date ___/___/___</p> <p>Left Right</p> <p>A. Length of horn _____</p> <p>B. Boss circumference _____</p>
<p>Species _____ Date ___/___/___</p> <p>A. Tip to Tip _____</p> <p>B. Width (if buffalo) Circumference (if wildebeest)</p> <p>Left boss _____</p> <p>Right boss _____</p>	<p>Species _____ Date ___/___/___</p> <p>Left Right</p> <p>A. Length of horn _____</p> <p>B. Boss circumference _____</p>	<p>Species _____ Date ___/___/___</p> <p>Left Right</p> <p>A. Length of horn _____</p> <p>B. Boss circumference _____</p>
<p>Species _____ Date ___/___/___</p> <p>A. Tip to Tip _____</p> <p>B. Width (if buffalo) Circumference (if wildebeest)</p> <p>Left boss _____</p> <p>Right boss _____</p>	<p>Species _____ Date ___/___/___</p> <p>Left Right</p> <p>A. Length of horn _____</p> <p>B. Boss circumference _____</p>	<p>Species _____ Date ___/___/___</p> <p>Left Right</p> <p>A. Length of horn _____</p> <p>B. Boss circumference _____</p>
<p>Example species: Impala, Roan, Sable, Waterbuck, Lechwe, Puku, Reedbuck, Duiker, Oribi, Grysbok</p>	<p>Example species: Kudu, Eland, Sitatunga, Bushbuck</p>	

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REPORT (3) / SAFARI / NPWS

Name of company

Year HUNTING AREA

Game Management Area

Species purchased	Total animals purchased	Total animals killed
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		

Note: Please attach copies of supporting receipts of these purchases.

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REPORT (4) / SAFARI / NPWS

Name of company

Year Hunting Area

Game Management Area

	Camp employee Surname	initial	Job title	* Monthly wages	Duration employed	Place of permanent residence
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

*
If an operator feels that wages are confidential, then this information and only this may be exempt. Otherwise all information must be provided.

1/10

REPORT (6) / SAFARI / NPWS

Name of company

Year Hunting Area

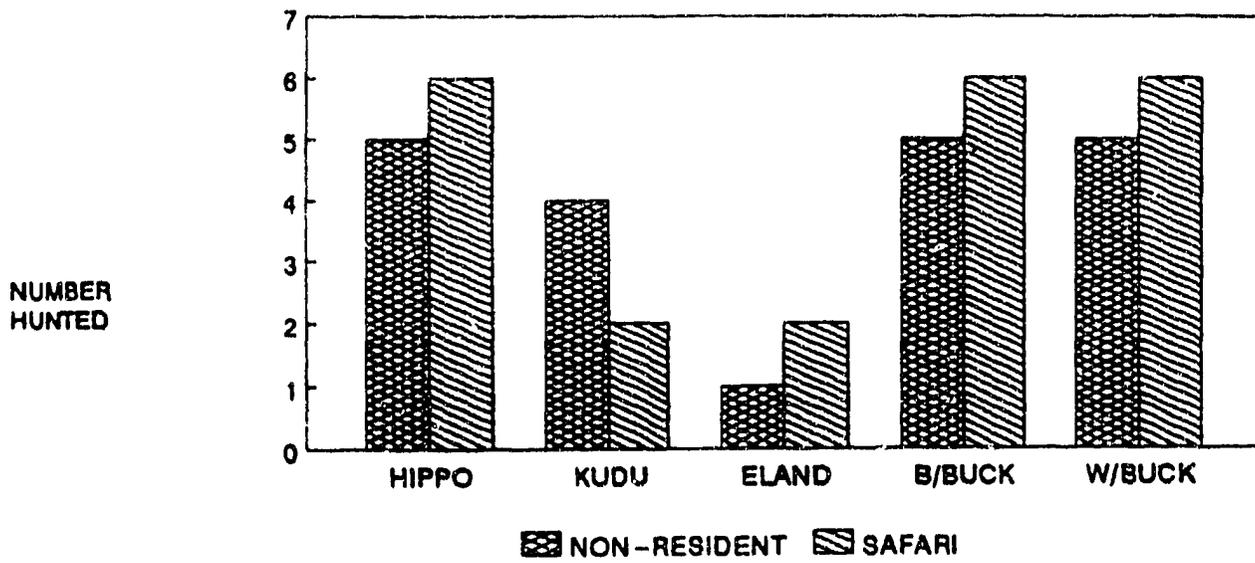
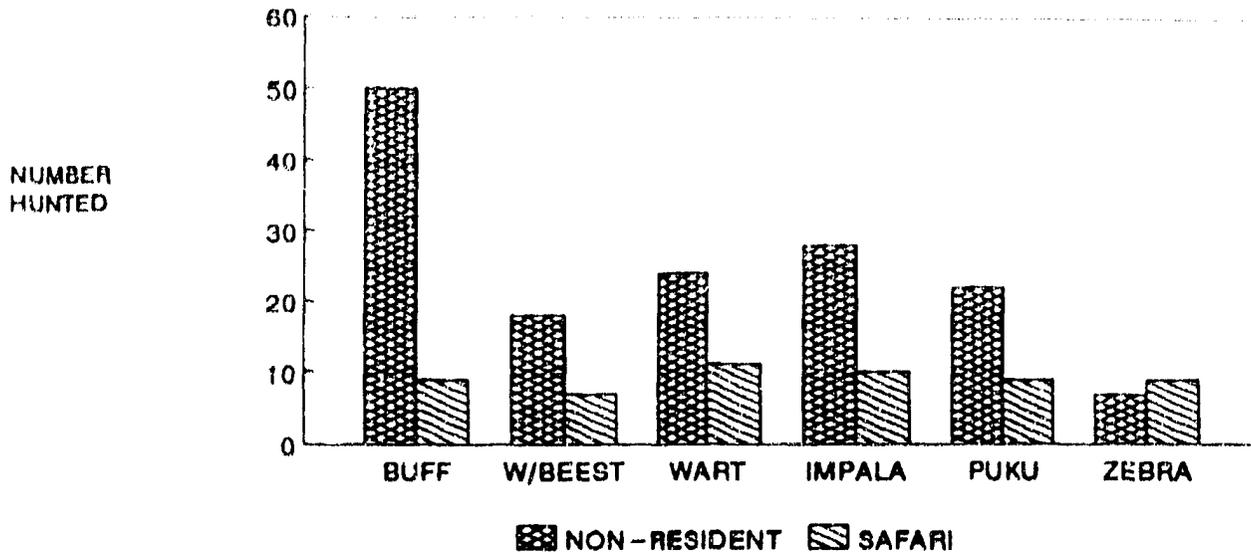
Game Management Area

Please write all disturbances your PHs and clients encountered which you considered as a conflict or potential threat to the safari hunting industry or which violated the spirit of agreement between your company and local community's support of the industry. Also, please attach completed dataforms called SNARE issued to all PH for recording snares found in your hunting area.

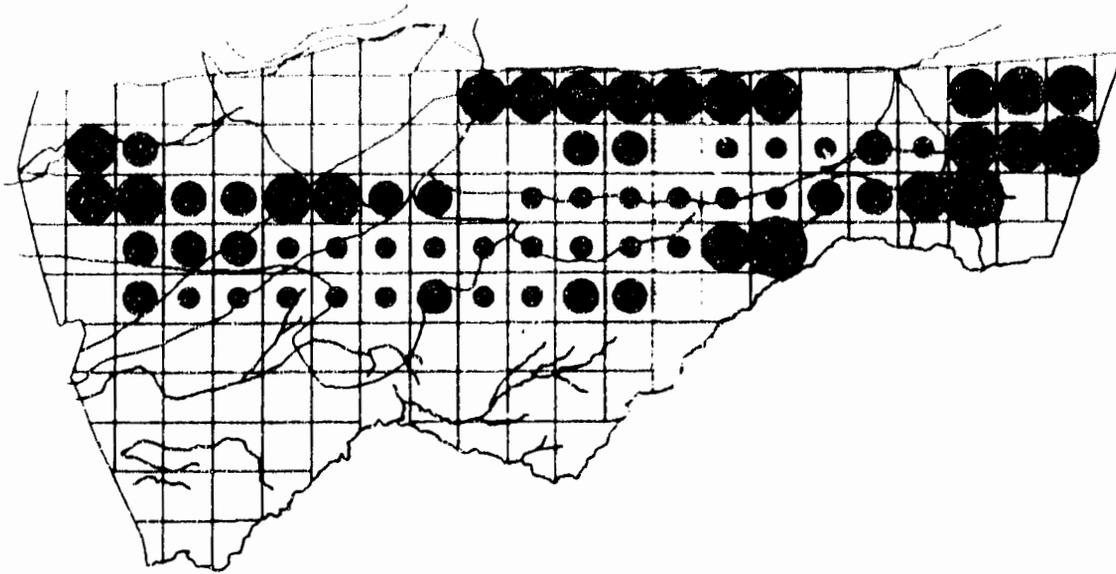
111



1993 COMPARISON OF ANIMALS HUNTED BY SAFARI CLIENTS VS NON-RESIDENT HUNTERS FOR LOWER LUMIMBA



Elephant distribution in Sichifulo, based on patrol data/ 1993



Elephant Distribution, '92

- 1 Least abundant
- 3
- 4
- 5 Most abundant

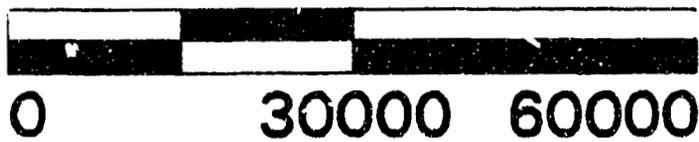
Roads.



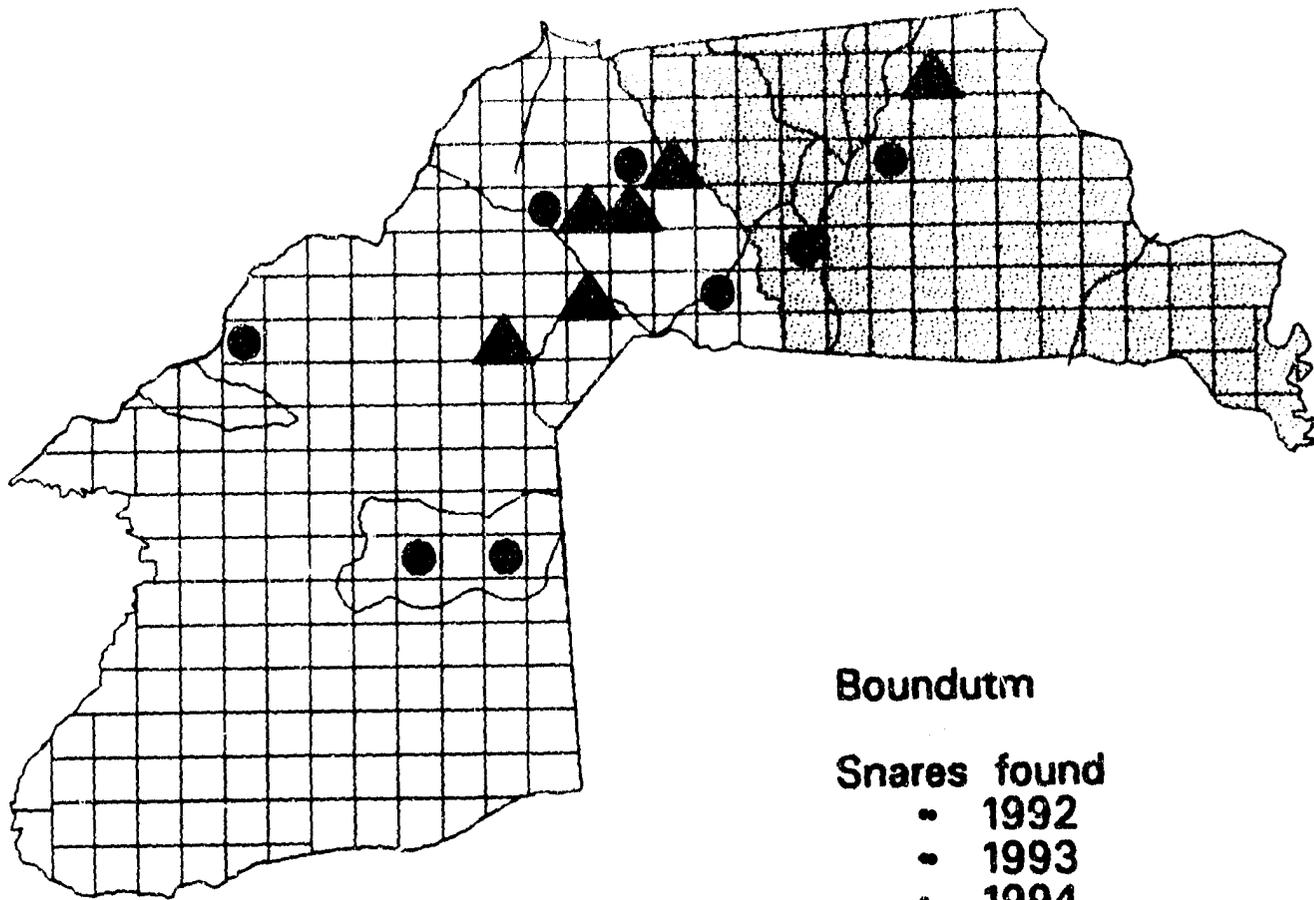
Rivers.



Grid5.



Poaching trends in Kasonso/Busanga / 1992-94



Boundutm

Snares found

- 1992
- 1993
- 1994

Carcasses found

- ▲ 1992
- ▲ 1993
- ▲ 1994

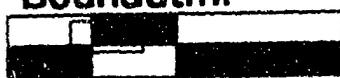
Roads.



Grid5.



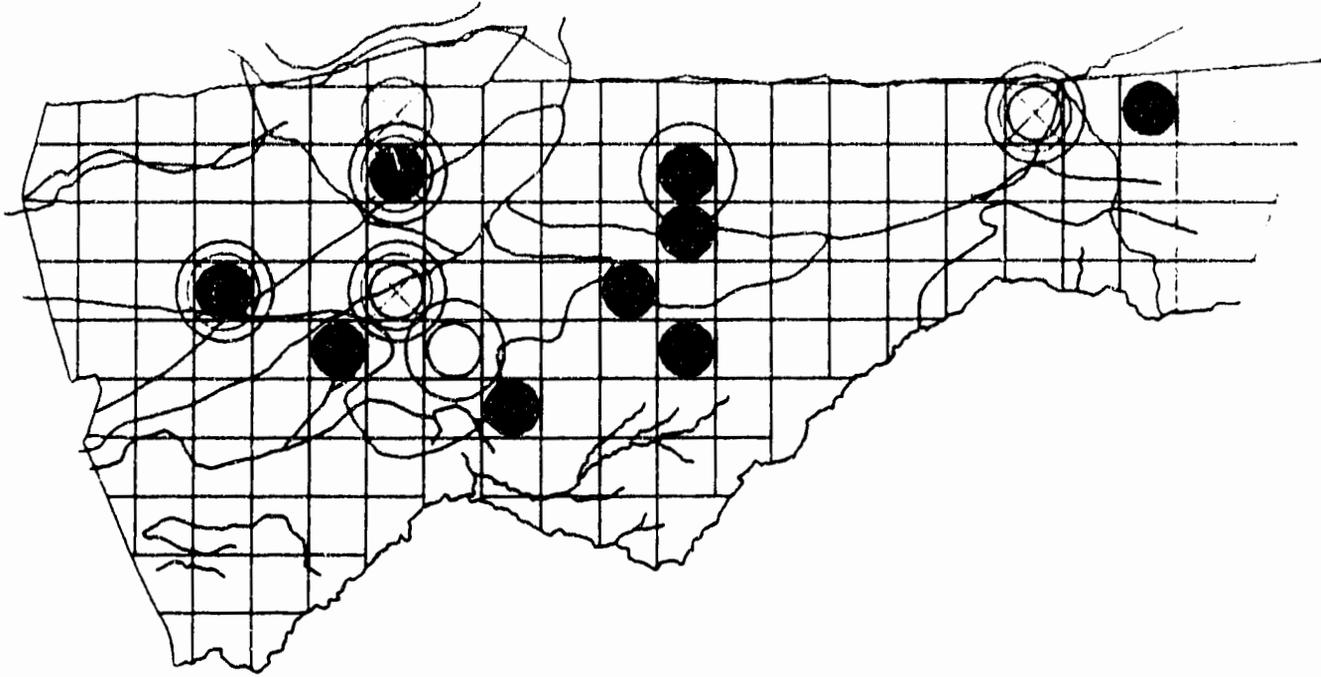
Boundutm.



0 20 40 60 80 100



Patrol summary for Sichifulo / 1993



Carcasses found 93



Poachers camps 93



Poachers encountered 93



Roads.



Rivers.



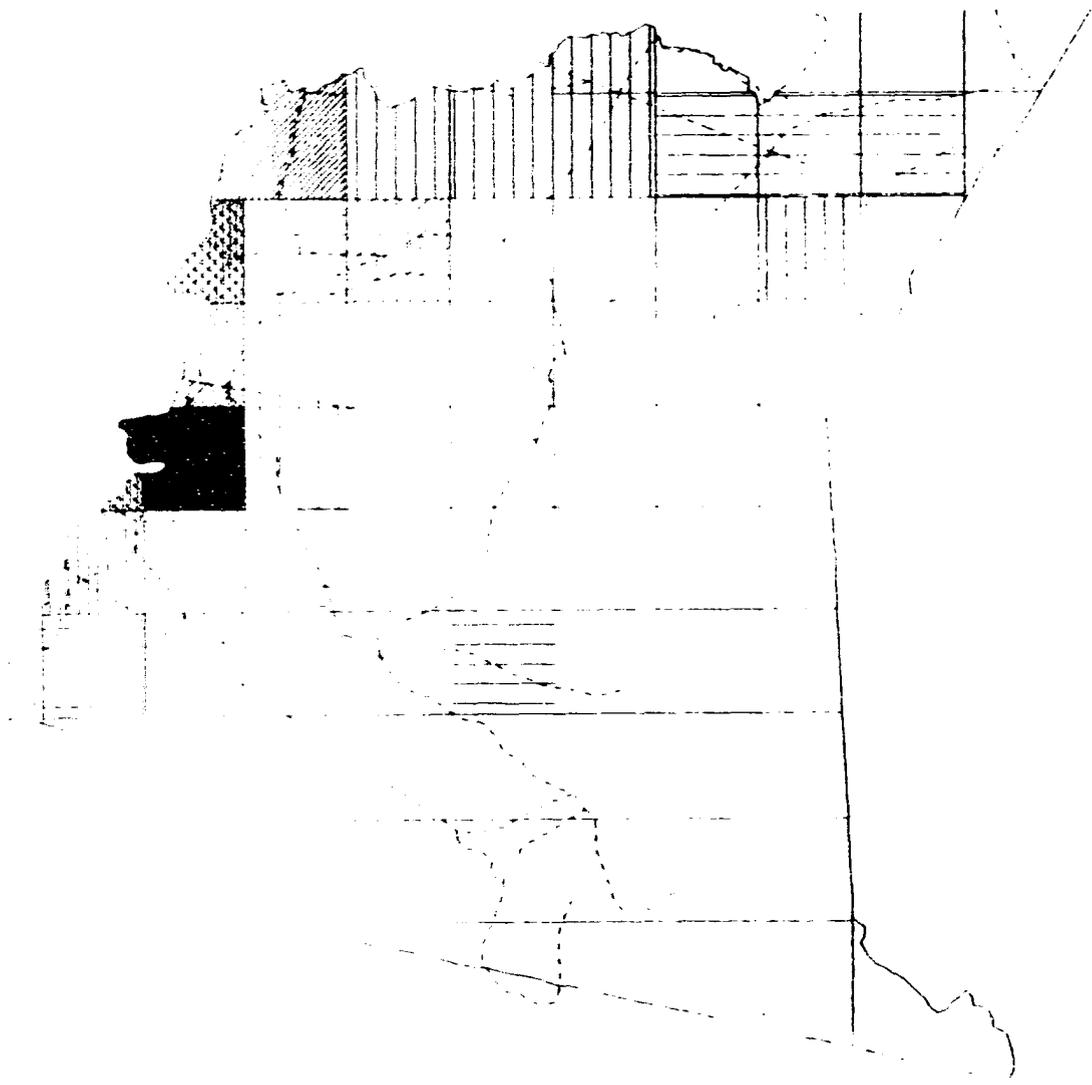
Grid5.



12/1

AB

2. AREAS HUNTED BY SAFARI CLIENT IN KALUUI. 1 1



Legend for number of
harvested per 5 km²

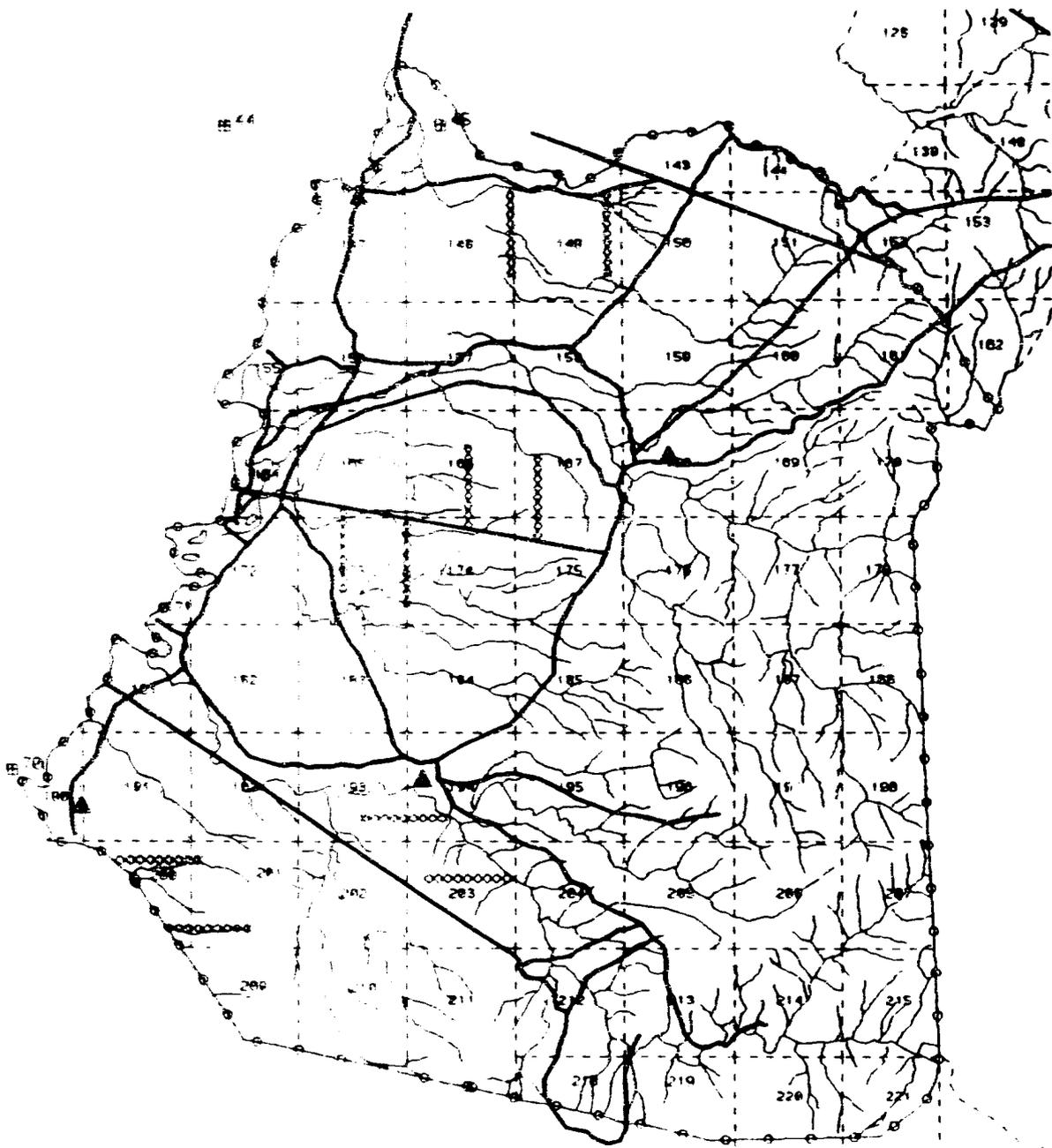
- 1
- ▤ 2-3
- ▥ 4-5
- ▧ 5-6
- ▨ 7-8
- ▩ 9-10
- 11-12
- 13-14
- 15-17

UNIT NAME	LOWER LUMIMBA	PERIOD	NO. OF							
TRANSECT NAME	A	TIMES TRANSECT OBSERVED	NUMBER							
SPECIES RECORDED	CODE	TOTAL SEEN TRANSECT	AVG NO/ DISTANCE	MEAN	STD AVG TIMES	MIN	MAX	AD FEMALE	YEAR LINGS	YEAR LINGS
Buffalo	2	12	1.20	205.00	0.00	0.00	0.00	0	0	0
Eland	4	1	0.20	141.00	0.00	0.00	0.00	0	0	0
Zebra	6	1	0.10	135.00	0.00	0.00	0.00	0	0	0
Zebras	7	14	1.40	95.00	0.00	0.00	0.00	0	0	0
Wildbeest	11	3	0.30	239.00	0.00	0.00	0.00	0	0	0
Kudu	14	4	0.40	202.00	0.00	0.00	0.00	0	0	0
Waterbuck	15	5	0.50	79.00	0.00	0.00	0.00	0	0	0
Puku	17	24	2.40	100.25	0.00	0.40	0.00	0	0	0
Impala	18	48	4.80	114.93	0.13	0.60	0.00	0	0	0
Warthog	19	6	0.60	172.33	0.00	0.30	0.00	0	0	0
Bushpig	20	11	1.10	69.00	0.00	0.00	0.00	0	0	0
Bushbuck	23	1	0.10	190.00	0.00	0.00	0.00	0	0	0
Saboon	25	40	4.00	92.50	0.00	0.20	0.00	0	0	0

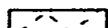
UNIT NAME	LOWER LUMIMBA	PERIOD	NO. OF							
TRANSECT NAME	A	TIMES TRANSECT OBSERVED	NUMBER							
SPECIES RECORDED	CODE	TOTAL SEEN TRANSECT	AVG NO/ DISTANCE	MEAN	STD AVG TIMES	MIN	MAX	AD FEMALE	YEAR LINGS	YEAR LINGS
Buffalo	2	11	1.10	208.00	0.00	0.10	0.00	0	0	0
Eland	4	13	1.30	115.00	0.00	0.20	0.00	0	0	0
Zebra	6	28	2.80	75.25	0.00	0.30	0.00	0	0	0
Wildbeest	11	10	1.00	95.00	0.00	0.00	0.00	0	0	0
Waterbuck	15	35	3.50	114.00	0.57	0.40	0.00	0	0	0
Puku	17	73	7.30	74.40	1.20	0.50	0.00	0	0	0
Impala	18	100	10.00	123.22	0.50	0.80	0.00	0	0	0
Warthog	19	9	0.90	117.50	0.00	0.00	0.00	0	0	0
Hyena	24	2	0.20	180.00	0.00	0.00	0.00	0	0	0
Saboon	25	34	3.40	64.00	0.00	0.00	0.00	0	0	0

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TRANSECTS in LOWER LUMIMBA (Base map)

-  ROADS
-  RIVERS
-  TRANSECTS
-  5 KM GRIDS
-  UNIT BOUNDARY
-  WILDLIFE CAMP