

Biodiversity Support Program



A U.S.A.I.D.-funded consortium of World Wildlife Fund, The Nature Conservancy, and World Resources Institute

PD ABW-083

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December 15, 1992

Dr. Twig Johnson
Director
Office of Environment and Natural Resources
R&D/ENR, 500 SA-18
U.S. Agency for International Development
Washington, D.C. 20523-1810

Dear Twig:

Enclosed is the Biodiversity Support Program's Eighth Semi-Annual Progress Report, for the period April 1, 1992 to September 30, 1992.

The Report contains an introductory section that highlights some of BSP's activities during the period. The report also contains activity summary sheets for all of BSP's activities that were ongoing or that concluded during the reporting period. Descriptions of the 34 research projects funded in the 1991/1992 research grants competition are also included.

If you have any questions or comments on the report, please give me a call.

Sincerely,

Kathryn Saterson

Kathryn A. Saterson, Ph.D.
Director

cc:

AID: Sy Sohmer, R&D/ENR
Jim Hester, LAC
Molly Kux, ASIA
Ron Greenberg, ENE
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Bonnie Pounds, USAID/The Gambia
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The Biodiversity Support Program's Eighth Semi-Annual Progress Report April 1 - September 30, 1992

I. Introduction and Background Information

The Biodiversity Support Program (BSP) is funded by USAID under the Bureau of Research and Development's Office of Environment and Natural Resources (R&D/ENR) Conservation of Biodiversity Project (No. 936-5554). A Cooperative Agreement (No. DHR-5554-A-00-8044-00) establishing BSP was signed September 30, 1988 between USAID and World Wildlife Fund, Inc. (WWF), with an initial ceiling of \$12,844,931 for a period of five years. Due to strong interest in BSP by overseas missions and other bureaus (an increased number of add-ons) and USAID's high degree of satisfaction with the Program, BSP's funding limit was increased to \$22,500,000 and a one-year extension was granted in August 1992. The Cooperative Agreement now ends on September 30, 1994. During the first five-year phase of the Program, funding will come from two sources: core funding from R&D/ENR and add-ons from missions and regional bureaus interested in participating in the program.

The project adopted the name "Biodiversity Support Program" (BSP) for public use. BSP is being implemented as a consortium effort with the formal collaboration of The Nature Conservancy (TNC) and the World Resources Institute (WRI). Beyond the three-member consortium of WWF, TNC, and WRI, the Biodiversity Support Program collaborates with a wide range of other U.S. and international conservation, scientific, and educational institutions involved in international conservation and development.

The goal of the Biodiversity Support Program is to conserve biological diversity while enhancing human livelihoods in selected developing countries through improved conservation and use of biological resources. Functionally, BSP works to facilitate conservation activities in USAID-assisted countries by working in collaboration with USAID missions and bureaus, government institutions, and nongovernmental organizations.

BSP has five major components: (1) technical assistance for USAID missions, host country institutions, and local PVOs; (2) a small research grants program for specific issues relevant to



USAID's conservation activities worldwide; (3) training focusing on the capacity of host-country conservationists and institutions to conserve biological diversity; (4) an information networking and evaluation component that compiles information on selected conservation activities of USAID and other U.S. institutions, analyzes it, and disseminates the results; and (5) pilot demonstration projects in the field funded largely by USAID mission or regional bureau add-ons (via contract amendments) to the program.

II. Overview of BSP Activities -- Highlights

The following are brief summaries of some of the projects which were completed between April 1, 1992 and September 30, 1992, or which are currently underway, that BSP considers significant for their impact -- or potential impact -- on the conservation of biodiversity.

The project numbers next to the project titles indicate which of the five cooperative agreement components the activity represents: "TA" is technical assistance, "RE" is research, "TR" is training, "IN" is information and evaluation networking, and "PD" is pilot demonstration projects. Detailed project activity summaries for BSP projects underway during the reporting period are attached.

Biodiversity Analysis of Africa (BAA) (Project #PD912C)

Under the Biodiversity Analysis for Africa (BAA) project, funded by the Africa Bureau, BSP has developed a long-term, action-oriented program to analyze and support key biodiversity conservation issues and initiatives in Africa. The BAA project is BSP's primary, ongoing effort to advance the understanding of biodiversity conservation in Africa. Results from the BAA activities are expected to influence the future direction of USAID's and BSP's conservation initiatives and strategies in Africa.

In order to guide and conduct its analysis, BSP established the African Biodiversity Consultative Group comprised of natural and social scientists -- six Africans and one American. The Consultative Group took the lead in developing the focus of the BAA project's strategy report, which analyzes critical issues and outlines a new strategy for conserving biodiversity in Africa. This process represents an innovative and successful approach for integrating African perspectives into BSP's analysis and programming. The strategy report is intended to assist the Africa Bureau, USAID missions in Africa, governments, and NGOs to shape organizational strategies and programs that will be more effective in conserving biodiversity and promoting sustainable development.

In conjunction with this analysis, BSP is supporting demonstration activities that explore key issues and innovative techniques for biodiversity conservation in Africa. BSP's objectives in assisting these activities are to keep its ongoing analysis fueled with information from field activities and targeted studies, build the biodiversity knowledge base, and improve the overall effectiveness of biodiversity conservation efforts in Africa. As part of this effort, BSP has targeted activities that include involvement of local people and institutions.

Through the Consultative Group and the demonstration activities, the BAA program is helping to build a process of collaborative action between U.S. and African individuals and institutions, which has generated a great deal of interest by all of those who have participated. These activities will continue under Phase II of the BAA project that began in October 1992.

BOSCOSA Evaluation - Costa Rica (PD924)

In order to improve conservation and program implementation and to better assess impact, BSP has made monitoring and evaluation an important component of the Program's strategy. USAID/Costa Rica asked BSP to coordinate an evaluation of the BOSCOSA project, which the mission has been supporting for the last three years. BOSCOSA is a multi-faceted, cutting-edge integrated conservation and development project on Costa Rica's Osa Peninsula. Originally focused on forestry activities, the project's scope has expanded to include improved agriculture, agroforestry, reforestation, and ecotourism activities, as well as improved credit opportunities.

After organizing a highly qualified team to carry-out the evaluation, BSP brought together Fundacion Neotropica, AID representatives, and the four-person evaluation team to help with the design of the evaluation process. Guided by the evaluation team, the group developed indicators to measure the impacts of the project's efforts. Analyses of these indicators were conducted during an eleven-day visit to the Osa Peninsula. The team visited project sites and conducted interviews with BOSCOSA staff, project beneficiaries, and other representatives of institutions working in the region. The indicators developed for this evaluation will guide project implementation and monitoring during the next phase of the project. A report on the evaluation's results, entitled Project Evaluation Report. BOSCOSA: The Program for Forest Management and Conservation on the Osa Peninsula, Costa Rica, was released December 4, 1992.

BSP will be providing technical assistance to Fundacion Neotropica for the development of a renewal proposal to USAID/Costa Rica for funding for the next three years of the

BOSCOSA project. An environmental assessment of BOSCOSA's forestry activities will be carried out simultaneously with the development of the renewal proposal.

Publication of "Designing Integrated Conservation and Development Projects" (IN927)

One of BSP's key objectives is to support and facilitate analyses of critical issues for conservation and to then disseminate the results and lessons learned to field practitioners, donors, non-governmental organizations (NGOs) and others. The publication of the report, Designing Integrated Conservation and Development Projects by Barbara Wyckoff-Baird and Michael Brown, marks BSP's first such analysis and publication. BSP received Asia Bureau funds to commission the study and R&D/ENR core funds to publish it.

Projects linking conservation and development have evolved over the last two decades. UNESCO's work on Biosphere Reserves in the 1970s, followed by the World Conservation Strategy (1980), focused international attention on ways to link core protected areas with multiple use zones. USAID's programming began to reflect the need to link conservation with development in a variety of new programs initiated in the mid-1980s, including the three USAID supported projects involved in this publication: Wildlands and Human Needs, PVO-NGO Natural Resource Management Support (NRMS) Project, and the Biodiversity Support Program.

Designing Integrated Conservation and Development Projects builds on these analyses and focuses specifically on what has been learned about "how to" design "integrated conservation and development projects" (ICDPs). Brown and Wyckoff-Baird outline what categories of issues need to be considered in ICDP design, and provide guiding questions for assessing options and feasibility. They provide realistic suggestions, given the constraints in time and funding that all programs face.

The book was released on December 7, 1992.

Bulgaria Biological Resource Conservation Strategy (PD915A)

The development of the Biological Resource Conservation Strategy (NBRCS) represents the first country-wide resources strategy to be generated for Bulgaria. The biological resources of Bulgaria are a rich and unique combination of northern and Mediterranean ecosystems. The strategy will encompass the conservation, protection, and sustainable use of the biological heritage of Bulgaria on both protected and private lands.

BSP is directing the NBRCS with funds from the Europe Bureau of AID. During this reporting period, five working teams have been established to develop the strategy. These are: biological

diversity team, socio-economic team, NGO team, environmental contamination team, and information team. Team leaders coordinate the development of background papers summarizing their respective issues. They will draw upon their own knowledge, the input of their colleagues, and counterpart team members. During the workshop, which will be held during the next reporting period, experts from the five thematic areas will meet and discuss the biological diversity and environmental contamination teams' topic area analyses to generate consensus on priority issues and areas for conservation action.

The process of planning this participatory workshop to develop the strategy is bringing together government agencies and nongovernmental organizations that were systematically isolated in the past. Although central planning was widespread under the previous regimes, multi-institutional and public participation which is blind to political affiliation is new to Bulgaria. As new linkages among groups are created, a more inter-disciplinary and broad-based natural resources strategy for Bulgaria will result.

Latin America and Caribbean Region Buy-In (PD895)

The Latin America and Caribbean (LAC) Bureau buy-in, begun in FY89, concluded during this reporting period. The six subprojects that make up this buy-in, in addition to being successful in their own right, were able to leverage significant financial support from other sources, thereby multiplying AID's investment.

In Belize, WWF's initiative to establish a Conservation Division specifically in charge of parks and protected areas within the forestry department, leveraged substantial additional support from USAID/Belize in the form of a cooperative agreement with WWF to implement the mission's new Natural Resource Management and Protection Project (NARMAP). In Ecuador, Wildlife Conservation International's (WCI) successful cloud forest project leveraged follow-on funding from USAID/Ecuador by promoting WCI's participation in the consortium selected to implement the SUBIR project. The consortium is working in and around the three national parks in Ecuador, including Cotacachi-Cayapas, which was one of the WCI's field site under the LAC buy-in. The Parataxonomists course in Costa Rica not only leveraged a large matching contribution from the Pew Charitable Trusts, but has become an important model for other similar training efforts worldwide. Finally, the Les Arcadins project in Haiti, which was also supported by matching funds from UNDP and WWF, has a very good chance of leveraging additional funds from UNDP should the political situation in Haiti stabilize.

The Gambia - Kiang West (TA902 and SP911)

The area in and around the Kiang West National Park is one of the last critical habitats for wildlife in the small West African country of The Gambia. The park is severely threatened, however, by human-related factors such as livestock production, agriculture, fire and poaching. Although Kiang West has been a designated national park for some years, there has been little funding available to protect it from damaging activities.

In 1989, the government of The Gambia (GOTG) requested the assistance of AID/The Gambia to assess the present ecological situation in the park and suggest measures to conserve this key national resource, as well as utilize it on a sustainable basis for the benefit of the local inhabitants and the nation as a whole. In 1990, at the request of AID/The Gambia, BSP carried out the initial assessment of KWNP. A team of 16 international and Gambian specialists in park management, sociology, ornithology, botany, zoology, natural resource economics, conservation education, ecotourism and fisheries completed the assessment and made recommendations to USAID and GOTG for follow-on actions.

In 1991, USAID requested that BSP continue to work in KWNP and follow through on recommendations as Phase II of the development of the Kiang West National Park management plan. A unique feature of the planning process is that representatives of key departments of the government and of local villages have closely collaborated in the plan's development. A multidisciplinary team was assembled -- including staff from several GOTG ministries that often do not coordinate their efforts: the Departments of the Environment, Agriculture, and Tourism. The team members spent several weeks living in the community to develop the plan and several community meetings in the project area were held. The management plan, completed in October 1992, outlines a long-term integrated conservation and development program. Examples of the proposed development activities include ecotourism and the sustainable use of selected park resources by local villagers.

Natural Resources Management Project -- Environmental Assessment in Indonesia (PD923 and PD923A)

At the request of USAID/Indonesia, BSP is producing the Environmental Impact Assessment (EA) of the field-based component of the USAID/Indonesia Natural Resource Management Project (NRMP). The NRMP is designed to improve analysis and testing of natural resource policies and management practices in Indonesia.

BSP is producing an EA of pilot management practices at the pilot sites. The EA examines pilot management activities which are designed to strengthen the ability of the Ministry of

Forestry to manage natural production forests and important protected areas.

Between September and November of this year, the EA team identified potential social and environmental impacts of project-funded field activities at the Bunaken-Manado Tua Marine National Park located in Northern Sulawesi and at the Bukit Baka/Bukit Raya Nature Reserve complex in West/Central Kalimantan and the adjacent Sari Bumi Kusuma forest concession. The BSP team will prepare a revised Initial Environmental Examination for the proposed activities at Gunung Palung National Park in West Kalimantan. The team recommended actions to minimize adverse environmental or social impacts and enhance beneficial impacts of proposed activities.

The BSP EA team is analyzing both the social and ecological impacts of the project. In the process, the team conducted four public "scoping sessions" in Indonesia to provide an opportunity for public participation in defining issues related to the social and environmental impact of a proposed project. WALHI, the major environmental NGO umbrella group, assisted BSP's EA team by working with local NGOs and communities to set up the public scoping sessions.

The BSP EA will serve as a model for future USAID EAs for natural forest management and park/reserve management projects. Both the process of conducting the EA and the written product are intended to improve the technical design of the NRMP, generate wider understanding and support for NRMP objectives, and demonstrate to the Ministry of Forestry and others the constructive role of an EA in project design.

III. General Management Issues

BSP Strategy Statement

BSP completed its strategy statement during this period. The document was based on issues raised in last year's mid-term evaluation and on the results of a retreat and many consultations between BSP staff and the Executive Committee. The final version of the BSP Strategy Statement is attached in Appendix 1.

One-year Extension

To ensure completion of ongoing activities beyond the existing BSP Cooperative Agreement September 1993 end date, and in order to consider taking multi-year add-ons beyond the original five year phase, BSP applied for and received a one-year extension in August 1992. The new end date is September 30, 1994. In anticipation of increased demand for BSP services from USAID missions and bureaus, a ceiling increase to \$22.5 million was also approved.

Staff Update

The following staff members began working with BSP during this reporting period (April 1, 1992 - September 30, 1992)

Chris Feral joined BSP in June 1992 as a research fellow, replacing Jim Webster who finished his fellowship. Before joining BSP, she worked at the New England Aquarium for almost seven years, at a photography studio for several years, and in the television industry for five years. Coauthor of Certified: A Citizen's Step-by-Step Guide to Protecting Vernal Pools, Ms. Feral also co-edited A Citizen's Guide to Protecting Wildlife Habitat. She received her BS in communications in addition to a pre-veterinary education and an MA in environmental policy from Tufts University.

Clarine Simpson joined BSP in October 1992 as a program secretary, replacing Satta Nallo who left to go back to school. Ms. Simpson is a recent graduate of George Mason University where she received a B.S. in public administration. Ms. Simpson worked with the Public Management Institute at George Mason University as a research assistant for two years, J.C. Penney Catalog Store as assistant manager, and as head customer service representative for Michael Round Fine China and Crystal. She is a native of Monrovia, Liberia.

A current BSP organizational chart is included.

IV. Program Financial Status

(See attached Financial Summary Table.)

V. Specific Program Activities

Attached are BSP's activity sheets for the five core components: Technical Assistance, Research, Training, Information Networking and Evaluation, and Pilot Demonstrations (Add-ons). These sheets are for activities that were completed during the reporting period or are in progress (new or ongoing). For those activities completed during previous reporting periods, please see the activity sheets included in the previous Semi-Annual Reports of Progress.

An historical listing of all of BSP's activities by country and region prefaces the individual activity sheets. An asterisk (*) indicates that the project is included in this report. In addition, attached is a "Key to BSP's activity Sheets" that explains each of the categories on the activity sheet and, where appropriate, lists the possible options.

Attachments:

- Current BSP organizational chart
- Financial Summary
- Complete List of BSP Activities by Region and Country
- Key to BSP's Activity Sheets
- BSP's Activity Sheets by Cooperative Agreement Component
(including descriptions of this year's Research Grants)
- Appendix 1: BSP Strategy Statement

SIX MONTH PROGRESS REPORT
 April 1, 1992 to September 30, 1992
 Expenditures for Reporting Period and Life of Project

COST ELEMENT -----	Expenditures This Period (Apr. to Sept.) -----	Life of Project Expenditures as of 09/30/92 -----
Salaries	172,642.38	778,604.73
WWF Indirect Costs	128,465.80	629,113.90
Travel & Per Diem	8,984.47	111,092.49
Other Direct Costs	16,787.72	180,895.64
Grants & Subcontracts (1)	1,982,996.09	6,647,769.33
	----- 2,309,876.46 =====	----- 8,347,476.09 =====

Footnote (1): Grants & Subcontracts Breakdown

	Expenditures This Period (Apr. to Sept.) -----	Life of Project Expenditures as of 09/30/92 -----
Technical Assistance	2,593.38	191,148.75
Research	499,875.95	1,160,821.21
Training	40,131.93	222,975.87
Information Networking	19,846.92	345,613.42
Pilot Demonstrations (2) & Earmarked Core (3)	1,420,547.91	4,727,210.08
	----- 1,982,996.09 =====	----- 6,647,769.33 =====

Footnote (2): Breakdown of Pilot Demonstrations

	Original Funding for Add-on	Expenditures This Period	Expenditures Life of Project
Thailand	449,993	3,154.49	197,782.22
LAC Bureau	500,000	16,422.29	494,273.32
ANE Bureau	290,717	35,267.31	276,682.63
Madagascar	100,000	602.19	97,476.94
Nepal	150,000	774.05	141,381.09
Gambia I	90,000	3,834.80	105,114.73
LAC/GCC	100,000	7,912.58	88,289.97
Mexico/GCC I	650,000	9,060.37	508,270.45
Africa I	1,440,000	329,083.59	746,993.22
APRE Bureau	555,852	115,177.56	251,542.32
ENE Bureau	800,000	87,349.08	147,634.81
No. Mexico	160,000	22,389.24	24,654.89
Mexico/GCC II	650,000	428,128.93	428,130.18
Indonesia	174,824	32,555.37	33,011.60
Costa Rica I	35,000	29,998.94	29,998.94
Costa Rica II	56,309	0.00	0.00
Honduras	135,000	225.66	225.66
Asia/Japan Centers	100,000	0.00	0.00
Asia Bureau	400,000	0.00	0.00
PPC/WID	30,000	0.00	0.00
	6,867,695	1,121,936.45	3,571,462.97

Footnote (3): Breakdown of Earmarked Core

	Original Funding	Expenditures This Period	Expenditures Life of Project
S&T/FENR (Misc.)	48,676	0.00	48,676
S&T/GCC I & II	1,136,000	174,805.30	969,153.86
PHG Supplemental	80,000	80,000.00	80,000.00
R&D/ENR Misc.	65,879	36,177.82	50,288.91
S&T/FENR APRE Supplemental	100,000	0.00	0.00
PARCS	300,000	5,186.08	5,186.08
Africa II	1,240,000	0.00	0.00
Cameroon	25,000	0.00	0.00
S&T/GCC III	168,000	0.00	0.00
R&D Japan Centers	300,000	2,442.26	2,442.26
	3,463,555	298,611.46	1,155,747.11

Other BSP Projects:

	Original Funding	Expenditures This Period	Expenditures Life of Project
AID/Gambia II	250,000	111,828.64	155,958.83
FSP/P.E.P.	90,000	10,000.00	10,000.00
WRI Sust. Development	56,466	37,738.54	37,738.54
NPS/Asia	8,000	0.00	0.00
	404,466	159,567.18	203,697.37

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Complete List of BSP Activities by Region and Country

<u>Project</u>	<u>Number</u>
<u>Latin America and the Caribbean</u>	
<u>LAC Regionwide</u>	
Debt for Nature Brochure: Por Que Canjear Deuda por Naturaleza?	IN902
*LAC Buy-in	PD895
LAC/GCC Macroeconomics Buy-in	PD904
Strategic Proposal Design Workshop	TR905D
<u>Caribbean Regionwide</u>	
Atlantic Center for the Environment (ACE) NGO Manager Training	TR903
Strategic Proposal Design Workshop	TR905C
ACE NGO Training	PD895E
<u>Argentina</u>	
*Small Mammal Conservation in the Puna Area of Bolivia and Argentina	RE911
<u>Belize</u>	
*Establishment of a Conservation Division and Expansion of Protected Areas System	PD895C
<u>Bolivia</u>	
Forest Inventory	TA905
*New York Botanical Garden's Amboro Inventory	PD895F
Vicuna Management by Communities on the Bolivian Altiplano	RE901
Establishment of Experimental Forestry Plots Using the Strip-Shelterbelt System along the Chimore-Yapacani Road	RE901
Determining Land Requirements for Sustainable Hunting among Native Amazonians: The Siriono of Eastern Bolivia	RE901
*Evaluacion de la diversidad ecologica y potencialidad del territorio en los valles secos interandinos del dep. de Cochabamba, Bolivia	RE911
(See additional Research Grant under Argentina)	
<u>Brazil</u>	
*S&T/FENR GCC Buy-In	PD902
WWF: Amazon Forest Management and Policy	PD902B
Biological Dynamics of Forest Fragments (BDFF)	PD902C
WHRC: Restoring Agricultural Productivity on Degraded Amazonian Lands	PD902D
*S&T/GCC and NYBG: Commemorative Issue	PD902E
*Biological Dynamics of Forest Fragments II	PD902H
*Restoring Agricultural Productivity II	PD902I
*Amazon Forest Management & Policy II	PD902J
Rapid Ecological Assessment of a Proposed Conservation Unit in the Pantanal	RE901
Supplementary Funding for the Implementation of the Estacao Ecologica do Lago Mamiraua in the Flooded Forests of the Upper Amazon	RE901
Utilization of Biodiversity by a Threatened Foraging Society - Guaja Indians, Maranhao	RE901
*Levantamento Etnobiologico na Estacao Ecologica Jureia-Itatins	RE911
<u>Chile</u>	
Botanical Conference Support	IN918
The Influence of Gracilaria chilensis Cultivation on the Benthic Macrofaunal Community in the Maullin Estuary	RE901
Assessment of Biodiversity Patterns in the Mediterranean-Type Climate Flora of Central Chile	RE901

*Projects included in Eighth Semi-Annual Progress Report (April 1, 1992 - September 30, 1992)



*Biodiversidad y Pesca Artesanal: Manejo Experimental de Recursos Marinos Bentonicos en la Costa del Centro-Norte de Chile	RE911
Colombia	
Restoration of Abandoned Agricultural Land in the Lowlands of Choco	RE901
Characterization of Vegetation and Variation in Biodiversity According to Land Use in the Rio Buritaca Watershed	RE901
*Rapid Assessment of Biodiversity in the Living and Dead Mangrove Forests of the Cienaga Grande de Santa Maria, Colombia	RE911
*Manejo de Bosques Privados y Repoblacion Forestal con Especies Nativas en la Franja Altoandina Colombiana	RE911
*The Role of Indigenous Women in the Reproduction of Plant Cultivars in the Colombian Amazon	RE911
Costa Rica	
Parataxonomists Course	TR901
INBIO Parataxonomists Course	PD895A
*BOSCOSA Evaluation Costa Rica Buy-in	PD924
*Costa Rica II	PD929
Butterfly Farming in Costa Rica	RE901
Sea Turtles and the Conservation of Biodiversity in Costa Rica: A Local Solution	RE901
The Importance of Forest Fragments to the Maintenance of REgional Biodiversity Surrounding a Tropical Reserve	RE901
Valuation of the Non-Priced Amenities Provided by the Biological Resources within the Monteverde Cloud Forest Preserve	RE901
Ecuador	
DESFIL Workshop and SUBIR Project Planning	TA893
SUBIR Project Technical Assistance	TA914
*Population Ecology and Conservation Biology, Post Graduate Course	TR911
*Population Ecology II	TR922
*WCI Cloud Forests	PD895B
The Economics of Agricultural Land Clearing in Lowland Ecuador	RE901
Guatemala	
The Impacts of Different Systems of Production on the Biodiversity of Guatemala's Semiarid Regions	RE901
*Identification of Nij insects and their wax: deriving a sustainable industry from biological resources used by the Maya	RE911
*La interrelacion entre conservacion, desarrollo de la comunidad, y calidad de vida humana: un analisis de la poblacion indigena Kekchi	RE911
Haiti	
*Les Arcadins Marine Park	PD895D
Honduras	
*Technical Assistance to Fundacion VIDA	PD928
Vertebrate Faunal Inventory and Human Ecology in the Rio Platano Biosphere Reserve	RE901
Mexico	
Participatory Leadership Workshop/Mexico	TR905A
Strategic Proposal Design ODP Workshop	TR921a
*Publication of Montes Azules Research Volume	IN916
*Ecodevelopment Program Buy-in	PD903
Community Development in Chimalapas, Oaxaca	PD903A
Calakmul Buffer Zone Development Reserve	PD903B
El Ocote Sustainable Development, Chiapas	PD903C
*Community Development in the Buffer Zone of El Triunfo Biosphere Reserve, Chiapas	PD903D
*Participatory Rural Appraisal Training Program	PD903E
*El Ocote Environmental Education, Chiapas	PD903F
*South Mexico Buy-in	PD913
*Community Development in Chimalapas, Oaxaca II	PD913A
*Calakmul Buffer Zone Development II	PD913B
*El Ocote Sustainable Development, Chiapas II	PD913C
*El Ocote Environmental Education, Chiapas II	PD913E
*Calakmul Forestry Project	PD913F
*Northern Mexico II Buy-in	PD916
*Feasibility Study Northern Mexico GCC	PD916A
Quantifying Use and Evaluating Value of Ethnobotanical Resources in the Sierra de Manantlan Biosphere Reserve	RE901

Inventory of the Entomological Fauna of the Lacandon Forest, Chiapas: Lepidoptera: Heterocera RE901
 Maintenance of Biodiversity in the Tehuacan Valley: Social, Economic, and Geographic Factors Influencing Human Use of Wildland Resources RE901
 *Patrones de Distribucion Geografica de Cactaceas Amenazadas del Desierto Chihuahuense RE911
 *Sustainable Silviculture at the "Plan Piloto Forestal" in Quina Roo RE911

Panama

Restoration of Eastern Pacific Coral Reefs (Costa Rica, Panama, Colombia): An Approach to Maintain Regional Biodiversity RE901
 Sea Turtle Research and Protection Program: Bastimentos Island National Marine Park RE901
 *The Implementation of a Long-term Monitoring Project of Amphibian Population in Panama RE911

Paraguay

Butterflies of Paraguay RE901

Peru

Biodiversity, History, and Future of Rio Abiseo National Park RE901
 Dynamics of Natural Regeneration in a Tropical Forest Harvested Using the "Strip-Shelterbelt" System RE901
 Jurisdictional Conflicts in the Public Administration of the Environment in Peru and the Process of Constituting a National System for the Environment RE901
 *La Mujer y Las Plantas Silvestres en la Comunidad Aguaruna Huambisa del Rio Marañon RE911
 *Manejo Sostenido del Bosque Tropical: El Role de la Interaccion Quiroptero - Planta RE911

St. Kitts

*Promoting the Development of a National Parks and Protected Areas System: An NGO led Research Program RE911

Africa

Africa Regionwide

*AID Biodiversity Portfolio for Africa TA907
 Lake Tanganyika Conference on Conservation and Biodiversity TA908
 Buffer Zone Management Workshop Publication IN904
 Central Africa Global Climate Change Project PD902F
 *Africa Bureau Buy-in PD912
 *Central Africa Global Climate Change Action Plan PD912A
 *AID Biodiversity Project Portfolio and Strategy PD912B
 *Biodiversity Pilot Analytical Projects PD912C
 *PARCS Proposal Buy-in PD922
 *Africa II PD926
 *Attitudes PD926A
 *Global Climate Change PD926B
 *Biodiversity Analysis for Africa PD926C

Burundi

Study of the Nursery Zones in the Nearshore Environment of the North Basin of Lake Tanganyika RE901
 *The Kibira Chimpanzee Project RE911

Cameroon

*Natural Resource Management Plan PD927
 *Consequens de l'exploitation forestiere industrielle sur l'ecosysteme de foret dense equatoriale et sur le mode de vie des population indigenes RE911

Central African Republic

Conservation Education in South western CAR IN915

Ghana

Study of Traditional Conservation of Biodiversity (Sacred Groves) RE901

Guinea-Bissau

Southern Province Park Planning TA901

Kenya

Traditional Utilization of the Reticulated Giraffe by the Oromo Peoples of Northern Kenya: Current Conservation Status and Proposals for its Protection RE901

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Establishment of Kitchen Gardens for Indigenous Food Species in a Masai Group Ranch Area in Kajiado District	RE901
Fig Tree Harvesting in the Tana River Reserve and its Implications for Two Species of Endangered Primates	RE901
<u>Madagascar</u>	
Buy-in	PD892
Andohahela Nature Reserve	PD892A
Beza Mahafaly Nature Reserve	PD892B
Butterflies as Biodiversity Indicators: Developing Tools for Conservation Planning in Madagascar	RE901
Alternatives to Destruction: Steps Toward Sustainable Use of Malagasy Rainforest	RE901
Conserving Local Biodiversity in Madagascar: the Population Biology and Conservation of an Endangered Keystone Palm	RE901
*The Economic Implications of Biodiversity Protection in Madagascar	RE911
<u>Nigeria</u>	
Development and Utilization of Fast Disappearing and Underutilized Edible Woody Forest Species in Southeastern Nigeria	RE901
<u>Rwanda</u>	
*Potentialites et Facteurs Affectant la Diversite Biologique dans les Forests de Montagne	RE911
<u>Tanzania</u>	
Mafia Island Marine Park/Reserve	TA912
The Impact of Different Fishing Techniques on the Maintenance of Biological Diversity of Inshore and Pelagic Fishes of Lake Tanganyika	RE901
*Social Constraints in Community Forestry: A Case Study of Iringa Rural District	RE911
<u>The Congo</u>	
WCI Conservation Assessment	TA909
<u>The Gambia</u>	
Kiang West National Park Assessment-Supplemental	TA902
Kiang West National Park Plan	PD901
*The Gambia Kiang West National Park II	SP911
<u>Uganda</u>	
*The Role of seed predation and herbivory on forest regeneration and community composition in the Kibale Forest Reserve	RE911
<u>Zambia</u>	
*Support for Land Use Planning of Zambia's Wildlands National Parks and Wildlife Services of Zambia	RE911
<u>Asia</u>	
<u>Asia Regionwide</u>	
Strategic Proposal Design Workshop	TR902
*ANE Bureau Buy-in	PD894
*Asia Bureau Buy-In	PD911
Linkages between Enterprises and Conservation	SP921
<u>Bangladesh</u>	
Assessment of Biodiversity of Teknaf Game Reserve on Bangladesh Using Keystone Species	RE901
*Conservation of Faunal Resources of Hail haor (Wetland) and their Utilization by Local Communities	RE911
<u>Borneo</u>	
Forests and People: Conservation for Development	IN895
<u>India</u>	
Buffer Zone Restoration Assessment	SP891
Biodiversity and the Exploitation of Wild Fruits in the Tropical Forests of Arunachal Pradesh	RE901
*Ecology of Indian Megachiropteran Bats	RE911
*Development of people's institutions for participation in management of forest resources	RE911

Indonesia

Dipterocarp Mast Fruiting TA9010
Tangkoko Mature Reserve TA921
Financial Resource Development Workshop TR905B
*Forest and People in Kalimantan Conference (NYBG) IN912
Senior Advisor, PHPA PD894A
NRNP Environmental Assessment Buy-in PD914
*Indonesia Environmental Assessment PD923
*US/Japan Center in Indonesia PD925
*Interagency Workshop on Biodiversity Database PD9210
The Effects of Selective Logging on Dipterocarp Forest Regeneration and Dipterocarp
Seed Predators in Kalimantan RE901
*Adnat Ethnobotany RE911

Morocco

Merja Zerga Biological Reserve Land Use Study RE901

Nepal

NECTARI Report TA891
*ACAP and NECTARI Buy-in PD893
Annapurna Conservation Area Project PD893A
*NECTARI PD893B
Biodiversity in the Shivapuri Watershed and Wildlife Reserve RE901

Pakistan

*Himalayan Jungle Project PD894C

Papua New Guinea

*NGO Element of Conservation Needs Assessment TA911
*Papua New Guinea Conservation Needs Assessment PD894D
*Small Grants Program PD911E
Reseeding of Selectively Logged Rainforests by Buffer Zones: A Case Study of Logging
Operation in PNG RE901
*Maintaining Biodiversity through the Establishment of a Wildlife Management Area in
Madang Province RE911

Philippines

Foundation Design TA906
Ecological and Physiological Aspects of Frugivory in Philippines Species of Pteropodidae RE901
*Non-Timber Forest Products and Biodiversity in the Palanan Wilderness Area RE911

South Pacific

Priority Ecosystems Inventory TA904
South Pacific Short-term Assistance TA913
*Profitable Environmental Protection Project - Monitoring and Evaluation TA922
TNC South Pacific CDC Development PD894B
Pacific Science Biodiversity Symposium PD905B
*Pacific Support/Program Officer PD911C
*Profitable Environmental Protection SP922

Sri Lanka

Medicinal Plants Assessment TA903
AID Regional Conference in Sri Lanka PD911A
Research in Horton Plains National Park RE901
*Evaluation of Forest Use Methods by Peripheral Village Communities in the Knuckles
Range RE911
*A Phytosociological Study of the Angiosperms in Lowland Wet Tropical Forests of
Sri Lanka RE911
*Spatial and Temporal Diversity of Coral and Algal Communities of SW Sri Lanka RE911

Thailand

MANRES Project Planning TA892
Publication of Flora of Thailand IN893
World Bank Regional Meeting on Biodiversity IN904
*MANRES Biodiversity Research & Conservation PD891
US Study Tours PD891A
*Information Transfer (books, journals, videos) PD891B
National Botanical Assessment PD891C
NGO Seminar on Conservation and the Environment PD891D
*WFT Small Grants Program and Institution Strengthening PD891E

*Huay Kha Khaeng/Thung Yai Florula	PD891F
Speaker for GCC Conference	PD891K
*Technical Assistance for Asia	PD891M
*Ecology and Numbers of the Asian Elephants in Huai Kha Khaeng Wildlife Sanctuary	RE911

Eastern Europe

Eastern Europe

*Biodiversity in Central Europe Buy-In	PD915
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Bulgaria

*Needs Assessment for Biological Resources Conservation Strategy	PD915A
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Czechoslovakia

*Strengthening NGO Participation in Czech and Slovak Republics	PD915D
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Hungary

*Exploratory Biodiversity Studies in the Former "Iron Curtain" Zone on the Western Border of Hungary	RE911
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Worldwide or General Activities

*1990/1991 Research Grants Competition	RE901
*1991/1992 Research Grants Competition	RE911

Smithsonian Institution's Wildlife Conservation and Management Course	TR904
WWF/ODP Training Workshops	TR905

ODP Training Guides: Designing Effective Proposals & Financial Resources Development	TR905E
*Organizational Development Training	TR921
*Organizational Development Publications	TR921b

Biodiversity Seminar Series 1989	IN891
WRI Investment Survey for 1987	IN892
IUCN Report: Biodiversity Funding Mechanisms	IN894
Biodiversity Seminar Series 1990	IN901
*Setting Priorities for Biodiversity	IN905
CMC Workshop on Marine Biodiversity	IN906
Publication of Gnusletter (1991)	IN907A
*Publication of Gnusletter (1992)	IN907B
WRI Investment Survey for 1989	IN908
Tropinet Newsletter	IN909
Women and Biodiversity Conference	IN9010
Biodiversity Seminar Series 1991	IN911
*WRI/WCMC Biodiversity '92/Expanded Investments Survey	IN913
National Forum on Ocean Conservation	IN915
*Conservation Biology Subscriptions	IN917
*Biodiversity Seminar Series 1992	IN921
*Sponsorship Two Participants to IV World Parks Congress	IN922
*Symposium "Can Nuts Save the Rain forest"	IN924
*UNCED UN Conference on Environment and Development	IN926
*Designing Integrated Conservation and Development Projects	IN927
*Women and Development Supplemental	IN928
*BSP Seminar Series 1993	IN931

S&T/FENR Miscellaneous	PD896
CITES Convention	PD896A
ISEE Symposium (participant support)	PD896B
ISEE Symposium (Conference support)	PD896C
IFAR Ex-Situ Report	PD896D
DAI Wetlands Report	PD896E
S&T Global Climate Change Buy-in	PD902
Cultural Survival: Rain forest Products Report	PD902A
Project Coordinator GCC	PD902G
R&D/ENR Miscellaneous Buy-in	PD905
*Women in Development Proposal	PD905A

National Science Foundation/AID Steering Committee on Biodiversity	SP901
Organization for Economic Cooperation and Development Report	SP902

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Key to BSP's Activity Sheets

PROJECT NUMBER: (located in upper right hand corner). The first two letters in the project number indicate the cooperative agreement component: "TA" is technical assistance, "RE" is research, "TR" is training, "IN" is information networking and evaluation, and "PD" is pilot demonstration projects (add-ons). "SP" indicates special projects. The two numbers following the letters represent the year the project began, and the final number represents the sequence of approved projects for that year.

STATUS: Indicates the status of the project in one word. The categories are: planned, new, ongoing, completed, on hold, and cancelled. For this report only projects that are new, ongoing, and completed (completed during the reporting period) will be included.

TITLE:

CA COMPONENT: One of the five cooperative agreement components (Technical Assistance, Research, Training, Information Networking, and Pilot Demonstration Projects). "Special Project" indicates that funding has come from sources other than the parent cooperative agreement for BSP.

TYPE OF ACTIVITY: Up to 6 types of activities are listed in order of significance. Activity types are: Buffer Zone Management, Community Development, Ecological Research/Inventory, Ecosystem Restoration, Ecotourism, Education/Public Awareness, Enterprise Development, Environmental Impact Assessment, Institutional Support, Program/Project Evaluation & Monitoring, Protected Areas, Public Policy, Resource/Ecological Economics, Socio-cultural Analysis & Research, Sustainable Use, Training, Various, Women in Development

FUNDING: Total U.S. dollar amount budgeted for the activity and the source of funds.

START DATE: The start date indicated in the contract or grant, or if there is no contract or grant, the date the activity began.

END DATE: Expected completion date.

PRIMARY IMPLEMENTOR: Name of the organization with primary responsibility for coordination and financial management of the project.

PRIMARY IMPLEMENTOR TYPE: Type of organization with primary responsibility for implementing the activity. Options include: Botanical garden or zoo, Corporation (for-profit), International NGO (eg. WRI, WWF, TNC), Foundation, Government, Museum, NGO, Private (often an individual), University, Various.

OTHER IMPLEMENTORS: Organizations that receive financial support directly or indirectly from BSP and are doing on-the-ground implementation (and are not the "primary implementor"). Up to five may be listed.

OTHER IMPLEMENTOR TYPES: Organization types that correspond to the organizations listed in the "other implementor" field.

COLLABORATORS: Organizations that contribute assistance, labor, materials, or funds to the activity, but do not receive BSP financial support (directly or indirectly) to do so. Up to ten may be listed.

CONTACT: The name and phone number of the person(s) from whom further information on the activity may be obtained.

LOCATION: Region (Africa, Asia, Pacific, Latin America, Caribbean, or Eastern Europe), country, site (specific project site). "Various" indicates that the project is in more than one location.

BIOME: The project's predominant biome. Biome types are: Tundra, Cold Desert, Arid Lands, Temperate Forest & Grasslands, Tropical Moist Forest, Tropical Seasonal Woodlands & Grasslands, Tropical Montane Forest, Wetlands/Brackish or Saltwater, Wetlands/Freshwater, River or Lake Systems, Coastal/Marine, Open Seas, Non-Specific.

PURPOSE: Concise summary of overall goals, objectives, or purpose for the project.

DESCRIPTION: A brief summary of the activities planned or conducted, including relevant background information.

SIGNIFICANCE: Describes how the project relates to conserving global biodiversity and to BSP program goals.

PRODUCTS/OUTPUTS: Expected results, technical papers, publications, outcomes, and activities.

UPDATE: Significant changes that have occurred since the last activity sheet was completed. Update on how far the project has progressed.

REVISION DATE: Date that the Update section was written.

STATUS: Ongoing

TITLE: AID Biodiversity Portfolio for Africa

CA COMPONENT: Technical Assistance

TYPE OF ACTIVITY:
PRIMARY: Program/Project Evaluation and Monitoring

FUNDING: \$10,000 (S&T/FENR)

START DATE: May 1991

END DATE: September 1993

PRIMARY IMPLEMENTOR: BSP

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s):

OTHER IMPLEMENTOR TYPE(s):

COLLABORATOR(s):

CONTACT: BSP: Kate Newman 202-778-9524; fax 202-293-9211, Jim Webster 202-778-9786; AID/Africa: Tim Resch 703-235-3786; fax 703-235-3805

LOCATION: Africa, Various

BIOME: Non-Specific

PURPOSE: This technical assistance activity will strengthen the Africa Bureau's efforts to conserve biological diversity by examining past projects and studying how future A.I.D. efforts could be better targetted to address the continent's needs. These activities will provide basic information on what the Bureau has done to conserve biodiversity, highlight lessons learned from past activities, and provide an analytical basis for future Bureau efforts in this area.

DESCRIPTION: BSP is conducting a technical review of the Africa Bureau's biodiversity project portfolio, consisting of 35 grants that have been initiated since 1987. The Bureau requires this information to revise and update their biodiversity strategy. The knowledge gained from the review will also aid the pilot demonstration project component of the Africa Bureau add-on (PD912) to BSP.

SIGNIFICANCE: This activity will (a) collect, evaluate, and disseminate information and (b) seek out evaluation information that will document successes, failures, and lessons learned. Results of the research will be applied to the design, modification and implementation of on-going activities. The portfolio and strategy reviews will enable the Africa Bureau to assess its first four years of effort in this sector, refine its funding priorities, and improve the quality of its future biodiversity initiatives. Because this is a relatively new area of involvement, many people are not aware of what the Bureau has done to conserve biodiversity and what projects have been successful and why. This activity will fill these gaps in knowledge and help them to develop an analytical basis for future projects.

TECHNICAL REPORT

or PUBLICATION: A report summarizing the Africa Bureau's biodiversity activities since 1987, highlighting lessons learned from these efforts will be produced. A comprehensive review of several of the Bureau's biodiversity grants conducted through site visits, interviews, and review of past reports and evaluations will be presented in report format.

OTHER OUTPUTS: The technical review will result in a database of past and current biodiversity projects.

UPDATE: BSP is currently conducting interviews and reviewing existing project reports, evaluations and papers. Site visits have been made to projects in Kenya, Tanzania, and Niger to obtain first-hand information from A.I.D. missions, project implementors, and local communities.

REVISION DATE: November 24, 1992

STATUS: Ongoing
TITLE: NGO Element of PNG's Conservation Needs Assessment (CNA)
CA COMPONENT: Technical Assistance
TYPE OF ACTIVITY:
 PRIMARY: Socio-cultural Analysis & Research
 SECONDARY: Training
 MINOR: Institutional Support
FUNDING: \$16,791 (R&D/ENR)
START DATE: October 1991
END DATE: December 1992
PRIMARY IMPLEMENTOR: National Alliance of Non-governmental Organizations (NANGO)
PRIMARY IMPLEMENTOR TYPE: NGO
OTHER IMPLEMENTOR(s):
OTHER IMPLEMENTOR TYPE(s):
COLLABORATOR(s): Greenpeace; PNG Development Trust; Barai Nonformal Ed. Association; Partners with Melanesians; Department of Environment and Conservation
CONTACT: BSP: Janis Alcorn 202-778-9697; fax 202-293-9211; Greenpeace: Lafcadio Cortesi 415-512-9025; fax 415-512-8699; NANGO: Vincent Manukayasi fax 675-254-309; Micael Ollson, fax 703-790-1248
LOCATION: Asia, Papua New Guinea, Various
BIOME: Non-specific
PURPOSE: Develop NGO and landowner perspectives on conservation needs in PNG with the aim of integrating their perspectives into the process of BSP's Conservation Needs Assessment (PD894D).
DESCRIPTION: NANGO will survey landowners to formulate their concerns and recommendations regarding conservation. NANGO representatives will attend a training program on how to work with local peoples in identifying issues related to resource use and creating mechanisms for their participation in an eco-

enterprise project.

SIGNIFICANCE: The project brings grassroots organizations and landowners into the DEC planning process for conserving biodiversity. It helps strengthen NGOs institutionally and encourages a commitment among landowners to conservation of resources.

In responding to BSP's mandate, this project helps establish national and local conservation priorities, assists policy development and dialogue to increase the national commitment to conservation, builds the capacity of host-country NGOs, and expands outreach to grassroots organizations and landowners.

TECHNICAL REPORTS or

PUBLICATIONS: CNA Report expected at end of activity.

OTHER OUTPUTS:

UPDATE: In August 1992, a training element was added to the project that allowed a representative from NANGO and from the Department of Environment and Conservation to attend a training forum on how to assist in identifying local communities' issues regarding resource use and establishing mechanisms for local community participation in an eco-enterprise project. The forum was held in August with the NANGO representative attending and issues were identified. A follow-up meeting will take place in December.

REVISION DATE: Dec 4, 1992

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STATUS: New

TITLE: Monitoring and Evaluation System for
the Profitable Environmental Protection
Project

CA COMPONENT: Technical Assistance

TYPE OF ACTIVITY:

PRIMARY: Program/project evaluation and
monitoring

SECONDARY: Community Development

MINOR: Sustainable Use

FUNDING: \$30,000 (R&D/ENR)

START DATE: September 1992

END DATE: December 1993

PRIMARY IMPLEMENTOR: BSP

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s):

1. World Wildlife Fund

OTHER IMPLEMENTOR TYPE(s):

1. International NGO

COLLABORATOR(s): Foundation for the Peoples of the South Pacific

CONTACT: BSP: Janis Alcorn, 202-778-9697, fax
202-293-9211; Barbara Wycoff-Baird,
202-778-9691, fax: 202-293-9211.

LOCATION: South Pacific, Various

BIOME: Non-specific

PURPOSE: This activity will develop a comprehensive monitoring
and evaluation system for the FSP-funded Profitable Environmental
Protection projects being developed.

DESCRIPTION: Biodiversity Support Program, in collaboration with
WWF's Wildland and Human Needs Program, will develop a
comprehensive monitoring and evaluation system for the Profitable
Environmental Protection program using a participatory process
that involves project stakeholders. The monitoring and
evaluation approach to be used will include: 1) clarification of
hypotheses, goals, objectives and projects using the logical
framework; 2) definition of indicators, design of tools for

periodic data collection, and training in the use of these tools; and 3) modification of the approach and tools.

SIGNIFICANCE: PEP is an effort to demonstrate working models of small scale profitable commercial and community enterprise that enable long-term conservation of biologically vital ecosystems.

This activity helps to integrate development activities with management of biodiversity in a grassroots setting and explores options for providing conservation projects with a sustainable future.

TECHNICAL REPORTS or PUBLICATIONS: Final report of lessons learned; Final Monitoring and Evaluation Plan.

OTHER OUTPUTS:

UPDATE: The project is expected to begin in January 1993.

REVISION DATE: December 10, 1992

STATUS: Completed

TITLE: Population Ecology and Conservation
Biology: A Postgraduate Field Course in
Ecuador

CA COMPONENT: Training

TYPE OF ACTIVITY:
PRIMARY: Training
SECONDARY: Ecological Research/Inventory

FUNDING: \$22,359 (S&T/FENR)

START DATE: June 1991

END DATE: June 1992

PRIMARY IMPLEMENTOR: Peggy Stern

PRIMARY IMPLEMENTOR TYPE: Private

OTHER IMPLEMENTOR(s):
1. David Neill
2. Peter Pearman
3. Ricardo Soto

OTHER IMPLEMENTOR TYPE(s):
1. Private
2. Private
3. Private

COLLABORATOR(s): Fundación Jatun Sacha; Fundación
Maquipucuna; Ministry of Agriculture;
Museo Ecuatoriano de Ciencias
Naturales; Missouri Botanical Garden;
PUCE; TNC; NYBG

CONTACTS: BSP: Meg Symington, 202-778-9727, fax
202-293-9211; AID/Quito: Cisco Ruybal
593-2521-100, fax 593-2561-228; MBG:
David Neill 314-577-5169; UC/D: Peggy
Stern 916-752-2176

LOCATION: Latin America, Ecuador, Various

BIOME: Non-specific

PURPOSE: To train 16 Ecuadorian scientists and advanced
university students in field and analytical techniques to conduct
independent basic and applied ecological research.

DESCRIPTION: This advanced field course was offered to Ecuadorian scientists and advanced university students in September 1991, at four research stations in Ecuador. The course provides scientists with the conceptual and practical tools needed to address conservation problems by teaching: 1) ecological concepts that are relevant and applicable to conservation and management problems, 2) techniques for investigating ecological systems in the field, and 3) how to approach the difficult tasks of finding project support and communicating with the broader community of ecologists and conservation biologists.

The course was open to 16 advanced university students and professionals in the biological sciences and forestry. The course curriculum and methods are based on the graduate courses sponsored by the Organization for Tropical Studies (OTS) in Costa Rica for over 28 years, and on the grantees' previous experience with a similar and very successful course held in Ecuador in 1989. The course is intensive, seven days a week, with virtually all daylight hours spent in the field. Students are expected to attend evening lectures which introduce them to new ecological concepts at each site, and they participate in directed group field projects. They also develop their own independent field investigations, collect data, analyze them and present the results orally to the class and in a written report.

The course is organized and coordinated by Dr. David Neill, MBG/Museo Ecuatoriano de Ciencias Naturales; Peter Pearman, Department of Zoology, Duke University; and Peggy Stern, Department of Zoology, UC/D. Dr. Neill is resident in Ecuador, where he has been carrying out a botanical research program since 1985. Pearman and Stern are both recent Ph.D.s, and have extensive field experience in Ecuador. The Ecuadorian institutions sponsoring this course are Fundación Jatun Sacha, Fundación Maquipucuna, Museo Ecuatoriano de Ciencias Naturales and the Ministry of Agriculture. An agreement has been reached with the MBG Flora of Ecuador Project and the Ministry of Agriculture to provide vehicles for course use.

SIGNIFICANCE: The course is particularly effective because concepts presented in evening lectures are immediately applied in directed and independent field projects. The impact of the course is heightened by training individuals who will in turn train others. It is the premise of this project that well-trained Ecuadorians can be more effective than the best-intentioned foreigner in advancing Ecuadorian conservation goals.

This project addresses BSP's mandate to build the capacity of host-country individuals and institutions to define and develop programs for the conservation of biodiversity.

TECHNICAL REPORTS or

PUBLICATIONS: A volume of the course proceedings, including student research projects, is being compiled and should be

available soon.

OTHER OUTPUTS: Sixteen Ecuadorian students trained in state-of-the-art ecological research techniques; reports by each trainee on his or her independent research project.

UPDATE: Final financial report and the volume of course proceedings are the only outstanding items; both should be completed soon.

REVISION DATE: November 19, 1992

STATUS: New

TITLE: ODP Institutional Strengthening and Training II

CA COMPONENT: Training

TYPE OF ACTIVITY:
PRIMARY: Training
SECONDARY: Institutional Support

FUNDING: \$75,000 (R&D/ENR)

START DATE: April 1992

END DATE: September 1993

PRIMARY IMPLEMENTOR: WWF

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s):

OTHER IMPLEMENTOR TYPE(s):

COLLABORATOR(s):

CONTACT: BSP: Bruce Leighty 202-778-9685 fax 202-293-9211; WWF: Bruce Moffat 202-778-9610 fax 202-293-9211.

LOCATION: Various

BIOME: Non-Specific

PURPOSE: This initiative is to provide follow-up to and continued development on the first year's efforts (see TR905) to prepare training programs and materials in proposal design, financial resource development, and human resource development with the objective of promoting institutional strengthening and building capacity for sustainable fund-raising and the institutional development of indigenous NGOs.

DESCRIPTION: BSP is continuing to provide support to selected efforts of World Wildlife Fund's Organizational Development Program (ODP) for a second year. ODP will develop training and resource materials, and run training workshops to expand and improve the abilities of governmental and non-governmental staff members to: 1) produce effective proposals, 2) manage and guide staff development, 3) cultivate and manage financial resources, and 4) facilitate workshops designed to teach skills to others.

Under the project, the Organizational Development Program will specifically:

- a) Run a Proposal Design Workshop for Mexican NGOs and institutions as a final field test of training methodologies and materials developed for instruction of fund raising (see TR921A);
- b) Publish two (2) self-help guides in both English and Spanish, one on Human Resources Development and another on Financial Resource Development, and develop and publish a manual to be used by trainers who will lead workshops on proposal design and development (see TR921B); and
- c) Develop a methodology and materials for training others to be workshop facilitators. This effort will include field testing a pilot workshop to be held in the greater Caribbean region sometime in the spring or summer of 1993.

ODP's workshops and materials will reach conservationists directly responsible for the development of proposals and will help them build upon their skills to design more effective projects. Self-help guides in human and financial resources development will extend assistance in staff and skill enhancement to a broad audience. The formation and field testing of training methodologies will assist in the transfer of skills to members of in-country organizations who can train others, thereby enlarging the network of in-country trainers and establishing a self-sustaining knowledge base in these areas of organizational development.

SIGNIFICANCE: Lack of institutional strengthening and organizational development in developing countries is a serious constraint to achieving conservation goals. This is often evidenced by a weakness in designing effective projects, establishing partnerships with donors, and managing financial and human resources. This two year collaboration between BSP and ODP seeks to develop permanent materials and methodologies to strengthen the capacity of scientists and organizations in these key areas. The materials developed will be applicable and available for use beyond the specific regions and countries in which they were developed.

TECHNICAL REPORTS or

PUBLICATIONS: Self-Help Guide on Human Resources Development, in English and Spanish; Self-Help Guide on Financial Resources Development, in English and Spanish; Facilitators Manual for Leading Proposal Design Workshops.

OTHER OUTPUTS: Two workshops, one for Mexican conservation organizations on Proposal Design and another on Training of Trainers.

UPDATE: A workshop on Proposal Design was held in Cuernavaca, Mexico May 18-22, 1992 (see TR921A). The English version of the self-help guide on financial resources development has been sent to the printer and will be available in January. The Spanish version of the guide will go through a final edit and be sent to the printer in early 1993. The final draft of the human resources development guide, in English, should be completed by the end of January. The Spanish version will follow in the spring of 1993. The first draft of the Facilitators Manual for Proposal Design Workshops is presently being written. A workshop for training trainers will be held in the Caribbean before late summer.

REVISION DATE: December 3, 1992

STATUS: Completed

TITLE: Strategic Proposal Design Workshop
Mexico

CA COMPONENT: Training

TYPE OF ACTIVITY:
PRIMARY: Training
SECONDARY: Institutional Support

FUNDING: \$25,000 (R&D/ENR)

START DATE: April 1992

END DATE: June 1992

PRIMARY IMPLEMENTOR: WWF

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s):

OTHER IMPLEMENTOR TYPE(s):

COLLABORATOR(s):

CONTACT: BSP: Bruce Leighty 202-778-9685 fax
202-293-9211; WWF: Bruce Moffat 202-
778-9610 fax 202-293-9211.

LOCATION: LAC, Mexico, Cuernavaca

BIOME: Non-Specific

PURPOSE: To provide a final field test of methodologies and materials developed by ODP in previous workshops, while attempting to expand and improve the abilities of selected Mexican conservation professionals to produce competitive, effective proposals.

DESCRIPTION: Through BSP support of a second year of organizational development and institution strengthening activities by World Wildlife Fund's Organizational Development Program, a Proposal Design Workshop was held in Cuernavaca, Mexico May 18-22, 1992. The workshop reached Mexican conservationists directly responsible for the development of fund-raising proposals, and helped them build upon their project planning and communications skills, and to compete more effectively in the search for funding sources. It also allowed ODP staff to examine its workshop methodologies and materials a final time in preparation for the development of a trainer's

guide on facilitating proposal design workshops.

SIGNIFICANCE: Designing strong projects and having the ability to communicate them effectively to donors are important skills that many conservationists in the developing world are lacking. The collaboration between BSP and ODP has resulted in development of permanent materials and methodologies designed to strengthen the capacity of scientists and organizations to design programs and produce proposals that garner funding and allow them to reach their conservation goals. The materials developed will be applicable and available for use beyond the specific regions and countries in which they were developed.

**TECHNICAL REPORTS or
PUBLICATIONS:**

OTHER OUTPUTS: Workshop for Mexican conservation organizations on Proposal Design attended by 18 participants.

UPDATE: All activities have been completed. A workshop on Proposal Design was held in Cuernavaca, Mexico in May 18-22, 1992.

REVISION DATE: December 2, 1992

STATUS: New
 TITLE: Publication of Self-Help and Facilitator Guides
 CA COMPONENT: Training
 TYPE OF ACTIVITY:
 PRIMARY: Training
 SECONDARY: Institutional Support
 FUNDING: \$25,000 (R&D/ENR)
 START DATE: April 1992
 END DATE: September 1993
 PRIMARY IMPLEMENTOR: WWF
 PRIMARY IMPLEMENTOR TYPE: International NGO
 OTHER IMPLEMENTOR(s):
 OTHER IMPLEMENTOR TYPE(s):
 COLLABORATOR(s):
 CONTACT: BSP: Bruce Leighty 202-778-9685 fax
 202-293-9211; WWF: Bruce Moffat 202-
 778-9610 fax 202-293-9211.
 LOCATION: Various
 BIOME: Non-Specific

PURPOSE: ODP intends to develop and publish two self-help guides, one on Human Resources Development and a second on Financial Resources Development, that can be used independently by NGOs in building their capacity to cultivate and manage staff capabilities and financial resources, and a manual for in-country trainers who will run workshops on proposal design for members of their own and other organizations, thereby assisting in a skills transfer to a broad base of people.

DESCRIPTION: The self-help publications will individually guide organizations through the steps necessary to assess institutional needs and resources, then respond by developing accurate budgets, effective funding strategies, sound financial management systems and active programs to motivate staff and develop their capabilities. Self-help guides can complement or be used in lieu of workshops, which may require travel and absences from work, making them a useful method of offering assistance and skill

development to as broad an audience as possible while providing a permanent reference source. Translation of the guides into Spanish will increase their accessibility.

A facilitator's manual for leading Proposal Design workshops will assist local people in transferring the skills they have learned to others within their region. It will offer them tested methodologies for teaching the concepts and skills associated with developing effective proposals, and help them expand the number of people whose capabilities have been strengthened.

SIGNIFICANCE: Indigenous institutions often have difficulty locating, obtaining and managing resources that are needed in achieving their conservation goals. Without proof of sound financial management, additional funding is often unobtainable. In addition, ineffective use of staff may constrain an organization from performing at its best, and stress the development and implementation of field programs. This two year collaboration between BSP and ODP seeks to develop permanent materials and methodologies to strengthen the capacity of scientists and organizations in these key areas. Self-help guides will allow governmental and non-governmental organizations to independently attain needed institutional development skills. The manual for facilitators will assist local trainers in transferring proposal design skills to others in a workshop setting. The materials developed are applicable and available for use beyond the specific regions and countries in which they were developed.

TECHNICAL REPORTS or

PUBLICATIONS: A Self-Help Guide to Financial Resources Development, in English and Spanish; a Self-Help Guide to Human Resources Management, in English and Spanish; and a Facilitator's Manual for Leading a Proposal Design Workshop.

OTHER OUTPUTS:

UPDATE: The self-help guide on Financial Resource Development has been sent to the printer and will be available by the end of January. The Spanish version is in its final edit and will be sent to the printer in early 1993. Distribution will be made to in-country individuals and organizations through the World Wildlife Fund's regional programs. The Human Resources Development self-help guide is in its final edit and will be completed by the end of January 1993. Publication of the guide and its translation into Spanish will occur in Spring 1993. The first draft of the manual for workshop trainers is being written.

REVISION DATE: December 2, 1992

STATUS: New

TITLE: Population Ecology Training Course II

CA COMPONENT: Training

TYPE OF ACTIVITY:
PRIMARY: Training
SECONDARY: Ecological Research/Inventory

FUNDING: \$18,000 (R&D/ENR)

START DATE: May 1992

END DATE: May 1993

PRIMARY IMPLEMENTOR: Peggy Stern

PRIMARY IMPLEMENTOR TYPE: Private

OTHER IMPLEMENTOR(s):
1. David Neill
2. Peter Pearman
3. Ricardo Soto

OTHER IMPLEMENTOR TYPE(s):
1. Private
2. Private
3. Private

COLLABORATOR(s): Fundación Jatun Sacha; Fundación Maquipucuna; Ministry of Agriculture; Museo Ecuatoriano de Ciencias Naturales; Missouri Botanical Garden

CONTACTS: BSP: Meg Symington, 202-778-9727, fax 202-293-9211; AID/Quito: Cisco Ruybal 593-2521-100, fax 593-2561-228; MBG: David Neill 314-577-5169; UC/D: Peggy Stern 916-752-2176

LOCATION: Latin America, Ecuador, Various

BIOME: Non-specific

PURPOSE: To train 16 Ecuadorian scientists and advanced university students in field and analytical techniques to conduct independent basic and applied ecological research.

DESCRIPTION: This is a repetition of the same course sponsored by BSP in 1991 (TR911). An advanced field course was offered to Ecuadorian scientists and advanced university students in

September 1992, at four research stations in Ecuador. The course provides scientists with the conceptual and practical tools needed to address conservation problems by teaching: 1) ecological concepts that are relevant and applicable to conservation and management problems, 2) techniques for investigating ecological systems in the field, and 3) how to approach the difficult tasks of finding project support and communicating with the broader community of ecologists and conservation biologists.

The course was open to 16 advanced university students and professionals in the biological sciences and forestry. The course curriculum and methods are based on the graduate courses sponsored by the Organization for Tropical Studies (OTS) in Costa Rica for over 28 years, and on the grantees' previous experience with a similar and very successful course held in Ecuador in 1989. The course is intensive, seven days a week, with virtually all daylight hours spent in the field. Students are expected to attend evening lectures which introduce them to new ecological concepts at each site, and they participate in directed group field projects. They also develop their own independent field investigations, collect data, analyze them and present the results orally to the class and in a written report.

The course is organized and coordinated by Dr. David Neill, MBG/Museo Ecuatoriano de Ciencias Naturales; Peter Pearman, Department of Zoology, Duke University; and Peggy Stern, Department of Zoology, UC/D. Dr. Neill is resident in Ecuador, where he has been carrying out a botanical research program since 1985. Pearman and Stern are both recent Ph.D.s, and have extensive field experience in Ecuador. The Ecuadorian institutions sponsoring this course are Fundación Jatun Sacha, Fundación Maquipucuna, Museo Ecuatoriano de Ciencias Naturales and the Ministry of Agriculture. An agreement has been reached with the MBG Flora of Ecuador Project and the Ministry of Agriculture to provide vehicles for course use.

SIGNIFICANCE: The course is particularly effective because concepts presented in evening lectures are immediately applied in directed and independent field projects. The impact of the course is heightened by training individuals who will in turn train others. It is the premise of this project that well-trained Ecuadorians can be more effective than the best-intentioned foreigner in advancing Ecuadorian conservation goals.

This project addresses BSP's mandate to build the capacity of host-country individuals and institutions to define and develop programs for the conservation of biodiversity.

TECHNICAL REPORTS or PUBLICATIONS: A volume of the course proceedings, including student research projects, will be compiled and should be available by next May.

OTHER OUTPUTS: Sixteen Ecuadorian students trained in state-of-the-art ecological research techniques; reports by each trainee on his or her independent research project.

UPDATE: The course took place as scheduled in September and according to the verbal reports of the instructors was highly successful and well-received by the students.

REVISION DATE: November 19, 1992

STATUS: Ongoing
 TITLE: Setting Priorities for Biodiversity
 CA COMPONENT: Information Networking
 TYPE OF ACTIVITY:
 PRIMARY: Public Policy
 FUNDING: \$49,754 (S&T/FENR)
 START DATE: June 1990
 END DATE: October 1992
 PRIMARY IMPLEMENTOR: World Resources Institute (WRI)/CDIE
 PRIMARY IMPLEMENTOR TYPE: International NGO
 OTHER IMPLEMENTOR(s):
 OTHER IMPLEMENTOR TYPE(s):
 COLLABORATOR(s):
 CONTACT: BSP: Janis Alcorn 202-778-9697 fax 202-293-9211; WRI: Nels Johnson 202-662-2529 fax 202-638-0036
 LOCATION: Various
 BIOME: Non-specific
 PURPOSE: To review existing methodologies and criteria used to establish priorities for the conservation of biodiversity.

DESCRIPTION: This study is an attempt by BSP to undertake special studies on behalf of the consortium to further the goals of conserving biodiversity. In order to proactively strengthen the collaborative efforts of the consortium, the BSP Executive Committee asked its members to submit one-page suggestions for a joint activity of potential significance to the conservation community. Nels Johnson's prospectus Filling the Ark: Systematic Approaches to Setting Priorities for the Conservation of Biodiversity was selected by the Executive Committee for funding. The project examines three major aspects of establishing biodiversity conservation priorities in developing countries: (1) What theories, concepts, processes, and tools are available to help institutions at national and local levels to set conservation priorities for a range of biodiversity conservation objectives?, (2) What strengths, weaknesses, and applications do these methodologies bring to bear on an overall

goal of conserving the widest range of biodiversity resources?
and (3) What indicators are available and which need to be
developed to monitor changes in biodiversity conservation
progress once priorities are established?

SIGNIFICANCE: Considerable attention has been given recently to setting international priorities for the conservation of biodiversity. Less consideration, however, has been given to how such priorities are set or could be set at national and local levels in tropical countries. Coherent priorities are necessary for the efficient use of limited funds. Developing priorities focuses efforts on information needs, conservation objectives, and assessing institutional capacity. Well-rationalized and institutionalized priorities, moreover, can signal a commitment to action at national and local levels and focus additional investment.

The Information Networking component of BSP provides A.I.D. with an overview of its biodiversity program and forms the underpinning for the Technical Assistance, Research, Training, and Pilot Demonstration components. This activity should assist in that effort and produce a synthesis report of use to the broader conservation community.

TECHNICAL REPORTS OR PUBLICATIONS: A technical report for publication.

OTHER OUTPUTS: One planning workshop in D.C. to discuss the proposed activities and work plan.

UPDATE: A draft of the report was provided by consultant on 7/20/92. We are awaiting the final report.

REVISION DATE: November 4, 1992

STATUS: Ongoing
 TITLE: Publication of the Gnusletter II
 CA COMPONENT: Information Networking
 TYPE OF ACTIVITY:
 PRIMARY: Education/Public Awareness
 FUNDING: \$1,000 (S&T/FENR)
 START DATE: November 1991
 END DATE: December 1992
 PRIMARY IMPLEMENTOR: Richard Estes
 PRIMARY IMPLEMENTOR TYPE: Private
 OTHER IMPLEMENTOR(s):
 OTHER IMPLEMENTOR TYPE(s):
 COLLABORATOR(s):
 CONTACT: BSP: Kate Newman 202-778-9524 fax 202-
 293-9211; IUCN: Richard Estes 603-924-
 9804
 LOCATION: Africa, Various
 BIOME: Non-specific

PURPOSE: To support the production and distribution of the newsletter of the Antelope Specialist Group of the IUCN Species Survival Commission. Gnusletter provides a comprehensive source of current information on antelope conservation, facilitates communication among those involved with antelope conservation worldwide, and raises awareness of antelope conservation issues in general.

DESCRIPTION: Due to their large habitat requirements and extreme visibility to hunters, large mammals are especially threatened by human activities and are often the first species to suffer local extinctions in areas of human habitation. The antelopes, while not as much in the spotlight as elephants and rhinos, nonetheless require special conservation attention to ensure their survival. Many of the 86 species of antelope found throughout Africa and Asia are endangered and threatened. Antelopes are among the only remaining examples of long-distance, migratory large mammals on earth and they are a major ecological and aesthetic component of

the African continent. This newsletter addresses the needs of those persons who are working especially with antelopes.

SIGNIFICANCE: The Gnusletter is the only comprehensive source of current information on antelope conservation, reporting on developments in both ex situ and in situ activities. It is the primary means of communication for those working with antelope conservation worldwide. In its 10th volume, the Gnusletter is recognized as a high-quality, effective information networking initiative.

TECHNICAL REPORTS OR

PUBLICATIONS: Three issues of the Gnusletter (approximately 15 pages each).

OTHER OUTPUTS:

UPDATE:

REVISION DATE: November 30, 1992

STATUS: Ongoing

TITLE: Forests & People in Kalimantan
Conference/NYBG

CA COMPONENT: Information Networking

TYPE OF ACTIVITY:
PRIMARY: Education/Public Awareness
SECONDARY: Public Policy
MINOR: Ecological Research

FUNDING: \$25,000 (S&T/FENR)

START DATE: March 1991

END DATE: June 1993

PRIMARY IMPLEMENTOR: New York Botanical Garden (NYBG)

PRIMARY IMPLEMENTOR TYPE: Botanical garden

OTHER IMPLEMENTOR(s):

OTHER IMPLEMENTOR TYPE(s):

COLLABORATOR(s):

CONTACT: BSP: Janis Alcorn 202-778-9697; fax
202-293-9211; AID/Jakarta: Jerry Bisson
62-21-360-360; fax 62-21-380-6694;
NYBG: Christine Padoch 212-220-8700

LOCATION: Asia, Indonesia, Kalimantan

BIOME: Tropical Moist Forest

PURPOSE: To provide a forum for international scholars, resource managers and the public to discuss Indonesia's Kalimantan forest ecology, human use and management of the forests, and the local and global effects of development in those forests.

DESCRIPTION: BSP supported 14 scholars and government representatives, including six officials from Indonesia, to attend the Jun 1991 conference on Indonesia's Kalimantan forest. Support was also provided for conference and lodging expenses for selected participants from other USAID-assisted countries. BSP Program Officer, Janis Alcorn, attended the conference.

SIGNIFICANCE: The conference provided a unique opportunity for social and natural scientists to discuss conservation issues.

Presentations were excellent and discussions were productive. The Indonesian delegation closed the conference with an invitation to continue the discussions next year at a follow-on conference in Indonesia. AID/Jakarta concurred with BSP funding because the conference brought together Indonesian decision-makers and international scholars to discuss biodiversity issues related to Kalimantan forests. The conference promoted a direct exchange of information and fostered a commitment to continue the dialogue.

The NYBG Conference (June 21 to 23, 1991) attracted more than 70 participants, including Nelson P. Hutabarat, the Indonesian Embassy's Agricultural and Environmental Attache, and Graham Kerr, Chief of the Regional and Resource Management Division with the Office of Agriculture in the AID/Jakarta Mission. Participants appreciated the opportunity to meet and discuss the issues with experts whom they had not met previously. Graham Kerr (participant from AID/Jakarta) expressed satisfaction with the conference.

TECHNICAL REPORTS OR

PUBLICATIONS: A publication is expected in 1993.

OTHER OUTPUTS:

UPDATE: Conference completed. Christine Padoch, co-convener of the conference with Nancy Peluso of UC/Berkeley, requested that BSP funds in excess of what was needed for participant support be used for publication of the papers presented. The request has been granted.

REVISION DATE: November 4, 1992

KS

STATUS: Ongoing
 TITLE: WRI/WCMC Biodiversity '92/Expanded Investments Survey
 CA COMPONENT: Information Networking
 TYPE OF ACTIVITY:
 PRIMARY: Public Policy
 SECONDARY: Education/Public Awareness
 MINOR: Program/Project Evaluation & Monitoring
 FUNDING: \$105,000 (S&T/FENR)
 START DATE: April 1991
 END DATE: December 1992
 PRIMARY IMPLEMENTOR: World Resources Institute (WRI)
 PRIMARY IMPLEMENTOR TYPE: International NGO
 OTHER IMPLEMENTOR(s):
 OTHER IMPLEMENTOR TYPE(s):
 COLLABORATOR(s):
 CONTACT: BSP: Janis Alcorn 202-778-9697 fax 202-293-9211; WRI: Janet Abramovitz 202-662-2528
 LOCATION: Various
 BIOME: Non-specific
 PURPOSE: The project was designed to monitor, analyze, and report on levels of investments by USAID and other US institutions in biodiversity and conservation. It is also enabling WRI to work with groups in key biodiversity countries to collaboratively determine information needs, build local capacity and develop data sets on their internal investments. These data will help WRI compare US investments to internal investments for select countries.
 DESCRIPTION: WRI's two previous publications on U.S. investments in biodiversity proved to be in great demand by government agencies and non-governmental organizations, charitable organizations and others. Trends are emerging in the economics of environmental investments in research, education, policy, planning, management, institution building, and other areas. WRI will continue to solicit information from previous and new

contributors, but will also gather data on investments made internally by key countries around the world.

SIGNIFICANCE: The cataloguing and identification of investments in environmental and biodiversity activities is relatively new; however, the demand for the previous two publications (WRI investment surveys for 1987 and 1989; see Activity Summaries IN892 and IN908) has been great. The anticipated survey is expected to yield new trends in investment patterns. Like the previous publication, the forthcoming one will serve the broad public and government as a valuable resource.

One of BSP's objectives is to address the maintenance and collection of information on conservation activities, including those of USAID and other U.S. institutions.

TECHNICAL REPORTS OR

PUBLICATIONS: Publication expected in Jan. 93.

OTHER OUTPUTS:

UPDATE: A six month status report was provided by the consultant on 9/24/92. A draft report was received on December 10, 1992. The final report is expected on 1/30/93.

REVISION DATE: December 12, 1992

STATUS: Ongoing

TITLE: Publication of Montes Azules Research Volume

CA COMPONENT: Information Networking

TYPE OF ACTIVITY:

PRIMARY: Ecological Research/Inventory

SECONDARY: Education/Public Awareness

MINOR: Protected Areas

MINOR: Socio-cultural Analysis and Research

FUNDING: \$15,000 (S&T/FENR)

START DATE: June 1991

END DATE: December 1992

PRIMARY IMPLEMENTOR: Centro de Estudios para la Conservación de los Recursos Naturales, México (ECOSFERA, A.C.)

PRIMARY IMPLEMENTOR TYPE: NGO

OTHER IMPLEMENTOR(s):

OTHER IMPLEMENTOR TYPE(s):

COLLABORATOR(s):

CONTACTS: BSP: Meg Symington 202-778-9727; fax 202-293-9211; ECOSFERA: Romeo Dominguez fax 529-678-0697

LOCATION: Latin America, Mexico, Chiapas, Montes Azules Biosphere Reserve

BIOME: Tropical Moist Forest

PURPOSE: To publish a volume of research papers on the biodiversity of the Montes Azules Biosphere Reserve.

DESCRIPTION: The Lacandon forest of extreme southeastern Mexico is the most biologically diverse forest system in the northern neotropics. It is Mexico's largest remaining tropical lowland forest, and the westernmost extension of Guatemala's vast Petén region. The forest also supports a small population of native Lacandon Indians, a semi-agricultural forest-dwelling group deriving from the ancient Maya. The 331,200 ha Montes Azules Biosphere Reserve, which was established by government decree in 1978, forms the core of this important conservation unit.

From 1983-1985, the Instituto Nacional de Investigaciones sobre Recursos Bióticos (INIREB) served as the institutional coordinator for all social and natural science research in the Montes Azules Biosphere Reserve. When the agreement ended in 1985, INIREB decided to publish the voluminous research results in a single volume that was to be a valuable resource for those directly involved with the conservation and management of the Montes Azules Biosphere Reserve, as well as for those involved with conservation in Mexico more generally. Unfortunately, the project was not completed before INIREB was closed by presidential decree at the end of 1988.

The Centro de Estudios para la Conservación de los Recursos Naturales (ECOSFERA) was formed in 1989 by a group of former students from INIREB. In 1990, ECOSFERA decided to resume publication of the completed manuscript. An editorial committee was established that included members of ECOSFERA and Mario Ramos, WWF's Program Officer for Mexico. ECOSFERA has made a substantial in-kind contribution to the publication process by entering all of the manuscripts into computer files, and will also make a \$3,000 cash contribution to the project.

SIGNIFICANCE: The publication of this research volume will have an importance and impact beyond just the scientific community. The volume will draw attention to the importance of the Montes Azules Biosphere Reserve at the state, national and international level. The volume will, for the first time, integrate biological and social science research on the Lacandon region. Such a multidisciplinary approach is critical to the conservation and sustainable development of this important and conflicted region.

This activity addresses BSP's mandate to collect, synthesize and disseminate information concerning biodiversity conservation to developing-country individuals and institutions.

TECHNICAL REPORTS OR

PUBLICATIONS: 1000 copies of a research compendium volume (ca. 450 p.): Investigaciones para la conservación de la reserva de la biósfera Montes Azules en la selva Lacandona, Chiapas, México. Five-hundred copies will be distributed free of charge to the contributors, Mexican universities and research centers, and to the Secretaría de Desarrollo Urbano y Ecología (SEDUE) personnel in charge of reserves and wildlife. The other half of the books will be sold to raise funds for ECOSFERA.

OTHER OUTPUTS:

UPDATE: A preliminary edition of the book (complete with a preface signed by President Salinas) was produced in time for the June 1992 UNCED meeting, and was presented to members of the Mexican delegation. Although the book was scheduled to go to press immediately following UNCED, BSP has not yet received the final volume.

REVISION DATE: November 16, 1992

STATUS: Ongoing
 TITLE: Conservation Biology Subscriptions
 CA COMPONENT: Information Networking
 TYPE OF ACTIVITY:
 PRIMARY: Education/Public Awareness
 SECONDARY: Institutional Support
 FUNDING: \$9,000 (\$3,000/yr over three years)()
 S&T/FENR
 START DATE: October 1990
 END DATE: October 1993
 PRIMARY IMPLEMENTOR: Society for Conservation Biology (SCB)
 PRIMARY IMPLEMENTOR TYPE: NGO
 OTHER IMPLEMENTOR(s):
 OTHER IMPLEMENTOR TYPE(s):
 COLLABORATOR(s):
 CONTACTS: BSP: Meg Symington 202-778-9727 fax
 202-293-9211; Ilana Locker 202-778-
 9793, fax 202-293-9211; SCB: Stephen R.
 Humphrey 904-392-6581 fax 904-392-8783
 LOCATION: Various
 BIOME: Non-specific
 PURPOSE: To sponsor 20 subscriptions a year to Conservation
 Biology for the next three years for developing country
 conservationists.
 DESCRIPTION: The Society for Conservation Biology requested
 financial assistance from BSP for its program of sponsored
 subscriptions to the journal Conservation Biology. This program
 was designed to promote the dissemination and discussion of
 critical ideas in conservation theory and management by providing
 the journal to countries where economic circumstances limit
 subscriptions.
 BSP agreed to fund 20 new subscriptions to Conservation Biology
 for three years. A list of 20 individuals and institutions in
 Africa, Asia and Latin America was generated by staff at BSP and
 A.I.D., taking into account technical and financial need as well

as the degree of exposure a recipient would be able to provide for others to use the journal. This list was forwarded to SCB and their publisher, Blackwell Scientific Publications.

SIGNIFICANCE: This activity provides journal recipients with technical information and news contained in Conservation Biology and will, it is hoped, result in better managed natural resources.

This activity relates directly to BSP's Information Networking mandate by disseminating valuable information to those institutions and individuals in A.I.D.-assisted developing countries that cannot afford a subscription to Conservation Biology. The journal also serves as a mechanism of information exchange for natural resources professionals around the world.

Countries with institutions receiving subscriptions in the first year of the program include those from Africa: Burkina Faso, Burundi, Malawi, Morocco, Namibia, Rwanda, and The Gambia. From Asia: Bangladesh, India, Indonesia, and Papua New Guinea. From Latin America: Bolivia, Brazil, Colombia, Guyana, and Peru.

TECHNICAL REPORTS OR

PUBLICATIONS: The journal is direct mailed by SCB to 20 sponsored subscribers. Recipients also receive any available back issues of Conservation Biology.

OTHER OUTPUTS:

UPDATE: The 20 subscribers for the second year have been selected and notified of their award by both BSP and the Society for Conservation Biology. Institutions in the following regions and countries were recipients: (Eastern Europe) Bulgaria, Hungary; (Asia) Bangladesh, India, Nepal, Pakistan, and Thailand (2); (Africa) Kenya (3), Nigeria, and Sierra Leone (2); (Latin America) Bolivia, Brazil, Colombia, Dominican Republic, Ecuador, and Panama.

REVISION DATE: November 16, 1992

STATUS: Completed

TITLE: Biodiversity Seminar Series

CA COMPONENT: Information Networking

TYPE OF ACTIVITY:
PRIMARY: Education/Public Awareness

FUNDING: \$6,000 (R&D/ENR)

START DATE: October 1991

END DATE: September 1992

PRIMARY IMPLEMENTOR: BSP

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s):

OTHER IMPLEMENTOR TYPE(s):

COLLABORATOR(s):

CONTACT: BSP: Janis Alcorn 202-778-9697, fax
202-293-9211 or Kathy Saterson 202/861-
8330

LOCATION: Various

BIOME: Non-specific

PURPOSE: To provide a forum for international scholars, government officials, resource managers and the public to discuss biodiversity issues and concerns.

DESCRIPTION: BSP hosts a monthly seminar series with guest speakers on current issues related to biodiversity, conservation, and sustainable development. Invitations are sent out to 350 organizations/individuals in the Washington, D.C. area, and attendance averages approximately 90 people at each event.

SIGNIFICANCE: The seminars have been a very effective tool for educating the public and professionals in the conservation community. The seminars are also a vehicle for publicity on BSP, as they are known throughout the area for the interesting presentations.

The Biodiversity Seminar Series directly addresses BSP's goals under the information networking component to sponsor periodic

technical seminars.

TECHNICAL REPORTS OR
PUBLICATIONS:

OTHER OUTPUTS:

UPDATE: Among the guest speakers in 1992 were Bill Mankin, "When a tree falls in the rainforest, does it make a sound in your town?"; Trish Shanley, "Ethnobotanical Applications in Conservation and Development: The Rio Capim Project in Brazil"; Jan Post, "Sharks, Shrimps and Sea Squirts: An Underwater View of Marine Biodiversity"; Jim Duke, "Economic Products from Latin American Rainforests: The value of diversity"; Jeffrey Campbell, "Joint Forest Management in India: Regenerating and Managing Natural Forests in Partnership with local communities"; Yaa Ntiamoa-Baidu, "Saving Wetlands by Building on Traditional Conservation strategies in Ghana." (See IN931 for FY93 activity)

REVISION DATE: November 4, 1992

STATUS: Completed
TITLE: Sponsorship of Two Participants to the IV World Parks Congress
CA COMPONENT: Information Networking
TYPE OF ACTIVITY:
PRIMARY: Institutional Support
SECONDARY: Public Policy
FUNDING: \$10,899
START DATE: January 1992
END DATE: May 1992
PRIMARY IMPLEMENTOR: Biodiversity Support Program
PRIMARY IMPLEMENTOR TYPE: International NGO
OTHER IMPLEMENTOR(s):
OTHER IMPLEMENTOR TYPE(s):
COLLABORATOR(s): Department of Environment and Conservation of Papua New Guinea.
CONTACT: BSP: Janis Alcorn/Richard Richina, 202-778-9697, fax 202-293-9211.
LOCATION: Asia, Papua New Guinea, Port Moresby
BIOME: Non-Specific
PURPOSE: The activity supports the travel of two senior Papua New Guinea government officials from the Department of Environment and Conservation to the World Parks Congress in Caracas, Venezuela.
DESCRIPTION: The congress raises institutional and public awareness of the plight of the world's parks and protected areas and the approaches being used in buffer zone management. BSP's contribution supports the travel and per diem of William Asigau, a senior officer of the government responsible for establishment of marine parks and conservation areas, and Gudo Valei, also a senior officer in the Department of Environment and Conservation.
SIGNIFICANCE: The activity strengthens the institutional capacity of the Papua New Guinea's Department of Environment and Conservation.

TECHNICAL REPORTS or
PUBLICATIONS: None

OTHER OUTPUTS: None

UPDATE: The two senior officials attended the congress, which was held between 10 February and 22 February 1992. The activity has been completed.

REVISION DATE: November 4, 1992

STATUS: Completed

TITLE: Symposium: "Can Nuts Save the Rainforest"

CA COMPONENT: Information Networking

TYPE OF ACTIVITY:
PRIMARY: Education/Public Awareness

FUNDING: \$10,000 (R&D/ENR)

START DATE: January 1992

END DATE: May 1992

PRIMARY IMPLEMENTOR: Natural History Museum, Smithsonian Institute

PRIMARY IMPLEMENTOR TYPE: Museum

OTHER IMPLEMENTOR(s):

OTHER IMPLEMENTOR TYPE(s):

COLLABORATOR(s):

CONTACT: BSP: Janis Alcorn/Richard Richina, 202-778-9697, fax 202-293-9211; Smithsonian, Bruce Smith, tel: 202-786-2693, 202-786-2477.

LOCATION: Various

BIOME: Non-Specific

PURPOSE: The activity helped support the travel of two representatives of indigenous peoples' organizations who presented their views on the role of non-timber products in saving the rainforest. They were Ana Sittenfeld from INBIO in Costa Rica and Mohamed Khalil from Kenya. BSP also provided funds to cover expenses for a reception after the symposium.

DESCRIPTION: The symposium raised institutional and public awareness of the Intellectual Property Rights issues surrounding commercialization of non-timber forest products. BSP's contribution brings two representatives of indigenous peoples' organizations from different regions -- Australia and Latin America -- to speak at the symposium. The reception allows participants to network and discuss the issues raised.

SIGNIFICANCE: The activity raised awareness of important

intellectual property rights issues surrounding the commercialization of non-timber forest products. BSP's support allowed greater non-U.S. participation.

TECHNICAL REPORTS or
PUBLICATION: A final report.

OTHER OUTPUTS:

UPDATE: Activity completed

REVISION DATE: November 4, 1992

STATUS: Ongoing

TITLE: Contribution to NGO Participation Fund
for UNCED

CA COMPONENT: Information Networking

TYPE OF ACTIVITY:
PRIMARY: Institutional Support
SECONDARY: Public Policy

FUNDING: \$45,000 (R&D/ENR)

START DATE: January 1992

END DATE: July 1992

PRIMARY IMPLEMENTOR: United Nations Non-Government Liaison
Service

PRIMARY IMPLEMENTOR TYPE: Agency of the United Nations

OTHER IMPLEMENTOR(s):

OTHER IMPLEMENTOR TYPE(s):

COLLABORATOR(s):

CONTACT: BSP: Kathryn Saterson/Richard Richina,
202-778-9697, fax 202-293-9211

LOCATION: Various

BIOME: Non-Specific

PURPOSE: The activity supports the travel of NGO representatives to the preparatory committee sessions for the United Nations Conference on Environment and Development and to the Conference itself in June, 1992.

DESCRIPTION: This grant is to support some of the activities of the United Nation's Non-Government Liaison Service administration of the NGO Participation Fund for UNCED. The grant is expected to support at least 50 NGO representatives' travel and per diem to the preparatory meeting for UNCED in New York and the UNCED Conference in Brazil in June.

SIGNIFICANCE: The increased participation of developing country NGOs will provide the UNCED process valuable input from groups who have first hand experience of the complexities of development and the environment.

TECHNICAL REPORTS or
PUBLICATIONS: A final report and accounting.

OTHER OUTPUTS:

UPDATE: The Rio Conference was held in June. We are awaiting a final report and accounting of how many representatives of developing country NGOs were assisted with our contribution of \$45,000.

REVISION DATE: November 4, 1992

STATUS: Completed

TITLE: Paper on Designing Integrated Conservation and Development Projects

CA COMPONENT: Information Networking

TYPE OF ACTIVITY:
PRIMARY: Education/Public Awareness

FUNDING: \$10,169 (S&T/FENR)

START DATE: March 1991

END DATE: August 1992

PRIMARY IMPLEMENTOR: World Wildlife Fund

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s):
1. PVO-NGO/NRMS

OTHER IMPLEMENTOR TYPE(s):
1. International NGO

COLLABORATOR(s): BSP; CARE; WWF; Experiment for International Living

CONTACT: BSP: Janis Alcorn, tel: 202-778-9697
fax 202-293-9211; WLHN: Barbara Wyckoff-Baird, tel 202-778-9691

LOCATION: Asia, Various

BIOME: Various

PURPOSE: To support the writing of a paper providing guidance on establishing and monitoring of integrated conservation and development projects.

DESCRIPTION: The Wildland and Human Needs Program of WWF will write a paper providing guidance on establishing and monitoring of integrated conservation and development projects. As a part of the preparation of the paper, BSP supported a case study site visit to the Annapurna Conservation Area in Nepal. BSP will publish the paper, as a joint publication with WL/HN and PVO-NGO/NRMS.

SIGNIFICANCE: The paper provides the current knowledge on Integrated Conservation Development Projects, including

constraints and guidance on overcoming these constraints.

TECHNICAL REPORTS OR

PUBLICATIONS: A book entitled: "Designing Conservation and Development projects."

OTHER OUTPUTS:

UPDATE: The end date of contract was extended to 8/30/92. Book was published in early December 1992.

REVISION DATE: December 4, 1992

STATUS: Ongoing

TITLE: Women in Development

CA COMPONENT: Information Networking

TYPE OF ACTIVITY:
PRIMARY: Women in Development
MINOR:

FUNDING: \$20,000 (S&T/FENR)

START DATE: September 1991

END DATE: June 1993

PRIMARY IMPLEMENTOR: WWF/Wildlands & Human Needs Program

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s):
1. International Center for Research on Women (ICRW)

OTHER IMPLEMENTOR TYPE(s):
1. International NGO

COLLABORATOR(s): The Network Foundation

CONTACT: BSP: Janis Alcorn 202-778-9697, fax
202-293-9211; WWF: Barbara Wyckoff-
Baird 202-778-9626; ICRW: Michael
Paolisso 202-797-0007

LOCATION: Various

BIOME: Various

PURPOSE: Core funds provided a 2:3 match for \$30,000 from USAID's Office of Women in Development (WID) in partial support of the WWF & ICRW proposal Gender, Community Development, and Conservation of Biological Resources. (See PD905a) This research attempts to integrate gender issues into community-based efforts to conserve biological diversity through sustainable development.

DESCRIPTION: WWF and ICRW seek to improve the capacity of international conservation projects to integrate local women into community development efforts to conserve natural resources. The two NGOs will conduct interdisciplinary case studies in each major tropical region. After analyzing the case studies, WWF and ICRW will offer technical assistance, training, and policy-oriented dissemination to address one of the most complex aspects

of rapid environmental change--the critical relation of women's traditional and evolving roles to the use and sustainability of natural resources.

SIGNIFICANCE: There is still too little analysis and focus on the roles of women in the sustainable use of natural resources. This project will help alert the conservation and development communities to gender as an issue that must be considered in projects involving local communities in managing local resources.

Although BSP does not have a specific mandate to address gender issues in the conservation of biodiversity, the role of women in development is a specific USAID focus. The project also addresses BSP's mandate to analyze local community involvement in the conservation of biodiversity.

TECHNICAL REPORTS or PUBLICATIONS: Issues paper and case study

OTHER OUTPUTS: Workshop for WWF staff

UPDATE: A draft issues paper was submitted 8/3, field work on the case study has been completed and a draft case study has been prepared.

REVISION DATE: November 4, 1992

STATUS: Ongoing

TITLE: Biodiversity Seminar Series

CA COMPONENT: Information Networking

TYPE OF ACTIVITY:
PRIMARY: Education/Public Awareness

FUNDING: \$6,000 (R&D/ENR)

START DATE: October 1992

END DATE: September 1993

PRIMARY IMPLEMENTOR: BSP

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s):

OTHER IMPLEMENTOR TYPE(s):

COLLABORATOR(s):

CONTACT: BSP: Janis Alcorn 202-778-9697, fax
202-293-9211 or Kathy Saterson 202/816-
8330

LOCATION: Various

BIOME: Non-specific

PURPOSE: To provide a forum for international scholars, government officials, resource managers and the public to discuss biodiversity issues and concerns.

DESCRIPTION: BSP hosts a monthly seminar series with guest speakers on current issues related to biodiversity, conservation, and sustainable development. Invitations are sent out to 350 organizations/individuals in the Washington, D.C. area, and attendance averages approximately 90 people at each event.

SIGNIFICANCE: The seminars have been a very effective tool for educating the public and key players in the conservation community. They are also a vehicle of publicity for BSP, as they are known throughout the area for the interesting presentations.

The Biodiversity Seminar Series directly addresses a mandate under the information networking component to sponsor periodic technical seminars.

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TECHNICAL REPORTS OR
PUBLICATIONS:

OTHER OUTPUTS:

UPDATE: Maria Angela and Guy Guagni dei Marcovaldi spoke on: "Fundacao Pra-Tamar: Protecting Sea Turtles in Brazil." Other speakers expected during the seminar series include: Janis Alcorn/Owen Lynch; Ginnette Hemley of WWF's TRAFFIC office, and Meg Lowman of the Selby Botanical Garden. (See IN921 for FY92 Activities)

REVISION DATE: November 4, 1992

STATUS: Ongoing
 TITLE: MANRES Biodiversity Research and Conservation
 CA COMPONENT: Pilot Demonstration Project
 TYPE OF ACTIVITY:
 PRIMARY: Various
 FUNDING: \$449,993 (USAID/Thailand)
 START DATE: August 1989
 END DATE: September 1993
 PRIMARY IMPLEMENTOR: Various
 PRIMARY IMPLEMENTOR TYPE: Various
 OTHER IMPLEMENTOR(s): Various
 OTHER IMPLEMENTOR TYPE(s): Various
 COLLABORATOR(s): Various
 CONTACT: BSP: Janis Alcorn 778-9697, fax 202-293-9211; USAID/Bangkok: Khun Komol 662-255-3661, fax 662-253-6318; AID/W: Molly Kux 202-663-2639, fax 202-647-4958
 LOCATION: Asia, Thailand, Various
 BIOME: Non-specific

PURPOSE: In August 1988, AID/Thailand initiated a \$44 million program with the Royal Thai Government (RTG) on the Management of Natural Resources and Environment (MANRES). The goal of the MANRES project is to promote the economic and social development of Thailand through improved management of the environment and natural resources. The purpose of the project is to develop the capacities of Thai governmental and non-governmental institutions to define, analyze and respond effectively to current and emerging natural resource and environmental problems. The objective of MANRES Element II is to support Thai organizations in developing increased scientific understanding of Thailand's biological resources, their potential, and effective management practices for conserving biological diversity.

DESCRIPTION: In November 1989 a detailed work plan (see Activity TA892) for this buy-in was prepared by BSP, submitted to

AID/Thailand and RTG agencies, and approved by the appropriate offices. Twelve specific activities were initially agreed upon, but were reduced in the Fall of 1991 when the workplan was revised because of reduced availability of matching funds through MANRES.

- A. Three U.S. Study Tours
- B. Information Transfer (books, journals, videos)
- C. National Botanical Assessment
- D. NGO Seminar on Conservation and the Environment
- E. WFT Small Grants Program and Institutional Strengthening
- F. Huay Kha Khaeng/Thung Yai Florula
- G. Sustainable Development in Buffer Zones
- H. Speaker for GCC Conferences

SIGNIFICANCE: BSP's first buy-in from a Mission. Given the policy changes mentioned below, BSP will be one of the few USAID activities in Thailand.

AID/Bangkok did a buy-in because the goals of MANRES Element II are almost identical to the goals of BSP. Many of the activities proposed by the Royal Forest Department and other Thai institutions include technical assistance, as well as U.S. study tours.

TECHNICAL REPORTS OR PUBLICATIONS:

OTHER OUTPUTS:

UPDATE: Since November 1989, a detailed work plan as well as the following have been completed:

- A. One U.S. study tour for Zoological Parks Organization
- B. Distribution of 450 copies of Wilson's book Biodiversity; 200 copies of Humphrey & Bain book Endangered Animals of Thailand
- C. Consultancy by three Thais and three Americans (January 1990); consultancy report; publication in Thai and English of executive summary on national botanical needs (July 1991)
- D. National seminar (20-21 January 1990) organized by 16 NGO's with 900 participants; excellent coverage by national press; resolutions reached Prime Minister
- E. Small grants program begun with Wildlife Fund Thailand; extended for a third year.
- F. Some field activities initiated
- G. Project is about to get under way.
- H. Provision of speaker on global change & agriculture

UPDATE: Implementation of this buy-in has been greatly hindered by two major policy decisions by AID/Washington: In 1990 the ANE Bureau attempted to restructure MANRES to exclude all elements of conservation and biodiversity, causing buy-in activities to be put on hold for about nine months. Following the February 1991

coup d'état, U.S. assistance to Thailand was suspended. After four months of uncertainty, BSP was granted a waiver by A.I.D. in order to continue to implement the buy-in in Thailand. The workplan activities were reviewed and the activities above were selected as projects to be completed within the life of the project.

REVISION DATE: November 5, 1992

STATUS: Ongoing

TITLE: Information Transfer

CA COMPONENT: Pilot Demonstration Project

TYPE OF ACTIVITY:
PRIMARY: Education/Public Awareness

FUNDING: \$25,000 (USAID/Thailand)

START DATE: August 1989

END DATE: September 1993

PRIMARY IMPLEMENTOR: BSP

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s):
1. Royal Forestry Department
2. Prince of Songkla University

OTHER IMPLEMENTOR TYPE(s):
1. Government
2. University

COLLABORATOR(s):

CONTACT: BSP: Janis Alcorn 202-778-9697, fax
202-293-9211; AID/W: Molly Kux 202-647-
9875, fax 202-647-7368

LOCATION: Asia, Thailand, Various

BIOME: Non-specific

PURPOSE: To buy or facilitate publication of key scientific or technical publications, and ship them to the AID/Bangkok Mission for distribution.

DESCRIPTION: Requests come from USAID/Thailand for purchase of publications or for support to publication of technical reports.

SIGNIFICANCE: Scientists, conservationists and managers involved with biological resources in developing countries often have limited access or means of obtaining critical scientific and technical literature. In order to improve the capability of these professionals to carry out their responsibilities, better access to the pertinent literature and other information is fundamental. The ability of BSP to expedite the publication, purchase and shipment of key scientific books has permitted the

AID/Bangkok Mission to effectively meet Thai requirements for scientific and conservation literature. The provision of key scientific and technical literature is an explicit mandate for BSP.

TECHNICAL REPORTS OR
PUBLICATIONS:

OTHER OUTPUTS: "The Phipun Restoration Plan" by the University of Songkla; "Botanical Needs Assessment" by the Royal Forest Department.

UPDATE: In January 1992, at the request of the Mission, BSP funded the publication of 400 copies of the "Phipun Restoration Plan." BSP has also supported the publication of the "Botanical Needs Assessment" by the Royal Forest Department in August of 1991. Other publications shipped to the mission have included copies of Biodiversity for distribution at the October 1989 workshop "Biodiversity in Thailand: Inventory and Values" organized by the Science Society of Thailand (Biology Section) and the Scientific Research Society of Thailand; and copies of Endangered Animals of Thailand were shipped to the Mission for distribution to Thai scientists on the request of AID/W.

REVISION DATE: November 5, 1992

STATUS: Ongoing

TITLE: WFT Small Grants Program and
Institution Strengthening

CA COMPONENT: Pilot Demonstration Project

TYPE OF ACTIVITY:

- PRIMARY: Institutional Support
- SECONDARY: Training
- MINOR: Education/Public Awareness

FUNDING: \$92,000 (USAID/Thailand)

START DATE: August 1990

END DATE: June 1993

PRIMARY IMPLEMENTOR: Wildlife Fund Thailand (WFT)

PRIMARY IMPLEMENTOR TYPE: NGO

OTHER IMPLEMENTOR(s):

1. Dhammaaat Foundation for Conservation
2. Hak Muang Nan
3. Environment Study Centre
4. "Rak Khao Yai Group"
5. Smiling Sea Trang Province

OTHER IMPLEMENTOR TYPE(s):

1. NGO
2. NGO
3. NGO
4. NGO
5. NGO

COLLABORATOR(s):

CONTACT: BSP: Janis Alcorn 202-778-9697, fax
202-293-9211; WFT: Pisit na Patalung
662-2583004, fax 662-2586003

LOCATION: Asia, Thailand, Various

BIOME: Non-specific

PURPOSE: To provide strengthening of WFT for administration and
support for a small grants program for research and conservation.

DESCRIPTION: This activity is designed to provide easier access
to funding sources for non-English speaking individuals and
organizations doing small-scale conservation work within

Thailand. Through the buy-in, WFT administers funds for a small grants program allowing applications, proposals and reports to be completed in the Thai language and offers grants of \$1,000 to \$4,000. Of the \$92,000, \$72,000 or more must be used for grant awards during the three years of the project. In the third year of the project, an evaluation of the project will be conducted.

SIGNIFICANCE: Many environmental NGOs are grassroots organizations without the experience or facility to handle research grants proposals. The project will contribute to development of WFT's capacity to peer-review grant proposals.

The activities funded through the program include grassroots conservation strategies and education programs to heighten the awareness of the need for conservation efforts.

**TECHNICAL REPORTS or
PUBLICATIONS:**

OTHER OUTPUTS:

UPDATE: A third round of grant competition was completed in March 1992 and five grants have been awarded, ranging from \$1,600 to \$3,200. BSP has extended the contract for a third year. The additional funds (45,000) will allow for a third round of grants and an evaluation component to be added to the project. The evaluation will be conducted in 1993. BSP has provided \$63,000 to the project as of August 1992. This has provided support for 15 projects over three grant periods. Among the projects in the latest round are: "Faith for Conservation Project," "Community Forest Conservation," "Environment Study Centre Development, Mangrove Project," "Local information service Centre for Nature Conservation Project," and "Production of story books for Children on Dugongs, Seagrass and Corals."

REVISION DATE: December 1, 1992

STATUS: Ongoing

TITLE: Huay Kha Khaeng/Thung Yai Florula

CA COMPONENT: Pilot Demonstration Project

TYPE OF ACTIVITY:
PRIMARY: Ecological Research/Inventory

FUNDING: \$66,528 (USAID/Thailand)

START DATE: September 1991

END DATE: September 1993

PRIMARY IMPLEMENTOR: Royal Forest Department (RFD) Herbarium

PRIMARY IMPLEMENTOR TYPE: Government

OTHER IMPLEMENTOR(s):

OTHER IMPLEMENTOR TYPE(s):

COLLABORATOR(s):

CONTACT: BSP: Janis Alcorn 202-778-9697, fax
202-293-9211; RFD: Thawatchai Santisuk
662-579-1534, fax 662-579-8611

LOCATION: Asia, Thailand, Huay Kha Khaeng and
Thung Yai Naresuan Wildlife Sanctuaries

BIOME: Tropical Seasonal Woodlands

PURPOSE: This project will make detailed botanical collections of plant species in Huay Kha Khaeng/Thung Yai Florula Wildlife Sanctuaries and publish a book on local flora (=florula) describing the taxonomy, botany, ecology and natural history of most of the local species.

DESCRIPTION: The Royal Forest Department Herbarium is the lead agency for field collecting of botanical specimens, processing the herbarium material and writing the florula for the HKK/TYN Wildlife Sanctuaries. Some of the field inventories will be done quantitatively on permanent inventory plots established in conjunction with the Hubbel/Ashton/RFD mega-plot (50 ha) funded by WWF and with the vegetation survey (PD891G) originally proposed for BSP co-funding. Through the buy-in, BSP assists the florula project with field equipment and expenses (e.g., plant drier, tree climbers), travel, illustrations and publication costs. In addition, BSP encourages and supports occasional working visits to HKK/TYN by foreign and Thai botanists to

collaborate on the florula project.

SIGNIFICANCE: The conservation units of Huay Kha Khaeng and Thung Yai Naresuan Wildlife Sanctuaries in western Thailand are the most ecologically significant conservation areas in mainland southeast Asia. This conservation complex is very large (625,000 ha) and contains several undisturbed habitats and endangered species including tigers, clouded leopard, and elephants. However, very little is known about the flora of these conservation units, the abundance and distribution of native plant species, and the use of plant species by the native herbivores. Furthermore, hilltribe villagers will be visited to compile ethnobotanical information on the native plants.

This project specifically addresses BSP's mandate to assist with inventories of biodiversity. In addition, the preparation of a local florula for an outstanding conservation area will make a very significant contribution to the national effort for a Flora of Thailand.

TECHNICAL REPORTS OR

PUBLICATIONS: A published florula of the HKK/TYN Wildlife Sanctuaries and semi-annual progress reports on the advances, plans and problems with project implementation.

OTHER OUTPUTS: Several thousand botanical specimens (collected in 6-10 replicates) for distribution to major herbaria in Thailand and abroad; and a working reference collection (mounted sheets and/or photocopies of specimens) maintained at the Khao Nang Rum field station in HKK.

UPDATE: 1300 specimens may have been identified and process as of March 1992. Progress report was received in May 1992. As of July 1992, a total of \$60,000 has been disbursed to the Royal Forestry Department Herbarium for the project. Another progress report is in preparation.

REVISION DATE: November 5, 1992

STATUS: Ongoing

TITLE: Technical Assistance to Thailand

CA COMPONENT: Pilot Demonstration Project

TYPE OF ACTIVITY:
PRIMARY: Institutional support

FUNDING: \$16,551.00 (APRE Bureau)

START DATE: May 1992

END DATE: September 1993

PRIMARY IMPLEMENTOR: BSP

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s):

OTHER IMPLEMENTOR TYPE(s):

COLLABORATOR(s):

CONTACT: BSP: Janis Alcorn 202-778-9697, fax
202-293-9211 or Kathy Saterson 202/816-
8330

LOCATION: Asia, Thailand, Various

BIOME: Non-specific

PURPOSE: To provide technical assistance to institutions and NGOs in Thailand in building their capacity in areas such as environmental education and public awareness, land tenure issues, integrated conservation and development projects, biodiversity information centers and conflict resolution.

DESCRIPTION: On an as needed basis, the program manager for Asia/Pacific travels to the region for the purpose of providing the technical assistance in lieu of hiring a consultant.

SIGNIFICANCE:

TECHNICAL REPORTS or PUBLICATIONS:

OTHER OUTPUTS:

UPDATE: The program manager for Asia/Pacific traveled to Thailand in October for three weeks to work with WFT in

developing additional components of their on-going conservation efforts in Thung Yai Naresuan Wildlife Sanctuary.

REVISION DATE: December 1, 1992

STATUS: Completed
 TITLE: Nepal ACAP and NECTARI
 CA COMPONENT: Pilot Demonstration Project
 TYPE OF ACTIVITY:
 PRIMARY: Training
 SECONDARY: Institutional Support
 FUNDING: \$150,000 (USAID/Nepal)
 START DATE: September 1989
 END DATE: September 1992
 PRIMARY IMPLEMENTOR: WWF
 PRIMARY IMPLEMENTOR TYPE: International NGO
 OTHER IMPLEMENTOR(s):
 1. King Mahendra Trust for Nature (KMTNC)
 OTHER IMPLEMENTOR TYPE(s):
 1. NGO
 COLLABORATOR(s):
 CONTACT: BSP: Janis Alcorn 202-778-9697, fax
 202-293-9211; AID/W: Molly Kux 202-647-
 9875, fax 202-647-7368; KMTNC: Hemanta
 Mishra (977-1)526-571 or -573, fax(977-
 1)526-570; WWF/Asia: Mingma Sherpa 202-
 778-9622
 LOCATION: Asia, Nepal, Kathmandu
 BIOME: Temperate Forest and Grasslands
 PURPOSE: 1) To incorporate sustainable development initiatives
 into the Annapurna Conservation Area Project (ACAP) by continuing
 USAID funding to complement funds from UK/ODA, the Netherlands,
 and WWF/Asia and 2) to provide start-up funds for the Nepal
 Conservation Training and Research Institute (NECTARI).
 DESCRIPTION: The project's two activities (PD893A and PD893B)
 are: 1) support of ACAP for training and supervision of selected
 core staff from the KMTNC in techniques of protected area
 management, financial accountability, and program administration
 in order to upgrade the management capability and professional
 administration of ACAP; and 2) providing for the initial
 establishment and development of NECTARI, particularly for

upgrading the Sauraha field station and support of field staff in Royal Chitwan National Park.

SIGNIFICANCE: In support of developing countries' needs for assistance in preparing sustainable projects and management plans, this pilot demonstration project provides funds for the institutional strengthening of NECTARI and ACAP.

Among the benefits outlined in BSP's terms of reference are to educate and train host country communities and personnel, to provide administrative costs, to develop management infrastructure, and to increase economic return from preserves. Annapurna Project is an award winning model program in Nepal demonstrating integrated conservation and community development.

**TECHNICAL REPORTS or
PUBLICATIONS:** Interim and Final Reports

OTHER OUTPUTS:

UPDATE: This buy-in supported subprojects PD893A, the Annapurna Conservation Area Project, and PD893B, the NECTARI project. PD893A and PD893B have been completed and both activities have been closed.

REVISION DATE: November 5, 1992

STATUS: Completed
 TITLE: Nepal NECTARI
 CA COMPONENT: Pilot Demonstration Project
 TYPE OF ACTIVITY:
 PRIMARY: Training
 SECONDARY: Institutional Support
 FUNDING: \$50,000 (USAID-Nepal)
 START DATE: September 1989
 END DATE: September 1992
 PRIMARY IMPLEMENTOR: WWF
 PRIMARY IMPLEMENTOR TYPE: International NGO
 OTHER IMPLEMENTOR(s):
 1. King Mahernda Trust for Nature Conservation (KMTNC)
 OTHER IMPLEMENTOR TYPE(s):
 1. NGO
 COLLABORATOR(s):
 CONTACT: BSP: Janis Alcorn 202-778-9697, fax
 202-293-9211; AID: Molly Kux 202-647-
 9875, fax 202-647-7368; WWF/Asia:
 Mingma Sherpa 202-778-9622
 LOCATION: Asia, Nepal, Royal Chitwan National
 Park & Kathmandu
 BIOME: Non-specific
 PURPOSE: To provide start-up funding to implement the steps
 needed (see TA891) to create the Nepal Conservation Research and
 Training Institute (NECTARI), including staff support at KMTNC
 headquarters, upgrading the Sauraha field station in Royal
 Chitwan National Park, and support of field staff.
 DESCRIPTION: This activity is an outgrowth of previous efforts
 in Nepal to save the endangered Bengal tiger. Centered in Royal
 Chitwan National Park, Project Tiger eventually encompassed
 protection of key prey species such as chital deer. Later the
 joint KMTNC/WWF/SI research was broadened to include the world's
 tallest grasslands as part of the Nepal Terai Ecology Project.
 The Sauraha field station, on the edge of Royal Chitwan National
 Park, was the headquarters for all these research projects. In

1989, USAID funded a feasibility study for transforming the Nepal Terai Ecology Project into a national institute (see TA891). This buy-in to support the initial establishment and development of NECTARI by helping to fund the support staff, materials, equipment and field projects including workshops, courses, reforestation and habitat management.

SIGNIFICANCE: Nepal is characterized by the United Nations as one of the least developed countries. The country straddles the central Himalayan Mountains, extending from the monsoonal tropical lowlands of the Terai (base of the Himalayas) to the world's highest peak--Mt. Everest (Sagarmatha)--an altitudinal gradient that occurs in less than 200 kms. In order to stem the environmental destruction resulting in part from human population growth due to the eradication of Malaria beginning in 1951, NECTARI was proposed to the government in early 1989 (see TA891) to direct natural resources management for Nepal.

This activity satisfies BSP's mandate for providing administrative costs and developing management infrastructure as well as education and training for host-country personnel.

**TECHNICAL REPORTS or
PUBLICATIONS:** Progress Reports

OTHER OUTPUTS:

UPDATE: BSP's funds were a part of a larger pool of funds support the NECTARI project. The activities supported by BSP's contribution have been completed. The latest accounting of the project indicted that a total of \$844 had not been disbursed and would be reprogrammed to support PD983C, the Nepal Database project, which is in the planning stages.

REVISION DATE: November 5, 1992

STATUS: Ongoing
TITLE: ANE Bureau
CA COMPONENT: Pilot Demonstration Project
TYPE OF ACTIVITY:
PRIMARY: Various
FUNDING: \$290,717 (ANE Bureau)
START DATE: September 1989
END DATE: September 1993
PRIMARY IMPLEMENTOR: Various
PRIMARY IMPLEMENTOR TYPE: Various
OTHER IMPLEMENTOR(s): Various
OTHER IMPLEMENTOR TYPE(s): Various
COLLABORATOR(s):
CONTACT: BSP: Janis Alcorn 202-778-9697, fax
202-293-9211; AID/W: Molly Kux 202-647-
9875, fax 202-647-7368
LOCATION: Asia, Various
BIOME: Non-specific

PURPOSE: This buy-in aims to strengthen the consortium's efforts and capabilities to conserve biological diversity in the region, while contributing useful information and assistance to the ANE Bureau and A.I.D Missions in Asia and the Pacific. Together, this information and assistance will enhance the ability of host countries to address biodiversity conservation.

DESCRIPTION: The buy-in supports a careful mix of technical assistance and pilot demonstration projects whose purpose is to strengthen Missions and host-country institutions and to test new approaches to improved resource management and conservation of biodiversity. The buy-in specifically supports: (A) a technical assistance project developed by WWF and the Government of Indonesia to strengthen the management of natural resources by the government's Ministry of Forestry and Directorate General of Forest Protection and Nature Conservation (PD894A); (B) the creation of a South Pacific Conservation Data Center (PD894B); (C) partial funding for ICBP's Himalayan Jungle Project (PD894C); and (D) partial funding for a Conservation Needs Assessment of

Papua New Guinea (PD894D).

SIGNIFICANCE: The buy-in will deliver assistance to countries, their governments and private organizations, so they can perceive and act on problems and opportunities for biological conservation in their own settings. The objective is to stimulate the capabilities of the participating countries by technical assistance, research, training, information exchange and pilot demonstrations.

The project will support identifying conservation priorities, collecting, evaluating, and disseminating information, identifying and surveying critical ecosystems, strengthening local and national conservation strategies, and creating model projects that will be used to acquire knowledge and practical experience in protecting biodiversity while meeting human needs.

TECHNICAL REPORTS or

PUBLICATIONS: (A) Himalayan Jungle Project interim and final reports; (B) PNG/CNA interim and final reports; (C) Final report on the feasibility of establishing regional network in the South Pacific.

OTHER OUTPUTS: (A) Short-term adviser to PHPA Director General/Indonesia: A detailed work plan, a status report on conservation legislation and current efforts; a report reviewing options for use of conservation extension service; and in-service training program and report; (B) Conservation Data Center established in Western Samoa and a final report. A GIS database of the biodiversity rich areas of PNG; 2) A report assessing existing information on PNG's biodiversity and research needs; 3) A report recommending priorities for future conservation efforts and a map of specific high biodiversity areas.

UPDATE: See updates of PD894B, PD894C, PD894D

REVISION DATE: November 5, 1992

STATUS: Completed

TITLE: Himalayan Jungle Project

CA COMPONENT: Pilot Demonstration Project

TYPE OF ACTIVITY:

PRIMARY: Protected Areas

SECONDARY: Training

MINOR: Enterprise Development

FUNDING: \$30,000 (ANE Bureau)

START DATE: November 1990

END DATE: June 1992

PRIMARY IMPLEMENTOR: International Council for Bird Preservation (ICBP)

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s):

OTHER IMPLEMENTOR TYPE(s):

COLLABORATOR(s): Government of Pakistan; WWF Pakistan

CONTACT: BSP: Janis Alcorn 202-778-9697; fax 202-293-9211; AID/W: Molly Kux 202-647-9875; fax 202-647-7368; ICBP: Guy Duke 44-223-2277318; fax 44-223-277200

LOCATION: Asia, Pakistan, Various

BIOME: Temperate Forest & Grasslands

PURPOSE: 1) To prepare a strategy for protecting Himalayan forests to assure adequate protection for tragopan birds; 2) to plan and promote sustainable development initiatives to reduce pressure on these forests; and 3) to create educational initiatives to raise the awareness of the need for conservation among local communities and within the Pakistani government.

DESCRIPTION: This activity partially covers the salary of the project coordinator in the first year of a three-year project. In addition, funds will be used to purchase reference and/or educational materials. ICBP is preparing socio-economic profiles of project areas in order to recommend sustainable development initiatives, training Pakistani personnel to assure follow-on activities, carrying out ecological research on the western tragopan (Tragopan melanocephalus, Galliforme), and establishing

long-term monitoring of this threatened species.

SIGNIFICANCE: The buy-in will help support the preparation of a model for forest management that aims at integrating conservation and sustainable development in Pakistan's Himalayan forests.

The activity supports the creation of conservation management plans that will integrate conservation with sustainable development, education, and training for host country personnel in biodiversity-related programs, and strengthen the host country's commitment to conservation.

TECHNICAL REPORTS OR

PUBLICATIONS: Interim report received February 1992; final report due 30 June 1992. Technical reports that have been prepared include: Forest Ownership in Palas: identifying the project constituency; Logging and alternatives in Palas; Tribal groups in Palas; Palas valley socio-economy: towards a rural appraisal; Mid Palas: initial dialogues; Status and Distribution Survey of Western Tragopan.

OTHER OUTPUTS: ICBP also supplied a flier and magazine article.

UPDATE: Completed

REVISION DATE: November 5, 1992

STATUS: Ongoing
 TITLE: PNG Conservation Needs Assessment (CNA)
 CA COMPONENT: Pilot Demonstration Project
 TYPE OF ACTIVITY:
 PRIMARY: Ecological Research/Inventory
 SECONDARY: Institutional Support
 FUNDING: \$200,000 (ANE Bureau, APRE Bureau, S&T)
 START DATE: April 1990
 END DATE: February 1993
 PRIMARY IMPLEMENTOR: BSP
 PRIMARY IMPLEMENTOR TYPE: International NGO
 OTHER IMPLEMENTOR(s):
 1. National Alliance of Non-Government Organisations PNG
 2. Wildlife Conservation International (WCI)
 3. Conservation International (CI)
 4. World Resources Institute (WRI)
 5. Keystone Center
 OTHER IMPLEMENTOR TYPE(s):
 1. NGO
 2. International NGO
 3. International NGO
 4. International NGO
 5. International NGO
 COLLABORATOR(s): Greenpeace; Kew Gardens; Bishop Museum;
 AID/Center for Development Information
 and Evaluation (CDIE); Australian
 National University (ANU).
 CONTACT: BSP: Janis Alcorn 202-778-9697, fax
 202-293-9211; USAID/PNG: Louis Kuhn
 675-213666 or 675-213717, fax 675-
 212886; WCI: Mary Pearl 212-220-5123,
 fax 212-293-7114; AID/W: Molly Kux 202-
 647-9875, fax 202-647-4958
 LOCATION: Asia, Papua New Guinea
 BIOME: Various
 PURPOSE: To analyze existing information to identify
 conservation priorities and conservation implementation

issues/options, and encourage dialogue among stakeholders. The assessment is technical assistance to the Government of Papua New Guinea (GOPNG) under the Tropical Forestry Action Program. The CNA's objectives are to: 1) analyze and organize information available for conservation and land use planning; 2) develop maps of biologically important areas; 3) identify constraints and opportunities for conservation; 4) develop dialogue and build working relationships between government, NGOs, landowners and scientists; and 5) propose culturally appropriate processes and options to conserve biodiversity in PNG. The CNA output will be used as input for the UNDP GEF formulation mission.

DESCRIPTION: The CNA is being implemented by four teams under the direction of Dr. Alcorn, BSP's senior program officer for Asia & Pacific. The four teams are: 1) biologists, 2) social scientists, 3) information managers, and 4) PNG NGO/Landowners (partially supported under TA911). Biologists serving as topic leaders prepared reports, in collaboration with their colleagues, on existing state of knowledge and areas of high diversity. Social scientists carried out fieldwork in PNG and prepared reports on social, legal, and political opportunities, constraints and framework for conservation action. Information managers mapped areas of high diversity in GIS system and prepared a paper on information management options for GOPNG. NGO team interviewed Landowners for their perceptions of conservation issues in PNG. The six-month long process included a CNA Workshop in Madang which brought together government, NGOs, biologists, social scientists, lawyers, and Landowners. The CNA Report will contain reports from all teams, maps of biological important areas of PNG, and recommendations for next step.

SIGNIFICANCE: This activity will create a basis for the rapid implementation of conservation activities by the GOPNG, including the UNDP GEF project, as well as activities planned by national and international NGOs.

This activity addresses BSP's mandate to help establish national biodiversity conservation priorities and formulate proposals for research and institutional development. PNG is one of the world's high biodiversity areas and therefore an appropriate site for significant BSP activity.

TECHNICAL REPORTS OR

PUBLICATIONS: CNA Report due to be produced in July 1992.

OTHER OUTPUTS: 1) A GIS database of the biologically rich areas of PNG; 2) A report assessing existing information on PNG's biodiversity and research needs; and 3) A report recommending priorities for future conservation efforts and a map of specific high biodiversity areas.

UPDATE: The final reports of the biologists; social scientists and the maps produced for the workshop have been revised and edited. Preparations are underway for publishing these work

products in a two volume set. In addition, a synopsis of the reports has been produced and will be distributed both in English and Pidgin along with the CNA Report. A companion CNA wall map is being produced.

REVISION DATE: November 5, 1992

STATUS: Completed
 TITLE: LAC Pilot Projects
 CA COMPONENT: Pilot Demonstration Project
 TYPE OF ACTIVITY: Various
 FUNDING: \$500,000 (LAC Bureau)
 START DATE: August 1989
 END DATE: September 1992
 PRIMARY IMPLEMENTOR: Various
 PRIMARY IMPLEMENTOR TYPE: Various
 OTHER IMPLEMENTOR(s): Various
 OTHER IMPLEMENTOR TYPE(s): Various
 COLLABORATOR(s): Various
 CONTACTS: BSP: Meg Symington 202-778-9727, fax
 202-293-9211; AID/W: Jim Hester 202-647-
 8093, fax 202-647-8098
 LOCATION: Latin America and the Caribbean,
 Various
 BIOME: Non-specific

PURPOSE: To assist A.I.D.'s Bureau for Latin America and the Caribbean (LAC) in fulfilling its legislative mandate for the protection of tropical forests and biological diversity by providing funds for the development and implementation of four to six biodiversity pilot projects in the LAC region. Through this buy-in, the LAC Bureau seeks to access the combined technical expertise and administrative capabilities of the BSP consortium as well as the wider NGO community. The Bureau also seeks to leverage a maximum amount of financial and technical support from those NGOs implementing pilot projects.

DESCRIPTION: In consultation with LAC/DR/E, a formal procedure for the solicitation and review of pilot project proposals was established. A limited call for proposals was issued in September 1989. Eleven proposals were received by the November 15, 1989 deadline. These proposals were sent out to five independent peer reviewers with considerable experience in the LAC region. The BSP Executive Committee and the LAC Bureau were consulted in determining the final ranking of proposals. Six

pilot projects were wholly or partially funded as a result of this review: (A) PD895A - INBio Parataxonomists Course/Costa Rica; (B) PD895B - WCI Cloud Forests/Ecuador; (C) PD895C - Establishment of a Conservation Division and Expansion of the Protected Areas System/Belize; (D) PD895D - Les Arcadins Marine Park/Haiti; (E) PD895E - ACE NGO Training/Caribbean (ACE); (F) PD895F - NYBG Amboro Inventory/Bolivia. (Please see project summary sheets (PD895A-F) for descriptions of each pilot project.)

SIGNIFICANCE: BSP's handling of the LAC Bureau's yearly biodiversity grants process relieved Bureau personnel from time-consuming grant administration and monitoring during a time of transition between Bureau environmental projects (DEMS to ESP). BSP also incorporated formal outside peer review into what had previously been an in-house A.I.D. process. (See project summary sheets for significance of individual pilot projects.)

The solicitation and selection process involved considerable outreach on the part of BSP to the wider NGO and academic community.

TECHNICAL REPORTS or

PUBLICATIONS: See specific project descriptions (PD895A-F).

OTHER OUTPUTS: (A) Fifteen Costa Rican parataxonomists trained; (B) Research, training and ecological assessment in Ecuador's threatened cloud forests; (C) Conservation Division established, national park system expanded and park management improved in Belize; (D) Marine park established and community fisheries program initiated in Haiti; (E) Seven Caribbean NGO managers and conservation professionals trained; (F) Complete floristic inventory of Bolivia's Amboro National Park initiated

UPDATE: All of the activities funded under this add-on were completed as of 9/30/92. Several of these have leveraged significant follow-on funding from A.I.D. missions or other sources for project implementors.

REVISION DATE: 11/16/92

STATUS: Completed

TITLE: WCI Cloud Forests/Ecuador

CA COMPONENT: Pilot Demonstration Project

TYPE OF ACTIVITY:

- PRIMARY: Ecological Research/Inventory
- SECONDARY: Training
- MINOR: Protected Areas

FUNDING: \$78,805 (LAC Bureau)

START DATE: November 1989

END DATE: June 1992

PRIMARY IMPLEMENTOR: Wildlife Conservation International (WCI)

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s):

1. Ecociencia
2. Pontificia Universidad Catolica del Ecuador (PUCE)

OTHER IMPLEMENTOR TYPE(s):

1. NGO
2. University

COLLABORATOR(s):

Fundación Ecologica ArcoIris;
University of Florida/Gainesville;
Ministerio de Agricultura y Ganderia;
Asociación Ecológica Quijos-Huaico;
Corporación Ecológica Amigos de la
Naturaleza de Mindo (CEANM);
Corporación Ornitológica Ecuatoriana
(CECIA); Acción Ecológica

CONTACTS:

BSP: Meg Symington 202-778-9727, fax
202-293-9211; AID/W: Jim Hester 202-
647-8093, fax 202-647-8098; WCI: Stuart
Strahl 212-220-7158, fax 212-220-7114

LOCATION: Latin America, Ecuador, Various

BIOME: Tropical Montane Forest

PURPOSE: To support a biological assessment program in mid-level cloud forests in eastern Ecuador, and to provide formal training and financial support for Ecuadorian nationals in conservation-oriented field programs. WCI will support inventory work and

ecological studies on indicator species in several mid-altitude forests, with particular emphasis on key protected areas (Podocarpus National Park and Cayambe-Coca Ecological Reserve). Research will focus on measuring the impact of various forms of exploitation on forest environments.

DESCRIPTION: This project combines ecological research, training of host-country nationals, and on-the-ground conservation. Patricio Mena (M.S. Botany) and Luis Suarez (M.S. Zoology), leaders of the Ecuadorian NGO Ecociencia and adjunct professors at PUCE, are the project leaders in the field. At Podocarpus National Park, they have completed baseline surveys throughout the park and are now focussing their attention on the southwestern portion of the park, which is particularly threatened by hunting, artesanal gold mining and selective logging. They are overseeing research by five Ecuadorian licenciatura students on topics ranging from the natural history of the bearded guan (an important indicator species) to local attitudes toward wildlife. One student has organized an ambitious research project involving surveys of professional and subsistence hunters in the area surrounding the park. In December 1989, a team visited a region of the park that was under heavy pressure from gold mining. Mercury levels downstream from a small placer mine at the head of the San Luis watershed were measured to be 150-170 times the WHO-accepted standards for mercury. The team followed up by meeting with institutions involved with local environmental management as a first step toward organizing a campaign to confront mining conflicts in the parks of Ecuador. The project will fund the production of a video about the problem of mining in national parks. In Cayambe-Coca, research will assess the impact of hunting by indigenous and colonist communities located in the reserve.

SIGNIFICANCE: The mid-altitude Andean slope forests (1500-3300m) of western South America are sites of exceptional biological diversity and high economic value. These forests are vital for conserving major watersheds and controlling soil erosion, both of which are key factors affecting local agricultural systems and those in surrounding lowland regions. In addition, the wide altitudinal range of life zones and habitats results in extremely high species diversity and endemism. Prior to this project, very little field research had been undertaken in Ecuador's cloud forests. This project will help to remedy the serious deficiencies in field knowledge and research expertise that are currently hampering natural resource management initiatives throughout Ecuador. Expanding the information base on the status of slope forest ecosystems will be immediately applicable to ongoing national conservation initiatives such as the Fundacion Natura/WWF Debt Swap and AID/Quito's SUBIR project.

This project directly addresses BSP's mandate by identifying and surveying critical ecosystems and supporting the education and training of host-country personnel in biodiversity-related programs.

TECHNICAL REPORTS or

PUBLICATIONS: Six licenciatura theses have been produced in Ecuador.

OTHER OUTPUTS: Six Ecuadorian students trained for their licenciatura degree in biology; research results published in both scientific and popular fora; research results further disseminated through participation of students in the January 1992 National Symposium on the Conservation of Biological Diversity in Ecuador and the national Biological Congress; video on the problem of gold mining in Podocarpus National Park.

UPDATE: The project is now officially completed although certain activities continue through the efforts of Ecociencia and other collaborating institutions. WCI is now a member of the consortium (along with CARE and TNC) implementing USAID/Ecuador's natural resources and protected area project (SUBIR). One of the three protected areas where SUBIR will be working is Cayambe-Coca.

REVISION DATE: 11/16/92

STATUS: Completed

TITLE: Establishment of a Conservation
Division and Expansion of the Protected
Areas System/Belize

CA COMPONENT: Pilot Demonstration Project

TYPE OF ACTIVITY:
PRIMARY: Protected Areas
SECONDARY: Institutional Support
MINOR: Public Policy
MINOR: Training

FUNDING: \$100,414 (LAC Bureau)

START DATE: March 1990

END DATE: September 1992

PRIMARY IMPLEMENTOR: World Wildlife Fund (WWF)

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s):
1. Government of Belize (GOB)
2. Belize Center for Environmental Studies (BCES)
3. Colorado State University
4. University College of Belize
5. University of Montana

OTHER IMPLEMENTOR TYPE(s):
1. Government
2. NGO
3. University
4. University
5. University

COLLABORATOR(s): Programme for Belize; Belize Audubon
Society, Belize Zoo

CONTACTS: BSP: Meg Symington 202-778-9727, fax
202-293-9211; AID/W: Jim Hester 202-
647-8093, fax 202-647-8098; WWF: Steve
Cornelius 202-778-9654, fax 202-293-
9211

LOCATION: Latin America, Belize, Various

BIOME: Non-specific

PURPOSE: To improve the capacity of the Belize Forestry Division

(FD) to manage wildlife, protected areas and forest reserves in accordance with existing laws by creating a Conservation Division (CD); to provide technical assistance in staff development and programming to allow the CD to assume administrative functions normally expected of government, such as policy making and strategic planning; and to identify areas of critical importance to be included in an expanded national system of protected areas.

DESCRIPTION: Belize's institutional capacity to manage its natural resources in the face of increasing social, economic and demographic threats is largely inadequate. Furthermore, government's default to the non-governmental sector of protected area policy and management responsibilities is widely felt to be an unacceptable arrangement. At the request of the GOB, in August 1989, WWF supported a consultant to work with the FD to identify the mission, objectives, and areas of responsibility of a protected areas management authority. The consultant drafted an internal organizational structure and chain of command and a five year plan estimating budgetary needs for staffing, equipment, training of personnel and operations. This plan forms the basis for the current project.

In 1990, the GOB established and staffed the CD according to plan. The BSP grant funded the BCES to do a diagnostic study of potential additions to the protected areas system and prioritize their candidacies based on established criteria of uniqueness of the resource, feasibility of present and future management, and degree of threat. BSP funds were also applied to consultancies provided to the CD in the areas of fees and concessions and wildlands area management. WWF matching funds have been used in CD staff training and in purchasing equipment for the CD offices. BSP funds will be used for the first two years of the project; WWF support will continue for three additional years.

SIGNIFICANCE: Given the low (but increasing) deforestation rate in Belize and the high proportion of the national territory controlled by the FD (30-40%), Belize represents the preeminent opportunity in Mesoamerica for establishing an exemplary wildlands and wildlife conservation program that is simultaneously integrated with a sustainable national economy.

This project directly addresses BSP's mandate by building the capacity of a host-country institution to conserve biological diversity and by supporting the identification and surveying of critical habitats.

WWF increased the level of their match from 1:1 after the project was approved. Ivor Jackson was hired as a consultant to the CD to oversee project implementation in the field.

TECHNICAL REPORTS or

PUBLICATIONS: A report to the GOB on critical wildland areas recommended for incorporation into an expanded protected areas system, "Belize Critical Habitat Survey," 31 December 1990,

Belize Center for Environmental Studies; two consultant reports provided to the GOB on: a) wildlands management, and b) fees and concessions.

OTHER OUTPUTS: A workshop involving government and the private sector to discuss the critical habitat survey's findings; the establishment of a Belize Protected Areas Conservation Trust to provide funds for the operation, maintenance and enhancement of protected areas for their conservation and visitor enjoyment and, most importantly, a functioning, internally funded Conservation Division within the Belize Forestry Division.

UPDATE: The final training activities were carried out in June and August of this year, and the project was officially completed on 9/30/92. WWF will probably be the recipient of a cooperative agreement from USAID/Belize to implement the mission's new Natural Resource Management and Protection Project. The experience gained by WWF in carrying out the BSP/LAC project will be invaluable to them as they continue and expand their work with the Belize Conservation Division.

REVISION DATE: 11/16/92

STATUS: Completed
TITLE: Les Arcadins Marine Park/Haiti
CA COMPONENT: Pilot Demonstration Project
TYPE OF ACTIVITY:
 PRIMARY: Protected Areas
 SECONDARY: Community Development
 MINOR: Education/Public Awareness
 MINOR: Sustainable Use
 MINOR: Ecotourism
 MINOR: Institutional Development
FUNDING: \$110,000 (LAC Bureau)
START DATE: July 1990
END DATE: September 1992
PRIMARY IMPLEMENTOR: World Wildlife Fund (WWF)
PRIMARY IMPLEMENTOR TYPE: International NGO
OTHER IMPLEMENTOR(s):
 1. Centre de Formation et d'Encadrement Technique (CFET)
OTHER IMPLEMENTOR TYPE(s):
 1. NGO
COLLABORATOR(s): Haiti Hotel Association; Fisheries Service/Ministry of Agriculture; Ministry of Tourism; FAN; Action Tet Ansam Quisqueya (ATAQUE); Federation pour la Restauration de l'Environnement National (FREN); ALERTE; Luly Fishing Cooperative (COPELU)
CONTACTS: BSP: Meg Symington 202-778-9727, fax 202-293-9211; AID/W: Jim Hester 202-647-8093, fax 202-647-8098; WWF: Evelyn Wilcox 202-778-9728, fax 202-293-9211
LOCATION: Latin America/Carribbean, Haiti, Les Arcadins Marine Park
BIOME: Coastal/Marine
PURPOSE: To establish a national marine park at Les Arcadins, Haiti, and to develop a community-based fisheries management program that will improve the quality of life for those living in the vicinity of Les Arcadins, while protecting the resource base.

DESCRIPTION: The rich biological diversity of the marine environment surrounding Les Arcadins, which is located off the west coast of Haiti about an hour's drive from the capital city of Port-au-Prince, is in stark contrast to the country's severely degraded terrestrial environment. The abundance of reef fishes at Les Arcadins compares favorably with some of the best developed reef systems in Puerto Rico and the Virgin Islands. In addition, the sheltered location of the reef and high water transparency encourage an unusual and abundant diversity of sponge life and coral species.

In 1989, an action plan for the establishment of a national marine park at Les Arcadins was completed following a two-year multidisciplinary study funded by the LAC Bureau. This action plan provides a solid biological, social, economic and institutional basis for establishing a marine park and fisheries program at Les Arcadins, and is the foundation for this project. WWF is working closely with the Luly Fishing Cooperative (COPELU), the Haiti Hotel Association, a local dive club and the government of Haiti to bring permanent protection to the site, while simultaneously increasing the profitability and sustainability of the local fishery. It is hoped that, in the future, the Les Arcadins Marine Park can be an important economic asset to Haiti and Luly through the development of tourism.

SIGNIFICANCE: The high biological diversity and many unique features of the waters surrounding Les Arcadins make it worthy of being the first national marine park in Haiti. The fishermen of Luly are seriously committed to maintaining their livelihood, for themselves and future generations. The Les Arcadins project provides a rare opportunity to enlist the aid of a local fishing community in the protection of a uniquely rich biological system, in a country that is infamous for its environmental degradation.

This project directly addresses BSP's mandate to assist developing countries in the establishment and maintenance of wildlife sanctuaries, reserves and parks.

UNDP and WWF provided over \$165,000 in matching funds for this project.

TECHNICAL REPORTS or

PUBLICATIONS: Quarterly technical reports by WWF Program Officer Evelyn Wilcox; WWF Project Description; various environmental education materials (7 booklets; 3 for adults; 4 for children).

OTHER OUTPUTS: At the end of two years the following outputs are expected: 1) an ongoing community-based fisheries management program in Luly; 2) a formally declared national marine park at Les Arcadins, complete with necessary equipment and infrastructure; 3) an NGO established that can effectively continue the work of the first two years by managing the park and the fisheries program; and 4) various promotional and educational

materials about the park and the marine environment in general.

UPDATE: The coup in Haiti and attendant social and political unrest slowed project implementation so that several of the project's original objectives could not be accomplished within the two-year time frame of the BSP project (e.g., the fisheries management program is still in a nascent stage, and the area has yet to be formally declared as a marine park). However, much has been accomplished, and the project will continue and, hopefully, be expanded over the next 3-5 years. UNDP has granted WWF an extension for its share of the project's funds until January 1993, and a private donor has contributed \$10,000 to keep the project going until either UNDP can continue its support (with the approval of a legally established government) or other funds can be raised.

REVISION DATE: 11/16/92

STATUS: Completed

TITLE: NYBG Amboro Inventory/Bolivia

CA COMPONENT: Pilot Demonstration Project

TYPE OF ACTIVITY:

- PRIMARY: Ecological Research/Inventory
- SECONDARY: Protected Areas
- MINOR: Training
- MINOR: Institutional Support

FUNDING: \$40,000 (LAC Bureau)

START DATE: July 1990

END DATE: June 1992

PRIMARY IMPLEMENTOR: New York Botanical Garden

PRIMARY IMPLEMENTOR TYPE: Botanical garden or zoo

OTHER IMPLEMENTOR(s):

1. Museo de Historia Natural "Gabriel Rene Moreno"
2. Jardin Botanico (Santa Cruz)

OTHER IMPLEMENTOR TYPE(s):

1. Museum
2. Botanical Garden or Zoo

COLLABORATOR(s): Missouri Botanical Garden

CONTACTS: BSP: Meg Symington 202-778-9727, fax 202-293-9211; AID/W: Jim Hester 202-647-8093, fax 202-647-8098; NYBG: Wayt Thomas 212-220-8642, fax 212-220-6504

LOCATION: Latin America, Bolivia, Amboro National Park (ANP)

BIOME: Tropical Moist Forest

PURPOSE: To botanically explore Amboro National Park (ANP) and to use the data acquired through botanical inventory to advise and assist in the conservation of the park. The project is also designed to assist in the development of the Natural History Museum in Santa Cruz and in the education of its staff, and to stimulate the use of ANP by scientists and visitors, thus, effectively increasing its protection.

DESCRIPTION: The featureless plains of eastern Bolivia are abruptly terminated by a line of ridges, the first Andean

foothills, about 30 km west of the city of Santa Cruz. One peak, Cerro Amboro, has a peculiar rounded form and has been held in awe since pre-Columbian times. The surrounding forested plains, which were a National Forest Reserve for several decades, became Parque Nacional Amboro (2000 km²) in 1984. Elevations in the park range from 300m to about 1900m on the highest peaks. The rainfall is estimated at between 2000 to 2500 mm per year, and probably varies from site to site.

Biological inventory in the park has been limited; less than 15% of the 3200 plant species thought to occur in the park have been collected to date. Dr. Michael Nee, of NYBG, will lead several botanical collecting trips to ANP over the course of the grant. These trips will be made in collaboration with the Museo de Historia Natural of the Universidad Gabriel Rene Moreno, and Dr. Nee will be accompanied by students from the University, and assisted by Mr. Robin Clarke, a scientific advisor for the park.

SIGNIFICANCE: Identifications made to date from previous botanical collecting trips reveal several significant patterns: 1) tropical rainforest species found here are all at the southern extreme of their ranges; 2) many species have been collected here for the first time in Bolivia; and 3) many species are new to science or, at least, are not represented in the collections of NYBG, which has the most complete collection of Bolivian plants.

This project relates directly to BSP's mandate to identify, study and catalog animal and plant species. It will also increase the capacity of host-country scientists and institutions to do this type of work.

TECHNICAL REPORTS or

PUBLICATIONS: 1) A checklist and basic plant identification manual has been produced that can be used to train students and park service personnel, as well as be useful for visiting scientists and tourists: "Las especies forestales mas communes en el Parque Nacional Amboro." 2) Draft flora of Amboro National Park. 3) Preliminary checklist for Noel Kempff Mercado National Park. 4) A one hectare inventory of trees in Amboro: "Inventario de Arboles en el Bosque Humedo Subtropical del Parque Nacional Amboro."

OTHER OUTPUTS: A system of foot trails will be established within the park that will result in more effective use by the scientific community, park protection officials and tourists, and 3-5 young Bolivian botanists will be trained in tropical botany and ecology.

UPDATE: The project was completed on June 30, 1992. Substantial progress in the knowledge of the flora in two parks in the Bolivian department of Santa Cruz was accomplished through this project, and the work is currently being extended through a direct grant from USAID/Bolivia to NYBG to continue their

inventory and training work. NYBG is also collaborating with Missouri Botanical Garden and the Natural History Museum in an expanded effort to study the botanical diversity of Noel Kempff Mercado National Park.

REVISION DATE: 11/16/92

STATUS: Ongoing

TITLE: S&T Global Climate Change

CA COMPONENT: Pilot Demonstration Project

TYPE OF ACTIVITY: Various

FUNDING: \$1,302,439 (S&T/FENR)

START DATE: September 1990

END DATE: November 1993

PRIMARY IMPLEMENTOR: Various

PRIMARY IMPLEMENTOR TYPE: Various

OTHER IMPLEMENTOR(s): Various

OTHER IMPLEMENTOR TYPE(s): Various

COLLABORATOR(s): Various

CONTACTS: BSP: Meg Symington 202-778-9727, fax 202-293-9211; Kate Newman 202-778-9524, fax 202-293-9211; AID/W: Twig Johnson 703-875-4022, fax 703-875-4394

LOCATION: Various

BIOME: Tropical Moist Forest

PURPOSE: In June of 1990, A.I.D.'s Science and Technology Office of Forestry, Environment and Natural Resources (S&T/FENR) asked BSP to address the effects of global warming by looking at the production of CO² in tropical regions in Africa and Brazil. See individual activity summaries PD902A-J.

DESCRIPTION: (See also individual project descriptions) (A) Cultural Survival report on rain forest products; (B) WWF projects on Amazon forest management and policy; (C) Smithsonian's Biological Dynamics of Forest Fragments; (D) Woods Hole for restoring degraded Amazonian lands; (E) NYBG commemorative publication; (F) BSP start-up activities on GCC in Africa.

SIGNIFICANCE: Interest in and concern for the effects of global climate change has been increasing in recent years. U.S. public concern resulted in a 1990 congressional earmark of AID's budget obligating the agency to spend \$15 million on new

initiatives addressing global climate change. Brazil was a key focal country for these new initiatives, hence S&T/FENR increased BSP's core funds to address the subcomponents described above.

The integration of global climate change initiatives with tropical forestry and the conservation of biodiversity is a particularly relevant activity for BSP.

TECHNICAL REPORTS or

PUBLICATIONS: Semi-annual progress reports or technical reports. Central Africa: Global Climate Change and Development- Overview Report, and Synopsis, and Technical Report were produced.

UPDATE: Second year funding from S&T permitted the continuation of the BDFP, WHRC, and WWF projects in the Brazilian Amazon (PD902H, PD902I, and PD902J). An environmental assessment of the commercial timber management component of the WWF project will be carried out in January 1993. BSP funding for the second year of the BDFP project (PD902H) has been extended to January 1993. FY 93 funding from R&D permitted third year funding for only WHRC (PD902K). The third year of their program in Brazil will officially begin November 1, 1992.

REVISION DATE: 11/16/92

STATUS: Ongoing

TITLE: Commemorative Issue of Boletim do Museu Paraense Emilio Goeldi

CA COMPONENT: Pilot Demonstration Project

TYPE OF ACTIVITY:
PRIMARY: Institutional Support
SECONDARY: Ecological Research/Inventory

FUNDING: \$3,000 (S&T/FENR)

START DATE: April 1991

END DATE: December 1992

PRIMARY IMPLEMENTOR: New York Botanical Garden

PRIMARY IMPLEMENTOR TYPE: Botanical Garden or Zoo

OTHER IMPLEMENTOR(s):
1. Museu Goeldi

OTHER IMPLEMENTOR TYPE(s):
1. Museum

COLLABORATOR(s):

CONTACT: BSP: Meg Symington 202-778-9727, fax 202-293-9211; AID/W: Twig Johnson 703-875-4106, fax 703-875-4394; NYBG: Doug Daly 212-220-6507, fax 212-220-6504

LOCATION: Latin America, Brazil, Various

BIOME: Tropical Moist Forest

PURPOSE: To finance the publication of a special commemorative issue of the Boletim do Museu Paraense Emilio Goeldi.

DESCRIPTION: These funds will permit the Museu Goeldi to publish a special issue of the Boletim, dealing with valuable recent research results in the field of Amazonian botany. It will also complement the S&T portfolio of global climate change activities in Brazil and support the relationship between the NYBG and the Museu Goeldi, which is a model of international collaborative research. This special issue will commemorate the 30 years of collaboration between the Museu and the Garden, as well as the NYBG Centennial. It will include about 30 articles.

SIGNIFICANCE: This activity will help to provide important

technical material concerning recent botanical research in Brazil to a wide audience throughout Latin America.

This project addresses BSP's information networking objectives by documenting results of research and disseminating technical information to institutions and individuals.

TECHNICAL REPORTS or

PUBLICATIONS: Publication of a special issue; 500 extra copies for distribution throughout Latin America.

OTHER OUTPUTS:

UPDATE: Final report has not yet been received.

REVISION DATE: 11/17/92

STATUS: Ongoing

TITLE: Biological Dynamics of Forest Fragments
II (BDFF)

CA COMPONENT: Pilot Demonstration Project

TYPE OF ACTIVITY:
PRIMARY: Training
SECONDARY: Ecological Research/Inventory

FUNDING: \$76,183 (S&T GCC)

START DATE: November 1991

END DATE: January 1993

PRIMARY IMPLEMENTOR: Smithsonian Institution (SI)

PRIMARY IMPLEMENTOR TYPE: Museum

OTHER IMPLEMENTOR(s):
1. Associacao de Levantamento Florestal do Amazonas (ALFA)
2. Instituto Nacional de Pesquisas de Amazonia (INPA)

OTHER IMPLEMENTOR TYPE(s):
1. NGO
2. Government

COLLABORATOR(s): University of Washington

CONTACT: BSP: Meg Symington 202-778-9727, fax
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703/875-4106, fax 703-875-4394; SI:
(technical) Rob Bierregaard 202-786-
2821, (contractual) Dave Short 202-287-
3796

LOCATION: Latin America, Brazil, Amazon Basin

BIOME: Tropical Moist Forest

PURPOSE: To enhance the training and outreach capacity of the Biological Dynamics of Forest Fragments Project. BDFF feels that the training of Latin American graduate students is one of the more significant contributions that the project is making toward conservation of neotropical forests. This grant will provide funds for: 1) two Brazilian Ph.D. students investigating the processes of forest regeneration in abandoned pastures; 2) a field course for Brazilian graduate students; 3) analyses of data on microclimate and remotely sensed data to enhance abilities to monitor forest dynamics across large reaches of the Amazon basin;

and 4) a follow-up Four Neotropical Rainforests Workshop to be held in Manaus.

DESCRIPTION: Currently in its 12th year, the Biological Dynamics of Forest Fragments (BDFF) Project is a large-scale ecological study that seeks to understand the effects of forest fragmentation in Amazonian forests on biodiversity conservation. While the accumulation of scientific data relating to reserve planning and management is essential to rational development in the Amazon, BDFF recognizes that any long-term conservation measures for Latin American forests will have to come from local initiatives. Consequently, the project has tried to involve as many Latin American graduate students as possible, in the hope that the coming generation of scientists and science policy makers in Brazil and its neighboring Amazonian countries will understand the importance of conserving intact tropical forest ecosystems.

SIGNIFICANCE: This activity addresses biodiversity, global change and forest management issues by providing and transmitting knowledge pertinent to improved forest management techniques based on conservation principles.

This project focuses on increased capacity of host-country and other Amazon country researchers to structure research and development programs for the conservation of biodiversity.

TECHNICAL REPORTS or PUBLICATIONS: Doctoral dissertations by students on carbon-flow in second growth and on leaf-cutter ants and forest regeneration are expected to result.

OTHER OUTPUTS: 1) A tropical ecology field course for Brazilian graduate students modelled after the highly successful OTS courses in Costa Rica; 2) A follow-up workshop for participants in the Four Neotropical Forests Symposium to establish research plans and protocols and plan collaborative initiatives.

UPDATE: The field course will not be held until June 1993. It is not yet clear how the lack of third year funds from R&D in November 1992 will affect the achievement of project objectives.

REVISION DATE: 11/17/92

STATUS: Ongoing
TITLE: Restoring Agricultural Productivity on Degraded Amazonian Lands II
CA COMPONENT: Pilot Demonstration Project
TYPE OF ACTIVITY:
 PRIMARY: Ecological Research/Inventory
 SECONDARY: Socio-cultural Analysis/Research
 MINOR: Ecosystem Restoration
 MINOR: Sustainable Use
 MINOR: Training
FUNDING: \$137,874 (S&T/FENR)
START DATE: November 1991
END DATE: October 1992
PRIMARY IMPLEMENTOR: Woods Hole Research Center (WHRC)
PRIMARY IMPLEMENTOR TYPE: NGO
OTHER IMPLEMENTOR(s):
OTHER IMPLEMENTOR TYPE(s):
COLLABORATOR(s): EMBRAPA/CPATU; AMAZON; Museu Goeldi; UFPA/NAEA; INPA; FUNTAC; USP/CENA; UFF; CNS; Rural Workers Union of Paragominas
CONTACT: BSP: Meg Symington 202-778-9727, fax 202-293-9211; AID/W: Twig Johnson 703-875-4106, fax 703-875-4394; WHRC: Dan Nepstad 508-540-9900, fax 508-540-9700 or 55-91-226-6622, fax 55-91-235-1124
LOCATION: Latin America, Brazil, Amazon Basin - Para
BIOME: Tropical Moist Forest
PURPOSE: This grant will support a study with the following objectives: (1) synthesize existing information on geographical patterns of natural resources and agriculture in eastern Amazonia, (2) synthesize information on the uses and management of native plants of eastern Amazonia, (3) evaluate processes and production systems with potential for restoring degraded Amazonian land, (4) disseminate information to farmers' organizations and extension workers, and (5) train young Brazilian scientists through intensive internships with project

scientists.

DESCRIPTION: This activity is in the second of a three-year period and includes collaborative efforts of several individuals. Dr. Daniel Nepstad, a tropical forest ecologist based in Belem, is project coordinator. To help execute the study, he selected two full-time Brazilian fellows--one with a graduate degree in agronomy and one with a graduate degree in economics. This three-person research team comprises the core of the project. Dr. I. Foster Brown, who has studied the biogeochemical impacts of land use in Rio de Janeiro and Rondonia since 1986, is assisting in project implementation. Three Brazilian student interns per year are also a part of the project team.

The geographic focus of the project is the northeastern region of the Amazon, in the state of Para, where a great diversity of agricultural systems has been established. The project is evaluating agricultural systems on degraded lands in other regions such as Rondonia and Acre in the south of Para. The project aims to reduce Amazonian deforestation and associated releases of carbon dioxide, methane, and other heat-trapping gases by increasing the agricultural options available to residents of degraded lands.

SIGNIFICANCE: Results will guide land managers in the areas of restoration ecology, degraded pasture productivity and management of primary and secondary forest--areas vital to tropical land use on three continents. This research, development and extension project deals directly with the biodiversity, global climate change and tropical forest conservation aspects of the BSP mandate. The research offers technical assistance to NGOs, develops models of land use that maintain natural vegetation and protect biodiversity, trains host-country scientists, develops public awareness and education programs, and contributes to rural development projects that integrate human economic needs and conservation.

TECHNICAL REPORTS or PUBLICATIONS: Interim Report, May 10, 1992 (13 pp); Final Report, October 29, 1992 (26 pp) (see p. 21 for publications completed with BSP support).

OTHER OUTPUTS: A portable Geographic Information Systems (GIS) was acquired in the first year of the program. The GIS database includes a satellite image map of Para with a drought index map superimposed. Database on tree flora of Para is being compiled, with 950 species included so far, including ethnobotanical and agroforestry information on some of them. Regeneration and seed characteristics of 80 tree species and seed predation characteristics of 15 species have been compiled. Several tree species have been identified that are nutrient concentrators, especially of phosphorus. Future studies will be built around this database as it develops. Interactions of seven tree species and three forage grasses are being tested to develop more sound

pasture management techniques. Extension programs have been developed with small-farm communities, and institutional linkages have been built with EMBRAPA/CPATU, AMAZON, Museu Goeldi, UFPA/NAEA, INPA, FUNTAC, USP/CENA, UFF, and CNS.

UPDATE: This project has attracted the participation of scientists from many Brazilian research institutions, and strong links have been formed with organizations of farmers. Project completed on schedule as of 10/31/92. Third and final year of project began as of 11/1/92.

REVISION DATE: 11/17/92

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STATUS: Ongoing

TITLE: Amazon Forest Management and Policy II

CA COMPONENT: Pilot Demonstration Project

TYPE OF ACTIVITY:

- PRIMARY: Sustainable Use
- SECONDARY: Public Policy
- MINOR: Enterprise Development
- MINOR: Community Development
- MINOR: Resource/Ecological Economics

FUNDING: \$220,001(S&T/FENR)

START DATE: December 91

END DATE: June 1993

PRIMARY IMPLEMENTOR: World Wildlife Fund

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s):

1. IMAZON
2. Rural Workers Syndicate of Paragominas (STRP)
3. Centro de Educacao, Pesquisa e Assistencia Sindical e Popular (CEPASP)

OTHER IMPLEMENTOR TYPE(s):

1. NGO
2. NGO
3. NGO

COLLABORATOR(s): IBAMA/SEMAM; EMBRABA/CPATU; USP; GENESYS

CONTACT: BSP: Meg Symington 202-778-9727, fax 202-293-9211; AID/W: Twig Johnson 703-875-4106; fax 703-875-4106; WWF: Garo Batmanian 202-778-9713, fax 202-293-9211

LOCATION: Latin America, Brazil, Amazon Basin

BIOME: Tropical Moist Forest

PURPOSE: This activity is to establish forest management demonstration projects for local companies and communities and to encourage forest policy changes that will result in a reduction in the rate of deforestation in the Brazilian Amazon.

DESCRIPTION: This is the second year of a three-year program implemented by the WWF Tropical Forestry Program which is funded by R&D/ENR through BSP. It is part of a larger program of interrelated activity aimed at reducing deforestation in the Brazilian Amazon that is being implemented by WWF in support of A.I.D.'s GCC initiative in Brazil. It aims to reduce rates in two major ways: (A) By promoting sustainable land management systems which provide an economic incentive for maintaining forest cover and reduce pressure for continued forest clearing. Specific activities include applied research and on-the-ground demonstration of the social, economic and environmental viability of these alternative land uses. And (B) by analyzing and disseminating information on these land management alternatives, to provide decision makers with the information they need to develop policies and provide incentives for sustainable land use. Specific activities include analyzing policy constraints and economic benefits of the sustainable forest management alternatives to be demonstrated under (A) above, communicating such analysis to decision makers, and strengthening NGOs to play an effective role in policy reform.

SIGNIFICANCE: By promoting sustainable land management systems which maintain forest cover and by giving decision makers information needed to develop policies and provide incentives for sustainable land use, this project attacks a widespread problem from two distinct angles. It offers technical assistance to the USAID Mission in Brasili and to local NGOs; works with local scientists to establish national and local conservation guidelines and priorities; identifies models of land use that maintain natural vegetation and biodiversity; and examines national and local priorities to see how these impact global climate change and biological diversity. It promotes rural development projects that integrate human and economic needs with conservation priorities.

TECHNICAL REPORTS or

PUBLICATIONS: First quarterly progress report, December 1991, 14 pp. Second quarterly progress report, March 1992, 25 pp. Third quarterly progress report, June 1992, 11 pp.

OTHER OUTPUTS: 1) The development of a sustainable timber management plan that will be implemented by a local private sawmill in Paragominas; 2) Development and implementation of several community-based forest management demonstration projects; and 3) Establishment of a working group of scientists, government officials and representatives of industry to make recommendations to the Brazilian government concerning Amazon forest policy issues.

UPDATE: The Environmental Assessment (EA) for the forest management component of this project (implemented by IMAZON) will be carried out in January 1993. The forest policy component of the project has been slowed considerably by high staff turnover within the Brazilian government. The lack of new funds for the

third year of this project will affect the implementation of the two demonstration projects if new funds are not forthcoming in the spring.

REVISION DATE: 11/17/92

STATUS: Completed

TITLE: Mexico Ecodevelopment Program

CA COMPONENT: Pilot Demonstration Project

TYPE OF ACTIVITY: Various

FUNDING: \$481,314 (USAID/Mexico)

START DATE: January 1991

END DATE: August 1992

PRIMARY IMPLEMENTOR: World Wildlife Fund

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s): Various

OTHER IMPLEMENTOR TYPE(s): Various

COLLABORATOR(s): Various

CONTACTS: BSP: Meg Symington 202-778-9727, fax 202-293-9211; AID/Mexico: Frank Zadroga 525-211-0042, fax 525-211-9980; WWF: Brad Ack 202-778-9652, fax 202-293-9211

LOCATION: Latin America, Mexico, Various

BIOME: Tropical Moist Forest

PURPOSE: To design and implement projects to promote environmentally sound community development around biologically important, threatened wildland areas in southern Mexico. The overall goal of the program is to decrease the rate of deforestation in these wildland areas, and to protect them as healthy diverse ecosystems, while achieving sustainable methods and levels of resource use for the people living in and around them.

DESCRIPTION: As the second largest producer of greenhouse gases in Latin America, Mexico has been designated as a "key" country for special attention under A.I.D.'s Global Climate Change (GCC) Initiative. Beginning in July 1990, USAID/Mexico, WWF, and BSP designed an integrated conservation and development program that would decrease emissions of greenhouse gases due to deforestation in southern Mexico, while simultaneously conserving the region's rich biological diversity and improving the quality of life for the region's rural poor. The result of these design efforts is a program that will focus on environmentally-sound community

development in the buffer zones of four priority wildland areas: (A) the Chimalapas region of Oaxaca (PD903A); (B) the Calakmul Biosphere Reserve in Campeche (PD903B); (C) the El Ocote Ecological Reserve (PD903C); and (D) the El Triunfo Biosphere Reserve in Chiapas (PD903D).

Each subproject will be implemented by a Mexican environmental NGO with experience in and commitment to its particular wildland area. Technical assistance, oversight, and coordination will be provided by the WWF Wildlands and Human Needs and Mexico Programs. Initial efforts focus on trying to identify alternative agricultural technologies that will result in increased productivity for local farmers without leading to further degradation of the surrounding forest. Alternative technologies will be identified using state-of-the-art participatory rural appraisal techniques (PD903E) and then disseminated through a proven community-based extension methodology. Because changes in attitude, awareness and knowledge of local people are necessary to insure sustainability, environmental education will also be a strong component of the four subprojects (PD903F).

Annual meetings, staff exchanges, training events, and a full-time field coordinator link the four subprojects into a coherent program. Monitoring and evaluation activities will be centrally coordinated through BSP and WWF in Washington.

SIGNIFICANCE: There are high hopes that the program can be a flagship effort in integrated conservation and development for both A.I.D. and WWF, as well as provide a model for future collaboration between the two institutions.

This program is directly relevant to BSP's commitment to activities that integrate conservation of biodiversity with grassroots development work, and expand and refine the biosphere reserve concept.

TECHNICAL REPORTS or

PUBLICATIONS: First Interim Report (January 1, 1991 - September 30, 1991) and Final Report (October 1, 1991 - March 30, 1992).

OTHER OUTPUTS: Because projects like these require a long-term commitment by both implementors and donors, AID/Mexico plans to continue its support for the Mexico ecodevelopment program over a five year period through annual buy-ins to BSP. At the end of the first year, each subproject will have completed team formation and training, and carried out the research and participatory appraisals to determine priority economic and environmental sectors, develop viable alternatives, and design and initiate community-based extension programs to promote these alternatives.

UPDATE: The first year of the program was a year of learning for all involved, and on the whole was very productive. All

components of the first year of the overall program were completed as of August 1992, except for the subgrant to World Resources Institute, which was extended until September 1992. The departure of WWF Mexico Program Officer Mario Ramos in December 1991 required some adjustments in the program's management structure; a new WWF Mexico Program Officer (Martin Goebel) began work in July 1992. Projects are defined and operating in each of the four areas, a project coordinator based in the field has been hired, and the global support components (e.g., monitoring and evaluation) are now defined and in the process of being operationalized. The annual coordination and evaluation meeting was held in San Cristobal de las Casas in January 1992, and project field staff have participated in both informal staff exchanges and formal training exercises. The program has been funded for its second year (PD913), and all involved are looking forward to continued progress.

REVISION DATE: November 18, 1992

STATUS: Completed
TITLE: Community Development in the Buffer Zone of the El Triunfo Biosphere Reserve, Chiapas
CA COMPONENT: Pilot Demonstration Project
TYPE OF ACTIVITY:
 PRIMARY: Buffer Zone Management
 SECONDARY: Community Development
 MINOR: Training
FUNDING: \$70,000 (USAID/Mexico)
START DATE: August 1991
END DATE: September 1992
PRIMARY IMPLEMENTOR: WWF
PRIMARY IMPLEMENTOR TYPE: International NGO
OTHER IMPLEMENTOR(s):
 1. Instituto Historia Natural (IHN)
OTHER IMPLEMENTOR TYPE(s):
 1. Government
COLLABORATOR(s): The Nature Conservancy; Instituto Agroecológico San Francisco de Asis
CONTACTS: BSP: Meg Symington 202-778-9727, fax 202-293-9211; AID/Mexico: Frank Zadroga 525-211-0042, fax 525-511-9980; WWF: Brad Ack 202-778-9652, fax 202-293-9211
LOCATION: Latin America, Mexico
LOCATION: El Triunfo Biosphere Reserve, Chiapas
BIOME: Tropical Montane Forest
PURPOSE: To design and promote environmentally sound community development around the biologically important, threatened El Triunfo Biosphere Reserve in Chiapas, Mexico. The goal is to decrease the rate of deforestation in and around El Triunfo, and to protect it as a healthy diverse ecosystem, while achieving sustainable methods and levels of resource use for the people living there.
DESCRIPTION: El Triunfo Biosphere Reserve, located in the Sierra

Madre del Sur, is one of the richest tropical forest areas in Mexico in terms of species endemism and presence of endangered species. The reserve has a legal extension of 119,177 ha with an altitudinal variation of 500-2800 m. It contains a variety of forest types, including pine-oak, riverine, tropical montane, and evergreen. Most importantly, the reserve includes some of the last cloud forest in Mexico.

WWF has supported planning and management activities by Instituto Historia Natural (IHN) at El Triunfo since 1985. When the reserve was enlarged from its 10,000 ha in 1990, more than 100 communities were incorporated into the buffer zone. Land use in and around the reserve is dominated by shifting agriculture, coffee production and cattle ranching with some commercial extraction of timber, and firewood and local construction material collected throughout the year. Hunting is common along the peaks and some wild plants and animals are collected for the wildlife trade.

The first phase of this project fielded a team to begin working in three strategically located communities. Following training, the team carried out participatory rural appraisal exercises in these communities that focus on subsistence agriculture and coffee production.

SIGNIFICANCE: The sierra and its cloud forests are of great economic importance to Chiapas because they are the watershed for Soconusco, the main coffee producing region in the state and the Frailesca, the primary agricultural region.

This program is directly relevant to BSP's mandate to pursue activities that integrate conservation of biodiversity with grassroots development, and expand and refine the biosphere reserve concept.

TECHNICAL REPORTS or

PUBLICATIONS: Evaluación Rural Participativa del Manejo de Recursos Naturales: Primer Taller. April 1991, 112 p.

OTHER OUTPUTS: A plan for the following three years that will include the establishment of a permanent community-based extension system in the area is expected at the end of the first year. Three communities have been selected to serve as the geographic base from which the project will expand over time. Local people will be trained and incorporated as promoters in the second and subsequent years and the project is expected to influence the entire buffer zone area of El Triunfo.

UPDATE: This project was officially completed as of 9/30/92, but a proposal for the second year of activities at El Triunfo had not yet been received by WWF as of the date of this update. Four young agronomists are currently assigned to the project, and are working with coffee farmers within three communities on developing and testing organic coffee farming and soil

conservation techniques. IHN has undergone significant organizational upheaval over the past year, and this has delayed the project somewhat and caused significant changes in project staffing as well as some dissatisfaction on the part of staff assigned to the project. There have also been some problems in gaining the trust of the communities selected for development activities because of IHN's dual role within El Triunfo as guardian/protector of the reserve and promoter of community development. This issue is of extreme importance to the future of the project, and WWF staff are currently working with IHN to resolve it.

REVISION DATE: 11/18/92

STATUS: Completed

TITLE: Participatory Rural Appraisal Training Program

CA COMPONENT: Pilot Demonstration Project

TYPE OF ACTIVITY:
PRIMARY: Socio-cultural Analysis and Research
SECONDARY: Training

FUNDING: \$29,400 (USAID/Mexico)

START DATE: April 1991

END DATE: September 1992

PRIMARY IMPLEMENTOR: WWF

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s):
1. World Resources Institute (WRI)
2. Grupo de Estudios Ambientales, A.C. (GEA)

OTHER IMPLEMENTOR TYPE(s):
1. International NGO
2. NGO

COLLABORATOR(s): Ecosfera, A.C.; Instituto de Historia Natural; Pronatura Peninsula de Yucatan, A.C.; Amigos de Sian Ka'an; A.C.; Maderas del Pueblo, A.C.

CONTACTS: BSP: Meg Symington 202-778-9727, fax 202-293-9211; AID/Mexico: Frank Zadroga 525-211-0042, fax 525-511-9980; WWF: Brad Ack 202-778-9652, fax 202-293-9211; WRI: Aaron Zazueta 202-638-6300

LOCATION: Latin America, Southern Mexico

BIOME: Various

PURPOSE: To design and implement a training program in Participatory Rural Appraisal (PRA) oriented to those organizations participating in the Mexico Ecodevelopment Program.

DESCRIPTION: PRA is a set of flexible information gathering methods used at the community level to articulate problems and opportunities for local natural resources management. The PRA package brings together simple, yet powerful techniques that have

been designed to help semi-literate populations analyze and articulate their needs in ways that lead them to group action. The method uses many techniques for analysis: 1) diagrams and drawings (transect, farm sketches and Venn diagrams) to help assess ecosystems, land use patterns and local organizations; 2) line and bar graphs to document trends; and 3) brief analytical tables to assess and rank problems and opportunities.

PRA is a particularly useful method in developing integrated conservation and development projects. It can help environmental NGOs and local people reach consensus on priority actions by providing a forum to jointly articulate problems and opportunities. PRA is generally conducted by interdisciplinary teams that include technicians, project managers and representatives of the local community. This mixed team configuration is an important element of PRA that helps integrate technical and local knowledge in project planning.

WRI's Center for International Development and Environment (CIDE) will train and provide technical support to those NGOs participating in the Mexico Ecodevelopment Program. CIDE will focus on training and providing financial support to one additional NGO, that will, in turn, provide training and technical backstopping to other NGOs in Mexico. In collaboration with these organizations, CIDE will adapt and translate the new PRA Trainers Manual for use by Spanish-speaking NGOs.

SIGNIFICANCE: PRA is a state-of-the-art methodology for incorporating the needs and desires of local communities into integrated conservation and development projects early in the planning stages. The Mexico ecodevelopment program will be the first large-scale field test of the technique in Latin America.

This project addresses BSP's mandate to pursue activities that integrate conservation of biodiversity with grassroots development.

TECHNICAL REPORTS or

PUBLICATIONS: Evaluación Rural Participativa del Manejo de Recursos Naturales: Primer Taller (Santa Rita, El Triunfo). April 1991, 112 pp; Memoria del Taller de Evaluación Rural Participativa de Manejo de Recursos Naturales (Nueva Vida, Calakmul). January 1992, 63 pp. El Proceso de Evaluación Rural Participativa: Una Propuesta Metodología. August 1992, 67 pp.

OTHER OUTPUTS: The success of PRA training will be crucial to enlisting the support of local people in the management of wildland areas under consideration within the Mexico Ecodevelopment Program. Participating NGOs will develop the skills to adequately use PRA as a means of integrating local people into project planning, management and evaluation. Village Management Action Plans should result from the PRAs conducted.

UPDATE: WRI extended their original one year grant for six

months (until September 1992), to allow more time for carrying out PRA exercises and publishing the final PRA facilitator's manual. WRI and GEA jointly sponsored two more PRA exercises with NGOs participating in the Ecodevelopment Program in the second half of the grant period. A written summary of one of these, carried out in conjunction with the community of Nueva Vida in the buffer zone of Calakmul (see Technical Reports above), was published in January. In August, a preliminary version of the PRA manual for Latin America was published; a final version of this manual will be published jointly by GEA and WRI in October.

REVISION DATE: November 22, 1992

STATUS: Completed

TITLE: El Ocote Environmental Education,
Chiapas

CA COMPONENT: Pilot Demonstration Project

TYPE OF ACTIVITY:
PRIMARY: Education/Public Awareness
SECONDARY: Socio-cultural Analysis and Research
MINOR: Women in Development

FUNDING: \$33,800 (USAID/Mexico)

START DATE: May 1991

END DATE: May 1992

PRIMARY IMPLEMENTOR: WWF

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s):
1. Pronatura Chiapas, A.C.

OTHER IMPLEMENTOR TYPE(s):
1. NGO

COLLABORATOR(s): Ecosfera, A.C.; Sna Jtzi Bajom, A.C.

CONTACTS: BSP: Meg Symington 202-778-9727, fax
202-293-9211; AID/Mexico: Frank Zadroga
525-211-0042, fax 525-511-9980; WWF:
Brad Ack 202-778-9652, fax 202-293-9211

LOCATION: Latin America, Mexico, El Ocote
Ecological Reserve - Chiapas

BIOME: Tropical Moist Forest Forest

PURPOSE: To design and implement an environmental education program that will be complementary to the ECOSFERA (see Activity PD903C) community development project in El Ocote Ecological Reserve in Chiapas, Mexico.

DESCRIPTION: The objective of this activity is to introduce environmental knowledge to El Ocote communities in a way that is useful to them. The focus is largely on the indigenous population in and around El Ocote. These residents belong to the Tzotzil and Tzeltal ethnic groups, who have little or no understanding of Spanish. Likewise, only a few have had any formal education and their culture must be understood in order to

work with them.

Pronatura-Chiapas will carry out in-depth research and analysis of the target populations, including their sociocultural habits, education, understandings and beliefs regarding the natural environment, forms of organization and communication, and perceived environmental problems. Information will be gathered through informal interviews, formal surveys, focal group discussion and other participatory techniques. With this information, conservation education materials will be designed and tested in selected communities. After analyzing native population acceptance of the conservation education materials, project leaders will produce a strategy for program implementation that will be followed by design and production of educational materials.

SIGNIFICANCE: It is anticipated that the lessons learned from this pilot effort will be useful for the other projects in the ecodevelopment program as they begin to formally incorporate conservation education into the ongoing extension process.

This project addresses BSP's mandate to pursue activities that integrate conservation of biodiversity with grassroots development, and expand and refine the biosphere reserve concept.

**TECHNICAL REPORTS or
PUBLICATIONS:**

OTHER OUTPUTS: The first year of this project is focussed on defining needs and communication channels, designing and testing materials, and putting together a specific program strategy for the longer term.

UPDATE: In its first year, the project began its in-depth research of the targeted populations, coordinating closely with the ECOSFERA team on site selection. Part of the program in the next year (see PD913) will include a strategy for training the extensionists of the ECOSFERA team and other community leaders to carry out the planned education activities. The project team now includes a full-time coordinator and one field assistant, and receives technical assistance and support from a wide group of people.

REVISION DATE: 11/18/92

STATUS: Ongoing
 TITLE: Women in Development
 CA COMPONENT: Pilot Demonstration Project
 TYPE OF ACTIVITY:
 PRIMARY: Women in Development
 FUNDING: \$30,000 (S&T/FENR)
 START DATE: September 1991
 END DATE: June 1993
 PRIMARY IMPLEMENTOR: WWF
 PRIMARY IMPLEMENTOR TYPE: International NGO
 OTHER IMPLEMENTOR(s):
 1. International Center for Research on Women (ICRW)
 OTHER IMPLEMENTOR TYPE(s):
 1. International NGO
 COLLABORATOR(s): The Network Foundation
 CONTACT: BSP: Janis Alcorn 202-778-9697, fax
 202-293-9211; WWF: Barbara Wyckoff-
 Baird 202-778-9626; ICRW: Michael
 Paolisso 202-797-0007
 LOCATION: Various
 BIOME: Various

PURPOSE: Core funds provided a 2:3 match for \$30,000 from USAID's Office of Women in Development (WID) in partial support of the WWF & ICRW proposal Gender, Community Development, and Conservation of Biological Resources. This research attempts to integrate gender issues into community-based efforts to conserve biological diversity through sustainable development.

DESCRIPTION: WWF and ICRW seek to improve the capacity of international conservation projects to integrate local women into community development efforts to conserve natural resources. The two NGOs will conduct interdisciplinary case studies in each major tropical region. After analyzing the case studies, WWF and ICRW will offer technical assistance, training, and policy-oriented dissemination to address one of the most complex aspects of rapid environmental change--the critical relation of women's traditional and evolving roles to the use and sustainability of

natural resources.

SIGNIFICANCE: There is still too little analysis and focus on the roles of women in the sustainable use of natural resources. This project will help alert the conservation and development communities to consider gender as an issue in projects involving local communities in managing local resources.

Although BSP does not have a specific mandate to address gender issues in the conservation of biodiversity, the role of women in development is a specific USAID focus. The project also addresses BSP's mandate to analyze local community involvement in the conservation of biodiversity.

TECHNICAL REPORTS or PUBLICATIONS: Issues paper, case study.

OTHER OUTPUTS: Workshop for WWF staff

UPDATE: A draft issues paper was submitted 8/3, field work on the case study has been completed and a draft case study has been prepared. A workshop is tentatively scheduled for December 1992.

REVISION DATE: November 4, 1992

STATUS: Ongoing

TITLE: APRE Bureau/Asia

CA COMPONENT: Pilot Demonstration Project

TYPE OF ACTIVITY:
PRIMARY: Various

FUNDING: \$456,000 (APRE Bureau)

START DATE: January 1991

END DATE: September 1993

PRIMARY IMPLEMENTOR: BSP

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s): Various

OTHER IMPLEMENTOR TYPE(s): Various

COLLABORATOR(s):

CONTACT: BSP: Janis Alcorn 202-778-9697, fax
202-293-9211; AID/W: Molly Kux 202-647-
9875, fax 202-647-7368

LOCATION: Asia, Various

BIOME: Non-specific

PURPOSE: Working in consultation with the APRE Bureau, BSP is developing a program under this buy-in that strengthens the consortium's efforts and capabilities to conserve biological diversity in the region, while contributing useful information and assistance to the Bureau and A.I.D. Missions in Asia and the Pacific. Together, this information and assistance will enhance the ability of host-countries to address biodiversity conservation.

DESCRIPTION: This buy-in has three major components: planning and analysis, short-term technical assistance and a regional NGO workshop with specific activities proposed. (See activity summaries). These activities include: (A) An A.I.D. Regional Conference/Sri Lanka, (B) Strategy and Analysis for Asia, (C) Support for a South Pacific Program Officer; (D) Environmental NGO Conference, and (E) Small Grants Program.

SIGNIFICANCE: This set of activities provides the opportunity for BSP to assist the AID/Asia Bureau in its conservation of

biodiversity. It is a BSP mandate to assist A.I.D. Bureaus in attending to Conservation of Biodiversity issues.

TECHNICAL REPORTS or

PUBLICATIONS: (A) Published proceedings and publicity from meeting in 1992; (B) Might produce research documents, workshops, and others.

OTHER OUTPUTS: (A) A Conference including Environment and Agriculture Officers and Workshop in Sri Lanka, September 1991; (B) Contribute to the Bureau's new environmental support project, Phase II (ESP II); (C) South Pacific Program Officer participation in PNG CNA and implementation of PEP.

UPDATE: See specific project descriptions including PD911A; PD911C; PD911E; and PD894D.

REVISION DATE: December 1, 1992

STATUS: Completed
 TITLE: A.I.D. Regional Conference/Sri Lanka
 CA COMPONENT: Pilot Demonstration Project
 TYPE OF ACTIVITY:
 PRIMARY: Education/Public Awareness
 SECONDARY: Institutional Support
 FUNDING: \$45,469 (ANE Bureau and APRE Bureau)
 START DATE: January 1991
 END DATE: September 1992
 PRIMARY IMPLEMENTOR: BSP
 PRIMARY IMPLEMENTOR TYPE: International NGO
 OTHER IMPLEMENTOR(s):
 OTHER IMPLEMENTOR TYPE(s):
 COLLABORATOR(s):
 CONTACT: BSP: Janis Alcorn 202-778-9697, fax
 202-293-9211; AID/W: Molly Kux 202-647-
 9875, fax 202-647-7368
 LOCATION: Asia, Sri Lanka, Colombo
 BIOME: Non-specific
 PURPOSE: This conference in Sri Lanka (AID/APRE) addresses the Bureau's Environment/Natural Resources Strategy (ENRS) to more fully integrate Bureau initiatives and Mission programs. Following the conference, a workshop focused on the design of a technical assistance program under the planned regional Environmental Support Project (ESP) II. ESP II will include pollution monitoring and control, natural resources economics, and management, environmental education, and conservation of biological diversity.
 DESCRIPTION: BSP provided technical assistance for the conference and workshop and contributed expertise in the area of conservation of biological diversity. BSP provided assistance to AID/APRE/DR/TR staff in preparation and coordination of the Regional Conference and ESP II workshop in Sri Lanka 9-17 September, 1991. Technical assistance included: 1) conference management, 2) selection of speakers and authors of technical documents, 3) technical review of documents, 4) travel and other

logistical arrangements for speakers, 5) liaison between conference coordinators, and 6) participation of Senior Program Officer for Asia/Pacific as member of planning committee. Additional assistance included revisions to the draft AID/APRE Environment and Natural Resource Strategy.

SIGNIFICANCE: BSP is supporting the APRE Bureau by providing them with their experience in technical assistance and information networking. BSP has influenced the incorporation of biodiversity conservation issues into the conference agenda.

It is a BSP mandate to assist A.I.D. Bureaus in attending to Conservation of Biodiversity issues.

TECHNICAL REPORTS or

PUBLICATIONS: 1) Executive summaries from all speakers for inclusion in the conference participants' notebook and 2) commissioned documents:

Russell Betts:	"Environmental Awareness and Education in Indonesia"
Michael Brown & Barbara Wyckoff-Baird	"Integrated Conservation and Development Projects to Conserve Biodiversity" (selected for publication by BSP)
Tim Greiner:	"Toxic Use Reduction: The Massachusetts Case Study"
John Huyler, Jr:	"Conflict Management Case Study"
Owen Lynch:	"Local Empowerment or Access to Biological Resources," (published by WRI)
Theo Panayotou:	"Natural Resource Economics"
Dianeetha Sadacharan:	"Coastal Resource Management in Sri Lanka"
Jeffrey Vincent:	"Asian Tropical Timber Trade" (revised version published in <u>Science</u>)
Alex Moad & Les Whitmore:	"Management of Primary and Secondary Tropical Forest in the Asia-Pacific Region"

OTHER OUTPUTS: Information networking among AID/APRE personnel and technical experts including BSP personnel.

UPDATE: All activities have been completed.

REVISION DATE: November 5, 1992

STATUS: Ongoing

TITLE: South Pacific Support

CA COMPONENT: Pilot Demonstration Project

TYPE OF ACTIVITY:
PRIMARY: Institutional Support

FUNDING: \$30,000 (APRE Bureau)

START DATE: August 1991

END DATE: December 1992

PRIMARY IMPLEMENTOR: BSP

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s):
1. World Wildlife Fund

OTHER IMPLEMENTOR TYPE(s):
1. International NGO

COLLABORATOR(s):

CONTACT: BSP: Janis Alcorn 202-778-9697; fax
202-293-9211; WWF: Bruce Bunting 202-
778-9635; fax 202-293-9211

LOCATION: South Pacific, Various

BIOME: Various

PURPOSE: To strengthen WWF and BSP's ability to deliver technical assistance to governments and local grassroots organizations of the South Pacific by providing partial support to a WWF program director for the South Pacific.

DESCRIPTION: A WWF South Pacific Program Director was recruited to assist Biodiversity Support Program (BSP) in planning and managing the implementation of activities under the BSP agreement with the Foundation for the Peoples of the South Pacific. The Director will assist in implementing the Profitable Environmental Protection (PEP) project and assist BSP with other activities in the South Pacific. A specific work plan was developed by the BSP director and the Vice President, Asia/Pacific Program at the initiation of this activity and is reviewed monthly. The South Pacific Program Director provides BSP with a one page monthly report of activities initiated under the activity and other reports as required by the work plan.

SIGNIFICANCE: This activity assists BSP and WWF in delivering technical assistance in the Pacific region.

TECHNICAL REPORTS or
PUBLICATIONS:

OTHER OUTPUTS:

UPDATE: WWF's new Pacific Program Director, Don Henry, has acted on BSP's behalf as a member of the PEP's Project Advisory Group and worked with Partners with Melanisiens in their training exercise in Papua New Guinea.

REVISION DATE: November 20, 1992

STATUS: Ongoing

TITLE: APRE Small Grants Program

CA COMPONENT: Pilot Demonstration Project

TYPE OF ACTIVITY:
PRIMARY: Various

FUNDING: \$40,581 (APRE Bureau)

START DATE: August 1991

END DATE: September 1993

PRIMARY IMPLEMENTOR: BSP

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s):

1. Partners with Melanesians
2. WALHI
3. Wau Ecology Institute

OTHER IMPLEMENTOR TYPE(s):

1. International NGO
2. NGO
3. NGO

COLLABORATOR(s):

CONTACT: BSP: Janis Alcorn 202-778-9697, fax 202-293-9211; AID/W: Molly Kux 202-647-9875, fax 202-647-7368

LOCATION: Asia, Various

BIOME: Non-specific

PURPOSE: To support capacity building of NGOs in such areas as environmental education and public awareness, land tenure issues, integrated conservation-development projects, biodiversity information centers and conflict resolution.

DESCRIPTION: In collaboration with the APRE Bureau BSP provides small grants to international and national NGOs to help support these NGOs providing technical assistance to local grassroots organizations involved in such conservation activities as environmental education and public awareness, land tenure issues, integrated conservation-development projects, biodiversity information centers and conflict resolution.

SIGNIFICANCE: The activity is expected to strengthen NGOs and their commitment to conservation. The grants will fund activities that include grassroots conservation strategies and education programs to heighten the awareness of the need for conservation efforts, which fulfills BSP's mandate.

TECHNICAL REPORTS or PUBLICATIONS: Research documents that may be suitable for publishing and be of use to A.I.D. Missions in the region.

OTHER OUTPUTS:

UPDATE: Three grants have been issued during the reporting period. They include: 1) \$6,660 to Wau Ecology Institute in PNG to strengthen its capacity as a conference center on conservation issues; 2) \$28,921 to the Partners With Melanesians to support the Barai community and NGO participation in the development of a sustainable development project among the Barai people in Papua New Guinea; and 3) \$5,000 to WAHLI, a national umbrella organization of NGOs in Indonesia, to provide technical assistance to the Environmental Assessment Team preparing an EA of USAID/Jakarta-funded Natural Resource Management Project plans in West and Central Kalimantan and Northern Sulawesi. The activities under the Wau grant are completed and a final accounting has been prepared. Activities under the Partners with Melanesians and WAHLI grants are ongoing.

REVISION DATE: November 4, 1992

STATUS: Ongoing
 TITLE: Africa Add-on I
 CA COMPONENT: Pilot Demonstration Project
 TYPE OF ACTIVITY:
 PRIMARY: Various
 FUNDING: \$1,440,000 (AFR Bureau)
 START DATE: August 1991
 END DATE: September 1993
 PRIMARY IMPLEMENTORS: Various
 PRIMARY IMPLEMENTOR TYPE: Various
 OTHER IMPLEMENTOR(s):
 OTHER IMPLEMENTOR TYPE(s):
 COLLABORATOR(s):
 CONTACT: BSP: Kate Newman 202-778-9524, fax 202-293-9211; AID/W: Tim Resch 703-235-3786, fax 703-235-3805
 LOCATION: Africa, Various
 BIOME: Non-specific

PURPOSE: This buy-in enables BSP to bring together NGOs and governmental organizations with considerable field experience, scientific knowledge and in-house capacity to develop some common understanding of and approaches for the conservation of biological diversity and the mitigation of global climate change. The technical reviews and pilot projects included in this buy-in lay the foundation for future Africa Bureau initiatives to conserve biodiversity. The global climate change efforts provide information to policy makers, particularly within the A.I.D. structure, to help them determine how best to mitigate future carbon emissions from central Africa.

DESCRIPTION: The buy-in was developed through a collaborative process between BSP and A.I.D.'s Africa Bureau, and consists of several biodiversity and global climate change activities.

To address global climate change (see Activity PD912A), the buy-in supports a series of data gathering and analytical activities in central Africa necessary to (a) establish a baseline estimate

of the extent of forest resources, (b) establish estimated rates of forest depletion, (c) identify the modes and dynamics involved in forest modification, and (d) estimate present and future carbon emissions from central Africa. The information compiled from this activity will help A.I.D. produce an action plan delineating their role in the mitigation of future gaseous emissions from the central Africa region.

Within the biodiversity activity, BSP is a) conducting a technical review of the Bureau's current biodiversity project portfolio, and a technical review of the Bureau's biodiversity strategy (see Activity PD912B), and b) developing and financing a series of analytical pilot projects to promote the conservation of biological diversity in the region (see Activity PD912C).

SIGNIFICANCE: Technical and strategy reviews should enable the Africa Bureau to assess its first four years of involvement in biodiversity conservation and refine its focus and improve the quality of its future biodiversity initiatives. Pilot projects are expected to strengthen the Bureau's analytical base in its biodiversity program. Key assumptions and theories the Bureau has used to guide its biodiversity program will be tested, and innovative concepts for conserving biodiversity in Africa will be promoted.

Predictions of increased temperatures associated with greenhouse gases have led to international concern over the causes and consequences of global warming. Central Africa has the greatest natural carbon inventory in Africa and is therefore the continent's greatest potential contributor to global climate change. This evaluation of present and future carbon emissions from central Africa will lead to an action plan to help A.I.D. address the mitigation of future gaseous emissions here.

This activity addresses BSP's mandate by identifying conservation priorities; collecting, evaluating and disseminating information; identifying critical ecosystems; performing policy studies to identify more effective methods to preserve biological diversity, including the monitoring and evaluation of current A.I.D. biological diversity conservation strategies; seeking out evaluation information that will document successes, failures, and lessons learned; and using the results of research for the design, modification and implementation of on-going conservation activities.

TECHNICAL REPORTS or

PUBLICATIONS: Many - see individual activity sheets.

OTHER OUTPUTS: Global Climate Change activities include (A) Remote sensing analysis, supported by ground-truthing to produce a map of the region estimating extent of forest cover and rates of change; (B) Desk studies on central Africa's bio-geophysical setting, policy and macroeconomic framework, population dynamics, land use practices, infrastructure, and biomass burning; (C)

Information system designed to incorporate remote sensing data and information from desk studies to support future efforts in the region.

Biodiversity activities include (A) Technical review to develop a database of projects and a report assessing these projects; (B) Strategy review that examines key issues in setting conservation priorities and makes recommendations for a revised strategy; (C) A series of projects to deliver a variety of products to be summarized in an analytical report.

UPDATE: See PD912 A, B and C for updates of the individual sub-projects.

REVISION DATE: November 24, 1992

STATUS: Ongoing

TITLE: Central Africa Global Climate Change Study

CA COMPONENT: Pilot Demonstration Project

TYPE OF ACTIVITY:

- PRIMARY: Public Policy
- SECONDARY: Ecological Research/Inventory
- MINOR: Socio-cultural Analysis and Research

FUNDING: \$400,000 (AFR Bureau)

START DATE: August 1991

END DATE: January 1993

PRIMARY IMPLEMENTOR: BSP

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s):

1. Goddard Space Flight Center (GSFC)
2. World Resources Institute (WRI)

OTHER IMPLEMENTOR TYPE(s):

1. Government
2. International NGO

COLLABORATOR(s): U.S. Forest Service (USFS); Univ. Maryland (UM); World Wildlife Fund (WWF); Wildlife Conservation International(WCI); U.S. Geological Survey(USGS); Illinois Natural History Survey; Universite Catholique de Louvain; Katholiek Universiteit Leuven.

CONTACT: BSP: Kate Newman 202-778-9524, fax 202-293-9211; AID/Africa: Tony Pryor 703-235-3832, fax 703-235-3805

LOCATION: Africa, Various

BIOME: Tropical Moist Forest

PURPOSE: This buy-in enables BSP to bring together NGOs and governmental organizations with considerable field experience, scientific knowledge, and in-house capacity to conduct a series of data gathering and analytical activities necessary to develop a global climate change action plan for central Africa.

DESCRIPTION: The U.S. Congress, having acknowledged the need to mitigate gaseous emissions that contribute to global climate change, has mandated that A.I.D. identify areas with high future emissions potential. As a result, A.I.D. has decided to focus its attention in Africa on the central Africa region which contains the largest and most carbon-rich forested area on the continent. The Central Africa Global Climate Change Study has been initiated through a collaborative process between BSP and the Bureau for Africa to determine the potential for future carbon dioxide emissions from the region and to provide a readily accessible source of information to those policy makers, particularly within the A.I.D. structure, responsible for deciding how best to mitigate them.

This activity seeks to: (a) assess the existing data base relevant to climate change studies (e.g., biogeophysical data, socioeconomic data, land-use change statistics, greenhouse gas emission data); (b) identify modes and dynamics of forest modification due to human use; (c) assess the potential impacts of forest modification and of global climate change on the peoples and environment of central Africa; (d) investigate the current and potential use of remote sensing data to estimate forest areas, clearing rates, and burned areas; and (e) develop systemized approaches for data collection, retrieval, and analysis for the local, regional, and global communities.

SIGNIFICANCE: Predictions of global warming due to an increase in various greenhouse gases in the atmosphere have led to international concern over the causes and consequences of global climate change. Central Africa has the greatest carbon inventory of any region in Africa and is therefore the greatest potential regional contributor of carbon dioxide emissions due to deforestation. This activity's estimate of present and future carbon dioxide emissions from central Africa, and analysis of the factors driving deforestation in the region, will help A.I.D. produce an action plan delineating their role in the mitigation of future gaseous emissions from the region.

TECHNICAL REPORTS or

PUBLICATIONS: Desk studies of central Africa's biogeophysical setting, the socioeconomic factors driving human use of the forests, and the use of remote sensing and geographic information systems for improved data and information management have been produced. An overview document and a synopsis, outlining the findings of the study, are being published.

OTHER OUTPUTS: Remote sensing analysis, supported by ground-truthing efforts, is being used to produce a map of Cameroon and of Zaire that estimate the extent of forest cover in each country. A poster-sized orthophoto image of the region around the borders of Cameroon, Congo, and the Central African Republic is also being produced.

UPDATE: The Synopsis was published in June, 1992, all outputs

are expected to be completed by the end of January 1993.
REVISION DATE: November 30, 1992

STATUS: Ongoing

TITLE: Biodiversity Project Portfolio and Strategy

CA COMPONENT: Pilot Demonstration Project

TYPE OF ACTIVITY:
PRIMARY: Public Policy
SECONDARY: Socio-cultural Analysis and Research
MINOR: Program/Project Evaluation and Monitoring

FUNDING: \$112,000 (AFR Bureau)

START DATE: August 1991

END DATE: September 1992

PRIMARY IMPLEMENTOR: BSP

PRIMARY IMPLEMENTOR TYPE:

OTHER IMPLEMENTOR(s):

OTHER IMPLEMENTOR TYPE(s):

COLLABORATOR(s):

CONTACT: BSP: Kate Newman 202-778-9524, fax 202-293-9211 and Jim Webster 202-778-9786, fax 202-293-9211; AID/Africa: Tim Resch 703-235-3786, fax 703-235-3805

LOCATION: Africa, Various

BIOME: Non-specific

PURPOSE: To strengthen the Bureau for Africa's goal to conserve biological diversity and help determine the direction of future A.I.D. efforts by assessing the Bureau's history in biodiversity conservation, identifying and examining lessons learned, and providing an analytical basis for future Bureau efforts.

DESCRIPTION: BSP will conduct a technical review of biodiversity conservation projects in Africa and the Bureau's strategy for conserving biodiversity in Africa. Past and ongoing biodiversity activities supported by A.I.D.'s Bureau for Africa will be examined to determine what has been accomplished and what lessons have been learned from these efforts. Interviews and a literature review will be conducted. The activities under PD912C, including targetted activities, studies, conferences, and

the Senior Advisor's analytical activities will contribute to the analysis. The final report will include case studies of innovative projects, a discussion of monitoring and evaluation techniques, a review of the existing conservation priorities for the continent, and recommendations for future action.

SIGNIFICANCE: The portfolio and strategy review will enable the Bureau for Africa to assess its first four years of effort in this sector, refine its funding priorities, and improve the quality of its future biodiversity initiatives. Because this is a relatively new area of involvement, the Bureau's efforts to conserve biodiversity are not well known, nor is there adequate information on which projects have been successful and why. This activity will fill these gaps in knowledge and develop an analytical basis for future projects.

TECHNICAL REPORTS or

PUBLICATIONS: A strategy report for conserving biodiversity will be produced. The report is tentatively entitled, Biodiversity Conservation in Africa: Analysis of Initiatives and Strategies for Successful Future Action.

OTHER OUTPUTS: A database of biodiversity conservation projects will be established.

UPDATE: All outputs are expected to be completed by the end of January 1993.

REVISION DATE: November 30, 1992

STATUS: Ongoing

TITLE: Biodiversity Pilot Analytical Projects

CA COMPONENT: Pilot Demonstration Project

TYPE OF ACTIVITY:
PRIMARY: Various

FUNDING: \$928,000 (AFR Bureau)

START DATE: August 1991

END DATE: September 1993

PRIMARY IMPLEMENTOR: BSP

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s):

OTHER IMPLEMENTOR TYPE(s):

COLLABORATOR(s):

CONTACT: BSP: Kate Newman 202-778-9524, Jim Webster 202-778-9786, fax 202-293-9211; AID/W: Tim Resch 703-235-3786, fax 703-235-3805

LOCATION: Africa, Various

BIOME: Non-specific

PURPOSE: This component of the buy-in is designed to explore key analytical issues and innovative techniques involved in the conservation of biodiversity in Africa. Selected activities are funded to help inform the analysis of existing biodiversity conservation initiatives, strategies, and approaches and test critical methods and techniques in the field.

DESCRIPTION: BSP is financing selected activities intended to conserve biodiversity regionally and in individual countries. Activities that are designed and implemented with local involvement and are intended to benefit or harmoniously exist with local populations are given high priority in the selection process. Activities that are part of ongoing initiatives and have built-in mechanisms for monitoring and evaluating progress are also given high priority. BSP staff is working closely with project implementors to monitor and evaluate the progress and impact of these carefully selected activities.

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SIGNIFICANCE: The selected activities will strengthen the analytical base of the Bureau's biodiversity program. Because this is a relatively new area of Bureau activity, there are many unanswered questions regarding the best approaches to conserving biodiversity. By addressing carefully identified questions, the selected activities will provide valuable insights, experience and knowledge specifically targeted to assist future Bureau efforts to conserve biodiversity. This information will be prepared for A.I.D. and disseminated to other interested organizations and governments.

TECHNICAL REPORTS or PUBLICATIONS: All project coordinators are required to submit mid-term and final reports. Results from the selected activities will be summarized in a report.

OTHER OUTPUTS: The selected activities will contribute to the ongoing analysis of biodiversity conservation initiatives, strategies and approaches described under PD912B.

UPDATE: BSP has approved the following activities:

- 1) Development of Monitoring Procedures and Analysis of Community-Based Conservation in Namibia; Implemented by Namibia's Environmental Planning Unit and World Wildlife Fund; \$108,988
- 2) The African Biodiversity Consultative Group; The Biodiversity Support Program; \$86,260
- 3) Public Attitudes and Assessment of Human Needs Around Kasungu National Park; Malawi's Department of National Parks, Wildlife and Tourism; \$3,000
- 4) Monitoring the Auxiliary Game Guard Program in Namibia; University of Nevada, Reno; \$6,000
- 5) Traditional Natural Resource Protection Methods as a Conservation Strategy in Nigeria; University of Ilorin, Nigeria; \$24,992
- 6) The Impact of Land Tenure Changes and Land Use Practices on Biodiversity in Nigeria; University of Port Harcourt and University of Benin, Nigeria; \$20,800
- 7) An Assessment of Attitudes and Values Pertaining to Conservation Among Communities Around Mkomazi Game Reserve in Tanzania; Tanzania's Ministry of Tourism, Natural Resources and Environment; \$5,600
- 8) African People, African Parks; Conservation International; \$3,175

- 9) Innovative Approaches to Natural Resources Management in the Pastoral Sector of East and West Africa; PVO-NGO/NRMS Project; \$10,000
- 10) Conservation of Biodiversity in Africa: Local Initiatives and Institutional Roles; The National Museums of Kenya; \$10,000
- 11) International Symposium on Human Influence on Endangered Wildlife Species in Africa; Uganda Institute of Ecology; \$2,117
- 12) A Workshop to Review the Sustainable Use of Natural Resources; Africa Resources Trust; \$10,000
- 13) The Third Annual International Congress of Ethnobiology; \$3,800

BSP has solicited proposals for the following activities:

- 1) Monitoring the Integrated Conservation and Development Strategy in Madagascar; Implemented by the Xerces Society, Wildlife Conservation International, the University of Antananarivo, and the Sanford University Center for Conservation Biology; \$125,000
- 2) Local Sustainable Management Surrounding Kabore Tambi National Park in Burkina Faso; Fondation des Amis de la Nature (NATURAMA), a local NGO; \$25,000
- 3) Development of Mafia Island Marine Park, Tanzania; The Tanzanian Fisheries Division and World Wildlife Fund; \$75,000
- 4) Market-Driven Forest Conservation Assessments and Biodiversity Protection in Cameroon; Cultural Survival; \$25,000

REVISION DATE: November 24, 1992

STATUS: Ongoing

TITLE: Mexico Ecodevelopment Program II

CA COMPONENT: Pilot Demonstration Project

TYPE OF ACTIVITY: Various

FUNDING: \$715,986 (LAC Bureau)

START DATE: April 1992

END DATE: August 1993

PRIMARY IMPLEMENTOR: World Wildlife Fund

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s): Various

OTHER IMPLEMENTOR TYPE(s): Various

COLLABORATOR(s): Various

CONTACTS: BSP: Meg Symington 202-778-9727, fax 202-293-9211; AID/Mexico: Frank Zadroga 525-211-0042, fax 525-511-9980; WWF: Brad Ack 202-778-9652, fax 202-293-9211

LOCATION: Latin America, Mexico, Various

BIOME: Tropical Moist Forest

PURPOSE: To design and implement projects to promote environmentally sound community development around biologically important, threatened wildland areas in Mexico. The overall goals of the program are to decrease the rate of deforestation in these wildland areas and to protect them as healthy diverse ecosystems, while achieving sustainable methods and levels of resource use for the people living in and around the wildland areas.

DESCRIPTION: This is the second year of the program described in PD903. The program focusses on environmentally-sound community development in the buffer zones of priority wildland areas in southern Mexico. The following subprojects are funded under this program: (A) Community Development in Chimalapas, Oaxaca (PD913A), Maderas del Pueblo, A.C.; (B) Calakmul Buffer Zone Development (PD913B), Pronatura Peninsula de Yucatan, A.C.; (C) El Ocote Sustainable Development (PD913C), ECOSFERA, A.C.; (D) Community Development in the Buffer Zone of the El Triunfo Biosphere Reserve, Chiapas (PD913D), Instituto Historia Natural

(E) El Ocote Environmental Education, Chiapas (PD913E), Pronatura-Chiapas; and (F) Calakmul Forestry Project (PD913F), Consejo Regional de Ejidos de Xpujil.

Other subprojects may be added over the course of the year. Each subproject will be implemented by a Mexican environmental NGO with experience in and commitment to its particular wildland area. Technical assistance, oversight, and coordination will be provided by the WWF Wildlands and Human Needs and Mexico Programs. Annual meetings, staff exchanges, training events, and a full-time field coordinator link the subprojects into a coherent program. Monitoring and evaluation activities will be centrally coordinated through BSP and WWF in Washington.

SIGNIFICANCE: Mexico is a focal country for A.I.D.'s Global Climate Change initiative. Southern Mexico has several internationally significant protected areas that are under serious threats (forest conversion, logging, agriculture, poaching). The second-year funding for sustainable development projects in the buffer zone of four areas will help consolidate local support for conservation.

This project is directly relevant to BSP's mandate to pursue activities which integrate conservation of biodiversity with grassroots development work, and expand and refine the biosphere reserve concept.

TECHNICAL REPORTS or

PUBLICATIONS: First semi-annual progress report (April 1, 1992-September 30, 1992).

OTHER OUTPUTS: At the end of the second year, each subproject should have a functioning, on-the-ground environmentally sound community development effort underway in selected buffer zone communities.

UPDATE: The second year of the Mexico Ecodevelopment Program is now well underway, with only the El Triunfo project yet to be authorized for second year funding. The first six months have also seen the development of a new forestry project in Calakmul with the Consejo Regional de Ejidos de Xpujil. Progress has been mixed at the four sites with relative success appearing to be directly proportional to the amount of previous development experience the project staff has had and the organizational development and resultant administrative agility of the executing organization. Somewhat surprisingly, the projects have all been hampered by internal factors more than external variables. There are two priority needs that this situation has made clear. One is the need for skills-specific on-the-job training for project staff, to provide them with the skills they need to implement projects successfully. Program staff are currently addressing this need and will increase their efforts over the next six months. The second need is for organizational development assistance, a need that, to date, has not been addressed, with

the exception of the TA provided by WWF accountant Feliz Morales in the area of administrative systems. Program staff will attempt to institute a more concerted effort in this regard over the next six months. For information on the progress of the specific subprojects, please see PD913A-F.

REVISION DATE: November 18, 1992

STATUS: Ongoing

TITLE: Community Development in Chimalapas,
Oaxaca II

CA COMPONENT: Pilot Demonstration Project

TYPE OF ACTIVITY:

PRIMARY:	Community Development
SECONDARY:	Sustainable Use
MINOR:	Protected Areas
MINOR:	Training
MINOR:	Women in Development

FUNDING: \$129,000 (LAC Bureau)

START DATE: April 1992

END DATE: March 1993

PRIMARY IMPLEMENTOR: WWF

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s):

1. Maderas Del Pueblo, A.C.

OTHER IMPLEMENTOR TYPE(s):

1. NGO

COLLABORATOR(s):

CONTACTS: BSP: Meg Symington 202-778-9727, fax
202-293-9211; AID/Mexico: Frank Zadroga
525-211-0042, fax 525-511-9980; WWF:
Brad Ack 202-778-9652, fax 202-293-9211

LOCATION: Latin America, Mexico, Oaxaca

BIOME: Tropical Moist Forest

PURPOSE: To design and implement an environmentally-sound community development project in the biologically important and threatened Chimalapas region of Oaxaca. The goal is to decrease the rate of deforestation in the Chimalapas region, and to protect it as a healthy diverse ecosystem, while achieving sustainable methods and levels of resource use for the people living in the region.

DESCRIPTION: The Chimalapas region of eastern Oaxaca comprises some 640,000 ha and is one of the five largest tracts of tropical forest left in Mexico. The vegetation is varied and includes

tropical dry, tropical humid, cloud, pine-oak, elfin forests, and riparian ecosystems. It is an important watershed for the Gulf of Mexico to the north and for the Pacific coast of the Isthmus of Tehuantepec.

WWF has supported Maderas del Pueblo, A.C., a Mexican NGO, since October 1989 to carry out field-level conservation/development efforts in the region. This activity supports Maderas del Pueblo in a continuation of their initial efforts. In 1990, they completed a comprehensive assessment of the causes and magnitude of forest destruction in the Chimalapas. They collected detailed information on the area and its environmental problems through 60 community surveys, some 200 personal interviews with representatives of diverse interest groups in the area, and on-the-ground investigation of environmental degradation.

From this work, a program to address critical environmental and economic problems in the Chimalapas region has been designed. This project initiates a community extension program to provide technical and organizational assistance to local residents. The project begins in two of six delineated zones in the Chimalapas, with an initial focus on promoting alternative technologies in basic grain production to curtail the widespread slash-and-burn practices, and to improve the production of coffee, a principal crop in parts of the two zones. Slash-and-burn agriculture for basic grain production was identified during the preliminary assessment as the primary economic activity of local residents, as well as one of three primary causes of deforestation and environmental degradation.

SIGNIFICANCE: As one of the five largest tracts of tropical forest remaining in Mexico, arresting deforestation in Chimalapas is important both for decreasing emissions of greenhouse gases due to deforestation and for conserving the region's rich biological diversity.

This program is directly relevant to BSP's mandate to pursue activities which integrate conservation of biodiversity with grassroots development work.

**TECHNICAL REPORTS or
PUBLICATIONS:**

OTHER OUTPUTS: Achieving economic and environmental success in basic grains and coffee production will be the base upon which the project will expand both geographically and technically. Geographically, the project will expand to the remaining four zones in years two through five, with the intent of being in the majority of communities in the region. In the zones where basic grain production is improved and slash-and-burn farming is arrested, the community extension program will begin to focus on other productive activities, including agroforestry, bio-intensive gardening, natural forest management, and establishment of community credit funds.

UPDATE: In the second year of the project, the field team has continued to promote recuperation of fallow lands through use of leguminous cover crops, intensification and increase of basic grain production through improving soil fertility, and biological pest control. In addition, they have expanded the number of communities from five to seven and incorporated four new village extensionists onto the team. One of the new extensionists is working in the municipality of San Miguel de Chimalapas, one of the two primary indigenous communities in the region, and another is a woman who will work with women in the seven villages to promote household vegetable gardening and increase awareness of basic health and nutritional practices. Also new this year is the initiation of a community tree nursery in one of the communities; promotion of agroforestry techniques is underway and this experience will serve as a test case for possible future expansion in this area. A specialist in community organization has also been hired to assist with the ongoing process of community organization and institutional development for resource management. Maderas del Pueblo is also taking the lead in developing community consensus and procedures for the eventual declaration of a "Campesino Forestry Reserve" in the Chimalapas region.

REVISION DATE: 11/18/92

STATUS: Ongoing

TITLE: Calakmul Buffer Zone Development II

CA COMPONENT: Pilot Demonstration Project

TYPE OF ACTIVITY:

- PRIMARY: Buffer Zone Management
- SECONDARY: Sustainable Use
- MINOR: Community Development
- MINOR: Training
- MINOR: Education/Public Awareness

FUNDING: \$87,000 (LAC Bureau)

START DATE: July 1992

END DATE: June 1993

PRIMARY IMPLEMENTOR: WWF

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s):

1. Pronatura Peninsula de Yucatan, A.C.

OTHER IMPLEMENTOR TYPE(s):

1. NGO

COLLABORATOR(s): Consejo Regional de Ejidos de Xpujil;
Plan Estatal Forestal de Quintana Roo

CONTACTS: BSP: Meg Symington 202-778-9727, fax
202-293-9211; AID/Mexico: Frank Zadroga
525-211-0042, fax 525-511-9980; WWF:
Brad Ack 202-778-9652, fax 202-293-9211

LOCATION: Latin America, Mexico, Calakmul
Biosphere Reserve

BIOME: Tropical Moist Forest

PURPOSE: To design and promote environmentally sound community development around the biologically important, threatened Calakmul Biosphere Reserve in Campeche, Mexico. The goal is to decrease the rate of deforestation in and around Calakmul, and to protect it as a healthy diverse ecosystem, while achieving sustainable methods and levels of resource use for the people living in the buffer zone around the reserve.

DESCRIPTION: Located in central and southern Campeche near the borders with Guatemala and Belize, the Calakmul Biosphere Reserve

is one of the 15 most important sites for biodiversity conservation in Mexico according to government and private sources. Calakmul has one of the five largest tracts of tropical forest remaining in the country. The site was declared a biosphere reserve (723,185 ha) in May 1989. Reserve management plans are still being developed.

To complement the ongoing planning process, programs are being designed to improve resources management in the local communities. The viability of the Calakmul ecosystem is pressured by human populations that are competing for the same space and resources. Major threats include: uncontrolled and unsound timber extraction, extremely poor agricultural practices, excessive commercial hunting, road construction in sensitive areas and archeological looting. Addressing the most pressing of these threats will be the long-term focus of this project.

SIGNIFICANCE: The interest on the part of the Guatemalan and Belizean governments to protect areas adjacent to Calakmul is noteworthy. If Calakmul and the adjoining forest in Guatemala and Belize can be effectively protected, the result would be a vast area of approximately 2 million hectares representing the largest area of tropical forest in Mesoamerica. This has enormous significance for both global warming and the conservation of biodiversity, as well as international and cross-border cooperation in favor of improving the environment.

This project is directly relevant to BSP's mandate to pursue activities that integrate conservation of biodiversity with grassroots development, and expand and refine the biosphere reserve concept.

TECHNICAL REPORTS or PUBLICATIONS:

OTHER OUTPUTS: At the end of the second year, Pronatura should have a functioning, on-the-ground environmentally sound community development effort underway in selected buffer zone communities.

UPDATE: The second year of the Pronatura project in Calakmul began in July 1992. Since a second project has been developed in Calakmul for forestry (see PD913F), the Pronatura component of the project will have its primary emphases on sustainable agriculture, beekeeping and environmental education. The sustainable agriculture program's focus is on training and extension in sustainable agriculture techniques to curb and reverse the process of forest destruction due to clearing for agricultural lands. Pronatura has an experienced agricultural technician in place and there are three communities, each with at least 12 farmer participants, engaged in the first phase of the program. Initial indications are that the techniques (including use of leguminous cover crops and integrated pest management) are viable and that they can significantly improve crop production. Indeed, Pronatura has received requests to expand the program

with outside funding obtained by the Consejo Regional de Ejidos de Xpujil. This is a very encouraging development, especially given the fact that the Consejo had been promoting extensive mechanized chile plantations up until this point. The beekeeping program is focussing on overall hive management and dealing with the negative effects of "africanization" of the local bee populations. The environmental education program has been redesigned to be more supportive of the other three technical programs within the reserve: agriculture, beekeeping and forestry. The EE specialist is currently designing curricula that each of these programs can use in their extension work. The EE program is also continuing to work on formal EE in schools throughout the project area.

REVISION DATE: November 18, 1992

STATUS: Ongoing

TITLE: El Ocote Sustainable Development,
Chiapas II

CA COMPONENT: Pilot Demonstration Project

TYPE OF ACTIVITY:

- PRIMARY: Buffer Zone Management
- SECONDARY: Sustainable Use
- MINOR: Community Development
- MINOR: Training

FUNDING: \$63,000 (LAC Bureau)

START DATE: April 1992

END DATE: March 1993

PRIMARY IMPLEMENTOR: WWF

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s):

1. Centro de Estudios para la Conservación de los Recursos Naturales (ECOSFERA, A.C.)

OTHER IMPLEMENTOR TYPE(s):

1. NGO

COLLABORATOR(s): Pronatura Chiapas, A.C.

CONTACTS: BSP: Meg Symington 202-778-9727, fax 202-293-9211; AID/Mexico: Frank Zadroga 525-211-0042, fax 525-511-9980; WWF: Brad Ack 202-778-9652, fax 202-293-9211

LOCATION: Latin America, Mexico, El Ocote Ecological Reserve

BIOME: Tropical Moist Forest

PURPOSE: To design and promote environmentally sound community development around the biologically important, threatened El Ocote Ecological Reserve in Chiapas, Mexico. The goal is to decrease the rate of deforestation in and around El Ocote, and to protect it as a healthy diverse ecosystem, while achieving sustainable methods and levels of resource use for the people living there.

DESCRIPTION: El Ocote Ecological Reserve is an area of approximately 30,000 ha of humid tropical forest in the state of

Chiapas, neighboring the Chimalapas region of Oaxaca. Both areas are in the same mountain range and share a number of characteristics, including habitat types, species and culturally similar residents. El Ocote has been considered a priority for protection since the 1950s and was formally included in the Chiapas state system of protected areas in 1972. In 1986, WWF supported the Instituto Historia Natural of Chiapas (IHN) to evaluate conservation needs for El Ocote and El Triunfo reserves. IHN found major deterioration in El Ocote's surrounding areas, with deforestation, unplanned and inappropriate land use, expansion of human settlements, slash-and-burn agriculture, cattle ranching and illegal timber extraction all posing threats to the area.

In 1989, WWF supported ECOSFERA, A.C.'s completion of an updated diagnostic study and evaluation of the El Ocote reserve; ECOSFERA found increased planned and unplanned colonization in the region in the intervening years. Legal boundaries of the reserve have not been completely respected, and 11 settlements are partially or completely within the reserve. Slash-and-burn agriculture provides the main source of income for the communities in the area, with maize, beans, chili peppers, and coffee being the chief crops.

SIGNIFICANCE: Due to its strategic geographic location, El Ocote is believed to be critical for the conservation of endemic species; however, ecological studies must be made to document the status of this area.

This project is directly relevant to BSP's mandate to pursue activities that integrate conservation of biodiversity with grassroots development work, and expand and refine the biosphere reserve concept.

**TECHNICAL REPORTS or
PUBLICATIONS:**

OTHER OUTPUTS: A functioning, on-the-ground environmentally sound community development effort underway in selected buffer zone communities, by the end of the project's second year.

UPDATE: The second year of funding was approved with the focus on establishing a training and extension program centered on developing and testing sustainable agriculture techniques in this very humid area. The goal is to replace current extensive slash-and-burn techniques with intensive, organic cultivation techniques, thereby slowing the rate of forest conversion. Ecosfera selected two communities and began work with a group of ten farmers in each community, promoting contour, in-row tillage and the use of leguminous cover crops. Unfortunately, just when the technical assistance of the Ecosfera team was needed most, the team was absent from the area for almost two months. This absence resulted in an abandonment of the experimental plots by all except one farmer in each community. These events have caused

serious concern in WWF, and meetings have been held with Ecosfera to insure changes that will hopefully prevent a repetition of the situation in the future. First, the coordinator was replaced by a project agronomist who is scheduled to spend 15 days per month in the project area. Also, an extensionist was hired that will live full time in the region and provide the critical presence that has been lacking thus far. Ecosfera is also developing a new work plan with measurable objectives that they will submit to WWF by the end of November.

REVISION DATE: November 18, 1992

STATUS: Ongoing

TITLE: El Ocote Environmental Education,
Chiapas II

CA COMPONENT: Pilot Demonstration Project

TYPE OF ACTIVITY:
PRIMARY: Education/Public Awareness
SECONDARY: Socio-cultural Analysis and Research
MINOR: Women in Development
MINOR: Buffer Zone Management

FUNDING: \$52,000 (LAC Bureau)

START DATE: June 1992

END DATE: May 1993

PRIMARY IMPLEMENTOR: WWF

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s):
1. Pronatura Chiapas, A.C.

OTHER IMPLEMENTOR TYPE(s):
1. NGO

COLLABORATOR(s): Ecosfera, A.C.

CONTACTS: BSP: Meg Symington 202-778-9727, fax
202-293-9211; AID/Mexico: Frank Zadroga
525-211-0042, fax 525-511-9980; WWF:
Brad Ack 202-778-9652, fax 202-293-9211

LOCATION: Latin America, Mexico, El Ocote
Ecological Reserve

BIOME: Tropical Moist Forest

PURPOSE: To design and implement an environmental education program that will be complementary to the ECOSFERA (see Activity PD913C) community development project in El Ocote Ecological Reserve in Chiapas, Mexico.

DESCRIPTION: The objective of this activity is to introduce environmental knowledge to El Ocote communities in a way that is useful to them. The focus is largely on the indigenous population in and around El Ocote. These residents belong to the Tzotzil and Tzeltal ethnic groups, who have little or no understanding of Spanish. Likewise, only a few have had any

formal education and their culture must be understood in order to work with them.

Pronatura-Chiapas will carry out in-depth research and analysis of the target populations, including their sociocultural habits, education, understandings and beliefs regarding the natural environment, forms of organization and communication, and perceived environmental problems. Information will be gathered through informal interviews, formal surveys, focal group discussions and other participatory techniques. With this information, conservation education materials will be designed and tested in selected communities. After analyzing native population acceptance of the conservation education materials, project leaders will produce a strategy for program implementation that will be followed by design and production of educational materials.

SIGNIFICANCE: It is anticipated that the lessons learned from this pilot effort will be useful for the other projects in the ecodevelopment program as they begin to formally incorporate conservation education into the ongoing extension process.

This project addresses BSP's mandate to pursue activities that integrate conservation of biodiversity with grassroots development, and expand and refine the biosphere reserve concept.

**TECHNICAL REPORTS or
PUBLICATIONS:**

OTHER OUTPUTS: The first year of this project focussed on defining needs and communication channels, designing and testing materials, and putting together a specific program strategy for the longer term. Implementation of the extension phase will begin in the second year.

UPDATE: The project began its second year in June 1992. Over the past six months, implementation of the program designed during the first year has begun. Pronatura has developed a series of materials and program activities focussed on the indigenous peoples of the Tzotzil and Tzeltal ethnic groups, with the target audiences being women, farmers, and children. With women, Pronatura is working on the promotion of vegetable gardens using the "biointensive" method. The idea of the gardens is to promote better nutrition through vegetable consumption, as well as improved agricultural practices, but equally important is the goal of using this experience to teach broader ecological lessons. With farmers, Pronatura is working with the same group of farmers as is Ecosfera, strengthening their agricultural extension program by adding more explicit ecological education. With children, Pronatura is working closely with local schoolteachers, providing them with information environmental education materials they can use in their classes. The project has hired a second female technician during this reporting period to replace one of the original field staff that had to leave the

project. The new person is of local origin and speaks boths of the local indigenous languages, which should be a big asset for the project. Both field staff are now women.

UPDATE: November 19, 1992

STATUS: New

TITLE: Calakmul Forestry Project

CA COMPONENT: Pilot Demonstration Project

TYPE OF ACTIVITY:

- PRIMARY: Sustainable Use
- SECONDARY: Buffer Zone Management
- MINOR: Training

FUNDING: \$50,000 (LAC Bureau)

START DATE: July 1992

END DATE: July 1993

PRIMARY IMPLEMENTOR: WWF

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s):

1. Consejo Regional de Ejidos de Xpujil
2. Plan Estatal Forestal de Quintana Roo

OTHER IMPLEMENTOR TYPE(s):

1. NGO
2. Government

COLLABORATOR(s): Pronatura Peninsula de Yucatan, A.C.

CONTACTS: BSP: Meg Symington 202-778-9727, fax 202-293-9211; AID/Mexico: Frank Zadroga 525-211-0042, fax 525-511-9980; WWF: Brad Ack 202-778-9652, fax 202-293-9211

LOCATION: Latin America, Mexico, Calakmul Biosphere Reserve

BIOME: Tropical Moist Forest

PURPOSE: To manage existing ejido forests in the buffer zone around Calakmul Biosphere Reserve for environmental and economic sustainability.

DESCRIPTION: WWF recently completed the design of this project in collaboration with the Plan Estatal Forestal of Quintana Roo (formally Plan Piloto Forestal) and the regional council of ejidos of Xpujil, each of which is committing resources to the project. The project's goal is to develop ecologically and economically sustainable forest management systems for ejidos in the buffer zone surrounding Calakmul Biosphere Reserve. The

project will focus on natural forest management including carrying out reliable inventory work, developing 25 year rotation management and harvesting plans, improving silvicultural techniques, and training community technicians to carry out the management activities.

SIGNIFICANCE: The Plan Estatal Forestal of Quintana Roo (formally the Plan Piloto Forestal) is one of the premiere models of natural forest management currently underway in the neotropics. This project is an attempt to geographically extend this highly successful forest management model into the neighboring state of Campeche, which has very similar forests.

This project addresses BSP's mandate to pursue activities that integrate conservation of biodiversity with grassroots development, and expand and refine the biosphere reserve concept.

**TECHNICAL REPORTS or
PUBLICATIONS:**

OTHER OUTPUTS: In the first year of this project, work will begin in five ejidos with the goal of carrying out inventories of forest stock and developing management plans.

UPDATE: One of the project's first activities will be to contract a director for the project, a process that is being carried out jointly by WWF, the Consejo and the Plan Estatal. One of the project director's first tasks will be to develop a work plan for the first year. At present, the training of three forestry technicians in silvicultural management techniques for tropical forests and inventory techniques is underway.

REVISION DATE: November 19, 1992

STATUS: Ongoing
TITLE: Conservation and Restoration of Biodiversity in Central and Eastern Europe
CA COMPONENT: Pilot Demonstration Project
TYPE OF ACTIVITY:
PRIMARY: Various
FUNDING: \$800,000 (ENE Bureau)
START DATE: October 1991
END DATE: June 1993
PRIMARY IMPLEMENTOR: BSP
PRIMARY IMPLEMENTOR TYPE: International NGO
OTHER IMPLEMENTOR(s):
 1. WWF Central and Eastern Europe Program (WWF/CEEP)
OTHER IMPLEMENTOR TYPE(s):
 1. International NGO
COLLABORATOR(s):
CONTACT: BSP: Francesca Grifo tel: 202-861-8370, fax: 202-293-9211; AID/W: Ron Greenberg tel: 202-647-7315, fax: 202-647-4958 and Lori Freer tel: 202-647-7340, fax: 202-647-4958; WWF: Richard Liroff tel: 202-778-9644, fax 202-293-9211
LOCATION: Central and Eastern Europe, Bulgaria and Czechoslovakia
BIOME: Non-specific
PURPOSE: To provide technical assistance and training and research support in Central and Eastern Europe. This buy-in will support the protection and conservation of biodiversity in the newly democratizing nations of Central Europe. Projects enhance and utilize the large cadre of well trained conservation professionals in the region while working to overcome the political and social legacy that has impeded their effectiveness. These activities further programmatic goals of WWF's program in Central Europe and leverage funds of the World Bank's Global Environment Facility.

DESCRIPTION: Technical assistance will be provided to governments, research institutes, NGOs and other pertinent sectors in Central Europe for the formation of national conservation strategies, activities leading to better linkages among and between these various sectors, setting up of trust funds, parallel financing of the GEF and for protected areas related activities.

SIGNIFICANCE: While the falling of the Iron Curtain revealed an horrific environmental legacy of air and water pollution and despoiling of forest and coastal areas, the dissolution also revealed a potential opportunity for nature conservation: after 45 years of border protection (complete with minefields and fences that have now been removed) broad corridors of natural habitat exist that are now vulnerable to development and destruction, but also available to become potential protected areas. The timing is ideal for an ambitious nature protection program and relatively inexpensive when compared to clearing or restoring areas degraded by development or pollution.

TECHNICAL REPORTS or

PUBLICATIONS: Semi-annual progress reports and specific products listed in individual projects.

OTHER OUTPUTS:

UPDATE: See following pages for Projects 915A and 915D

REVISION DATE: November 30, 1992

STATUS: New

TITLE: A Preliminary Needs Assessment and Subsequent Drafting of a National Biological Resources Conservation Strategy for Bulgaria

CA COMPONENT: Technical Assistance

TYPE OF ACTIVITY:

- PRIMARY: Public Policy
- SECONDARY: Socio-Cultural Analysis and Research
- MINOR: Resource/Ecological Economics
- MINOR: Protected Areas
- MINOR: Ecological Research Inventory
- MINOR: Ecotourism

FUNDING: \$300,000 (EUR Bureau)

START DATE: April 1992

END DATE: June 1993

PRIMARY IMPLEMENTOR: BSP

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s):

- 1. Various NGOs
- 2. Bulgarian Academy of Sciences

OTHER IMPLEMENTOR TYPE(s):

- 1. NGO
- 2. Museum/Botanical Garden

COLLABORATOR(s): Bulgarian Ministry of the Environment; Bulgarian Ministry of Regional Planning; Bulgarian Ministry of Agriculture; Bulgarian Committee on Forestry

CONTACT: BSP: Francesca Grifo; Jeko Spiridonov, Bulgarian Ministry of the Environment

LOCATION: Central and Eastern Europe, Bulgaria, Various

BIOME: Non-Specific

PURPOSE: To assist the government of Bulgaria to: 1) compile and analyze the existing information about Bulgaria's biological diversity for the identification of priority areas for

conservation and better management of existing biological resources inside and outside protected areas; and 2) apply the results of this and related analyses toward the drafting of a National Biological Resources Conservation Strategy (NBRCS) for Bulgaria.

DESCRIPTION: The Bulgarian National Biological Resources Conservation Strategy will:

- 1) provide an overview and assessment of information about the species and ecosystems of Bulgaria, their distribution, economic, biological, ecological, and social value; analyses of the potential and current threats to their health and existence and the potential impacts of global warming;
- 2) delineate the geographic areas that comprise a representative suite of biologically important areas;
- 3) evaluate the status of current protected areas;
- 4) summarize the concerns of Bulgarian NGOs about biodiversity
- 5) lay out the legal, cultural, and institutional framework within which conservation action can be implemented;
- 6) explore the sustainable use of biological resources and its potential as a tool for the conservation of biodiversity;
- 7) discuss the role and regulation of tourism in protected areas, its potential roles in increasing public education and awareness of biological resources, and revenue generation; and
- 8) recommend next steps for the government of Bulgaria (GOB), NGOs, citizens, and the private sector.

In order to accomplish these objectives, the NBRCS will include the following five teams:

1. The Biological diversity team will consist of Bulgarian biologists. The team includes topic leader specialists in the following areas: vertebrates, invertebrates, vascular plants, non-vascular plants, fungi, plant community ecology freshwater ecosystems, and Black Sea region ecosystems.
2. The Socio-economic Aspects of Biodiversity Conservation team will provide biological information concerning applied aspects of conservation of biological resources and current traditional and non-traditional uses of the flora and fauna, the legal framework of biological resources conservation; protected areas planning and management; natural resource economists; timber extraction; germplasm conservation, other agricultural issues; ecotourism; revenue generation for biological resources management and protection.
3. The Non-Governmental Organization (NGO) Team will work to establish meaningful dialogue around key social, economic, and political issues related to environment and conservation with the participation of landowners, so that they can make informed decisions in selecting the most viable strategies for conservation for their particular situation.

4. The environmental contamination team will consist of two experts who will be responsible for the integration of problems of environmental contamination with nature conservation.

6. The Information team will consist of a variety of information specialists. One participant will be responsible for planning and initiating a comprehensive bibliographic database on biological diversity in Bulgaria in close collaboration with the other teams and the GOB.

Other information specialists will produce computer generated maps of information about Bulgaria's biological diversity using a geographic information system (GIS). These maps will provide a framework for a country wide approach to the conservation of biological resources which will document the resources both in and out of protected areas. They will serve as a basis for land use planning and sustainable management of these resources for local to national and international applications. In addition, these maps will form a critical baseline assessment for future monitoring and evaluation.

SIGNIFICANCE: During the past several years, Bulgaria has undergone many significant changes which affect the protection and sustainable use of its natural resources. Foreign needs assessment teams have visited Bulgaria and met with officials concerned with the protection of natural resources, visited protected areas and reported the need for a National Biological Resources Conservation Strategy. The Environment Strategy Study compiled by the World Bank has been completed and while it forms a valuable first step, it does not focus sufficiently on biological diversity conservation. The Global Environment Facility (GEF) is considering two projects in the region. The Biological Resources Conservation Strategy will enhance and be an important source of information for a developing Bulgarian GEF project coordinated with the second, the Management and Protection of the Black Sea. A.I.D. is also funding work by the U.S. National Park Service on "Park and Protected Area Management and Operations" which is also coordinated with this strategy. The NBRCS process and document complement and provide a framework for directing future foreign assistance towards both economic development and nature protection in Bulgaria. Bulgaria has recently reorganized its Ministry of the Environment strengthening the role of the Nature Conservation department. The seminar would provide technical assistance as the newly empowered Nature Conservation Department develops both short and long-term strategies for enhancing protection and understanding of biodiversity in Bulgaria.

TECHNICAL REPORTS or PUBLICATIONS: A written report and, where appropriate, accompanying maps to describe the following: currently protected areas, unknown areas, species richness, rarity, endemism and relictual status, unique communities, ecological services, fragility, threat, economically important species and germplasm,

wildlands, and suite of best sites containing representative samples of biological diversity. An assessment of the ability of currently protected areas to sustain the processes necessary for the maintenance of biological diversity and guidelines for conservation of the biota through corridors, expansion of current reserves, and multiple-use areas outside protected areas. Lastly the identification of a research agenda for the future and recommendations regarding current and future monitoring requirements.

OTHER OUTPUTS: (1) A conservation seminar; (2) Draft National Conservation Strategy for Bulgaria; (3) The identification of specific technical assistance needs; and (4) Identification of specific technical assistance needs associated with implementation of the national strategy.

UPDATE: The organization and composition of the teams were finalized in collaboration with the Bulgarian Ministry of Environment in June in Bulgaria. Candidate team members were interviewed. An in-country coordinator was hired and is working. US-based consultants have been identified. Draft scopes of work for all team members were prepared.

REVISION DATE: November 30, 1992

STATUS: Ongoing

TITLE: Strengthening of NGO Participation in Nature Protection in the Czech and Slovak Republics

CA COMPONENT: Pilot Demonstration Projects

ACTIVITY TYPE:
PRIMARY: Protected Areas
SECONDARY: Institutional Support

FUNDING: \$75,000 (ENE Bureau)

START DATE: July 1992

END DATE: September 1994

PRIMARY IMPLEMENTOR: BSP

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s):
1. Various NGOs

OTHER IMPLEMENTOR TYPE(s):
1. NGO

COLLABORATOR(s): German Marshall Fund

CONTACT: Francesca Grifo, BSP; Rich Liroff, WWF/CEEP

LOCATION: Central and Eastern Europe, Czech and Slovak Republics, Various

BIOME: Temperate Forest & Grasslands

PURPOSE: To increase the capacity of NGO's to provide valuable, unique information critical for effective management of protected areas.

DESCRIPTION: The Czech and Slovak Biodiversity GEF projects are centered around 5 transboundary protected areas in the Czech and Slovak Republics. Local NGOs and other conservation professionals are important to effective protected area management and restoration. Strengthening these professionals will increase the information available to managers and for the preparation of sustainable development strategies which are proposed in the GEF and hence will increase the effectiveness of the GEF project. NGOs will be invited to submit proposals for work with direct relevance to the solution of management problems

in or around the Eastern Carpathians, High Tatras, Krkonose and Sumova National Parks and Palava Biosphere Reserves. Proposals were due to BSP by the 30th of October, 1992.

SIGNIFICANCE: This activity will aid in the process of NGO development in Central and Eastern Europe and would be both integrated with and complimentary to activities planned by the CSFR GEF project, National Park Service, Peace Corps, and other organizations.

TECHNICAL REPORTS or

PUBLICATIONS: NGOs funded will be required to submit regular technical reports concerning their projects.

OTHER OUTPUTS: Increased NGO capacity and activities such as:
(1) Management plans for selected localities which insure the continued existence of appropriate habitat for target species;
(2) Recovery plans for target species; (3) The production of germplasm for reintroduction into appropriate habitats.

Results of the increased NGO capacity and these specific activities could include: (1) The increased survivorship of many species with economic, ecological, and cultural significance to Central and Eastern Europeans and the world; (2) Opportunities for important linkages and collaboration among Central and Eastern European and US scientists; (3) Depending on the requests received, products should include valuable databases accessible to conservationists, policy makers, NGOs and scientists, and training for curators or students, etc.

UPDATE: 200 copies of the Request for Proposals were sent out to NGOs, foundations and government offices in the Czech and Slovak Republics as well as numerous copies to US NGOs, government agencies and other donors in Czech, Slovak and English. Nearly 50 proposals were received and are currently being reviewed.

REVISION DATE: November 30, 1992

STATUS: Ongoing

TITLE: Northern Mexico Ecodevelopment

CA COMPONENT: Pilot Demonstration Project

TYPE OF ACTIVITY: Various

FUNDING: \$160,000 (LAC Bureau)

START DATE: September 1991

END DATE: December 1993

PRIMARY IMPLEMENTOR: Various

PRIMARY IMPLEMENTOR TYPE: Various

OTHER IMPLEMENTOR(s): Various

OTHER IMPLEMENTOR TYPE(s): Various

COLLABORATOR(s): Various

CONTACTS: BSP: Meg Symington 202-778-9727; fax
202-293-9211; AID/Mexico: Frank Zadroga
525-211-0042; fax 525-511-9980

LOCATION: Latin America, Mexico, Northern Mexico

BIOME: Various

PURPOSE: To design and implement projects to promote environmentally sound community development around biologically important, threatened wildland areas in northern Mexico. The overall goal of the program is to decrease the rate of deforestation in these wildland areas, and to protect them as healthy diverse ecosystems, while achieving sustainable methods and levels of resource use for the people living in and around them.

DESCRIPTION: This program is designed to be complementary to that described in PD903 and PD913, which focusses on environmentally-sound community development in the buffer zones of priority wildland areas in southern Mexico. AID-Mexico would now like to expand the geographic focus of this ongoing program to include from one to three forested wildlands located in the northern border region of Mexico. As with the wildlands/buffer zone management activities in southern Mexico, priority will be given to the management of areas that will contribute to the objectives of A.I.D.'s Global Climate Change Initiative through

the protection and/or regeneration of natural forest vegetation. Activities eligible for funding under this northern Mexico component include operational and master planning, baseline studies, institutional strengthening of Mexican conservation NGOs, interinstitutional collaboration (especially between the cognizant Mexican agencies, SEDESOL and SARH, and U.S. agencies) and buffer and core zone management. Priority will be given to activities involving participatory approaches that emphasize local residents' involvement in resource management.

Before selecting specific sites and activities for funding, BSP will fund a preliminary analysis of ongoing conservation efforts in forested areas of northern Mexico, which will provide BSP with the background information (concerning both candidate areas and institutions) necessary to solicit and evaluate project proposals for potential funding (see PD916A). The purpose of this study is to collect and distill available information on candidate forested wildland sites in northern Mexico, including their exact location, areal extent, type(s) of habitat and ecosystem encompassed, protected area status, species lists, human population and demographic information, local land tenure situation, descriptions of ongoing projects, etc.

SIGNIFICANCE: Mexico is a focal country for A.I.D.'s Global Climate Change initiative. Northern Mexico is becoming a new focus of attention for A.I.D. because of the impending North American Free Trade Agreement (NAFTA). Northern Mexico has been relatively neglected by the international conservation community despite its rich diversity of species and ecosystems.

This project is directly relevant to BSP's mandate to pursue activities which integrate conservation of biodiversity with grassroots development work, and expand and refine the biosphere reserve concept.

TECHNICAL REPORTS or

PUBLICATIONS: A report, based on the interviews conducted, bibliographic materials consulted and site visits carried out during the course of the study, will be prepared that evaluates the potential suitability of the sites listed below, as well as any others the study may discover, for the establishment of integrated conservation and development projects. Biological, economic, socio-political and institutional criteria will all be considered in evaluating site suitability. This report should be completed by June 30, 1992.

OTHER OUTPUTS: One or more buffer zone projects, on the ground and functioning by December 1993.

UPDATE: The report was finished on schedule at the end of June, and a call for proposals was issued at the end of July. Eighteen proposals were received by mid-October. The BSP Program Officer had the opportunity to meet with many of those submitting proposals to discuss their work at the U.S.- Mexico Borderlands

Meeting held in Las Cruces, New Mexico, September 17-19, 1992.
BSP and USAID/Mexico are now in the final stages of discussion
concerning which projects will be funded; the first grant should
be made by the end of the year.

REVISION DATE: 11/19/92

STATUS: New

TITLE: Feasibility Study for Northern Mexico
GCC

CA COMPONENT: Pilot Demonstration Project

TYPE OF ACTIVITY:
PRIMARY: Program/Project Evaluation & Monitoring
SECONDARY: Protected Areas

FUNDING: \$20,000 (LAC Bureau)

START DATE: May 1992

END DATE: March 1993

PRIMARY IMPLEMENTOR: Biodiversity Support Program

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s):

OTHER IMPLEMENTOR TYPE(s):

COLLABORATOR(s):

CONTACTS: BSP: Meg Symington 202-778-9727; fax
202-293-9211; AID/Mexico: Frank Zadroga
525-211-0042; fax 525-511-9980

LOCATION: Latin America, Northern Mexico

BIOME: Various

PURPOSE: To provide BSP with the background information (concerning both candidate areas and institutions) necessary to solicit and evaluate project proposals for potential funding in northern Mexico (see PD916). The purpose of this study is to collect and distill available information on candidate forested wildland sites in northern Mexico, including their exact location, areal extent, type(s) of habitat and ecosystem encompassed, protected area status, species lists, human population and demographic information, local land tenure situation, descriptions of ongoing projects, etc.

DESCRIPTION: Before selecting specific sites and activities for funding under the Northern Mexico Wildlands Program (see PD916), BSP funded a preliminary analysis of ongoing conservation efforts in forested areas of northern Mexico. A report, based on the interviews conducted, bibliographic materials consulted and site visits carried out during the course of the study, has been

prepared that evaluates the potential suitability of a wide range of forested sites for the establishment of integrated conservation and development projects. Biological, economic, socio-political and institutional criteria were all considered in evaluating site suitability. This report was completed on June 30, 1992.

SIGNIFICANCE: Mexico is a focal country for A.I.D.'s Global Climate Change initiative. Northern Mexico is becoming a new focus of attention for A.I.D. because of the impending North American Free Trade Agreement (NAFTA). Northern Mexico has been relatively neglected by the international conservation community despite its rich diversity of species and ecosystems.

This project is directly relevant to BSP's mandate to pursue activities which integrate conservation of biodiversity with grassroots development work, and expand and refine the biosphere reserve concept. It also is relevant to BSP's mandate in the area of collection and dissemination of information relevant to biodiversity conservation.

TECHNICAL REPORTS or

PUBLICATIONS: "Preliminary Report on Candidate Sites," by Lane Krahl for the Biodiversity Support Program, June 30, 1992.

OTHER OUTPUTS:

UPDATE: The report was finished on schedule at the end of June. It contains very useful information, and is in the process of being put into a format suitable for distribution to individuals and institutions working in northern Mexico. The information in the report was very useful in evaluating proposals received by BSP for work in the region.

REVISION DATE: 11/19/92

STATUS: New

TITLE: PARCS (Protected Area Conservation Strategy)

CA COMPONENT: Pilot Demonstration

TYPE OF ACTIVITY:
PRIMARY: Protected Areas
SECONDARY: Training

FUNDING: \$300,000 (AFR Bureau)

START DATE: June 1992

END DATE: September 1993

PRIMARY IMPLEMENTOR: BSP

PRIMARY IMPLEMENTOR TYPE:

OTHER IMPLEMENTOR(s):
1. World Wildlife Fund
2. Wildlife Conservation International
3. African Wildlife Foundation

OTHER IMPLEMENTOR TYPE(s):
1. International NGO
2. International NGO
3. International NGO

COLLABORATOR(s): National governments; protected area managers; African, U.S., and European NGOs in the field; USAID missions

CONTACT: Barbara Pitkin, 202/861-8338

LOCATION: Africa, various

BIOME: various

PURPOSE: The Protected Area Conservation Strategy (PARCS) project seeks to improve the protection of Africa's biodiversity by increasing the capacity of relevant management authorities (both governmental and nongovernmental) to effectively manage their protected area systems. The PARCS project will achieve this goal by assessing training opportunities, constraints, needs, skill levels, and priorities in three regions of sub-Saharan Africa (east, central, and southern Africa) and designing a pilot program in each of the three regions to implement recommendations from this assessment.

DESCRIPTION: An in-depth assessment of the training opportunities, constraints, needs, skill levels, and priorities in east, central, and southern Africa will be completed. The implementing organizations will be seeking input and recommendations from key personnel involved in protected area management. Pilot projects to implement recommendations from this assessment will be designed.

SIGNIFICANCE: Africa's system of national parks and protected areas constitutes one of the most important safeguards of the continent's extraordinarily rich biological diversity. At present, however, the continent suffers a critical lack of training opportunities to enable staff to design and implement effective conservation management programs. In recent years, the effects of this lack in training opportunities have become more serious due to the increasing complexity of protected area operations and management. The question PARCS seeks to address is: what is needed with respect to staff training in order to ensure the long-term viability of Africa's protected areas?

TECHNICAL REPORTS

or PUBLICATIONS: The primary output of Phase I will be the assessment of training opportunities, constraints, needs, skill levels, and priorities in the three regions. Recommendations from this assessment will be used to guide the development of potential pilot programs in each of the three regions in Africa and recommendations for training protected area management staff.

OTHER OUTPUTS:

UPDATE:

REVISION DATE: November 9, 1992

STATUS: Ongoing

TITLE: Indonesia NRMP Environmental Assessment

CA COMPONENT: Pilot Demonstration Project

TYPE OF ACTIVITY:

- PRIMARY: Environmental Impact Assessment
- SECONDARY: Forest Management
- MINOR: Protected Areas

FUNDING: \$175,000 (USAID/Indonesia)

START DATE: May 1991

END DATE: September 1993

PRIMARY IMPLEMENTOR: BSP

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s):

OTHER IMPLEMENTOR TYPE(s):

COLLABORATOR(s): ARD

CONTACT: BSP: Janis Alcorn 202-778-9697, fax 202-293-9211; USAID/Jakarta: Jerry Bisson 62-21-360-360, fax 62-21-380-6694

LOCATION: Asia, Indonesia, Kalimantan and North Sulawesi

BIOME: Various

PURPOSE: To produce a detailed environmental assessment of forest management and nature conservation plans to be implemented under the National Resource Management project (NRMP) in Indonesia. The assessment will recommend implementation plans, modifications and other mitigation measures where necessary.

DESCRIPTION: BSP will assess the potential impacts of activities to be implemented under 1) forest management plans of the P.T. Sari Bumi Kusuma forest concession in West/Central Kalimantan and 2) the multi-purpose management plans of the Bunaken Marine National Park in Northern Sulawesi, Bukit Baka/Bukit Raya Nature Reserve in West Kalimantan, and Gunung Palung National Park in West Kalimantan.

SIGNIFICANCE: BSP will assess the environmental soundness and

sustainability of the project's plans in the area of natural forest production and conservation. This EA will serve as a model for future USAID EAs for natural forest management and park/reserve management projects in Asia.

It is BSP's mandate to strengthen the capability of host-countries to develop conservation area management plans and identify models of land use that protect biodiversity.

TECHNICAL REPORTS or

PUBLICATIONS: Report on each of the management plans to be prepared.

OTHER OUTPUTS:

UPDATE: A nine-member Environmental Assessment Team began work on the environmental assessment in mid-September. The field work was scheduled to be complete and final reports due by the end of November. The final assessment is expected by December 15, 1993.

REVISION DATE: November 19, 1992

STATUS: New

TITLE: BOSCOsa Evaluation

CA COMPONENT: Pilot Demonstration Project

TYPE OF ACTIVITY:
PRIMARY: Program/Project Evaluation & Monitoring

FUNDING: \$35,000 (USAID/Costa Rica)

START DATE: May 1992

END DATE: December 1992

PRIMARY IMPLEMENTOR: Biodiversity Support Program

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s):

OTHER IMPLEMENTOR TYPE(s):

COLLABORATOR(s): Fundación Neotrópica; World Wildlife Fund; U.S. Forest Service

CONTACT: BSP: Meg Symington 202-778-9727; fax 202-293-9211; USAID/Costa Rica: Enrique Barrau 506-204545; fax 506-203434 or 317476

LOCATION: Latin America, Costa Rica, Osa Peninsula

BIOME: Tropical Moist Forest

PURPOSE: To carry out an evaluation of the last three years of the USAID/Costa Rica-funded Forest Conservation and Management Project (BOSCOsa) in Costa Rica, which is implemented by the Fundación Neotrópica. The general purpose of the evaluation was to determine BOSCOsa's progress in achieving its stated purpose; identify relative strengths and weaknesses of BOSCOsa's organization, implementation and methodological approaches; and provide USAID/Costa Rica with an analysis of how project implementation might be improved and how future USAID support to BOSCOsa might be structured.

DESCRIPTION: The objective of BOSCOsa is to develop and demonstrate natural forest management, sustainable agriculture, ecotourism and biodiversity technologies which are economically productive and contribute to the maintenance of forest cover. BOSCOsa is being implemented through a number of activities at

both the regional and grassroots levels. Among the major activities are: support for a regional training/research center, protected areas planning and management, and local sustainable development.

One of the most important steps in any evaluation process is to define appropriate indicators of progress that can be used to evaluate a project's performance and impact. The BSP evaluation team will assist USAID/Costa Rica to define two sets of indicators: one to gauge project impact and one to gauge project performance. Possible impact indicators include: changes in the attitudes and behavior of the various individuals and interest groups living in the project area; changes in the policies and procedures of key public and private agencies having rights and responsibilities for natural resources in the project area; and changes in the magnitude or rates of deforestation, reforestation or other land use changes in the project area. Possible performance indicators include: organizational structure of BOSCOA vis-a-vis its ability to effectively interact with community client groups, governmental institutions, other NGOs and donors; appropriateness of methodologies used by BOSCOA to conduct education, transfer technology, establish enterprises, and influence behavior of land owners in the project area; and appropriateness of the range and mix of technical services offered by BOSCOA.

After developing appropriate indicators, the team will then undertake site visits in the field for the purpose of gathering the data required to quantify/address the indicators developed. This will involve interviews with the project director, key staff members, community leaders, government officials, and others knowledgeable about the natural resources of the Osa Peninsula. The team will review project documentation, technical materials, any agreements made with community groups and individuals, and other descriptions of services provided by BOSCOA to assess whether the projects methods and technology fit the needs of the client groups. The team will also visit selected land parcels and communities to assess the actual impact of the project on the target population and the area's natural resources.

After having collected the field data, the evaluation team will summarize and interpret these data to show the progress of BOSCOA in attaining the project's purposes. A synthesis and analysis of the data gathered will be presented to USAID/Costa Rica along with an analysis of how project implementation might be improved and how future USAID support to BOSCOA might be structured. These analyses will be presented before the evaluation team leaves Costa Rica.

SIGNIFICANCE: BOSCOA is continually cited as a model integrated conservation and development project. By organizing and participating in this project evaluation, BSP is addressing the need stated in its strategy to "assess the effectiveness of innovative conservation methods that seek to conserve

biodiversity while promoting sustainable development, and to disseminate that information."

TECHNICAL REPORTS or
PUBLICATIONS: "Project Evaluation Report: The Program for Forest Management and Conservation on the Osa Peninsula, Costa Rica." December 1992.

OTHER OUTPUTS: BSP organized a seminar (held October 8, 1992) to present the results of the evaluation to the greater Washington community. The seminar was extremely well-attended (almost 100 people). Over 30 attendees signed up to receive copies of the final evaluation.

UPDATE: The evaluation was carried out in the field from June 1-18, 1992 by a team of four; three of whom were supported by USAID/Costa Rica through BSP (Team Leader Bruce Cabarle, social scientist Paula Palmer and biologist Meg Symington). A fourth team member, Jerry Bauer (forester) was supported jointly by WWF and the USFS. The final draft was sent to USAID/Costa Rica at the end of August for final approval. Comments were received back from the mission at the end of September and the final version was printed in early December.

REVISION DATE: 11/24/92

STATUS: New

TITLE: Indonesia Biodiversity Center

CA COMPONENT: Pilot Demonstration Project

TYPE OF ACTIVITY:
PRIMARY: Ecological Research/Inventory

FUNDING: \$400,000 (Asia and R&D Bureaus)

START DATE: June 1992

END DATE: September 1994

PRIMARY IMPLEMENTOR: BSP

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s):

OTHER IMPLEMENTOR TYPE(s):

COLLABORATOR(s):

CONTACT: BSP: Janis Alcorn, 202-778-9697, fax
202-293-9211; Meg Symington, 202-778-
9727; 202-293-9211.

LOCATION: Various

BIOME: Non-Specific

PURPOSE: Working in collaboration with the AID Asia Bureau (Asia/DR/TR) and AID/R&D Bureau, BSP is assisting in the establishment of free-standing, not-for-profit, self-sustaining biodiversity center. The Center will address the biodiversity issues of geographic regions that are not being addressed by any existing institution.

DESCRIPTION: The activity has three major components: planning and analysis, a study tour, and short term technical assistance. The specific activities are still being planned.

SIGNIFICANCE: The activity fulfills BSP's mandate to help improve the capacities of non-governmental and government institutions in identifying critical needs for and economic potential of conservation and wise management of biological resources.

TECHNICAL REPORTS or

PUBLICATIONS:

OTHER OUTPUTS:

UPDATE: The activities are being planned.
REVISION DATE: November 19, 1992

STATUS: New

TITLE: Africa Add-on II

CA COMPONENT: Pilot Demonstration Project

TYPE OF ACTIVITY:
PRIMARY: Various

FUNDING: \$1,000,000 (AFR Bureau)

START DATE: October 1992

END DATE: September 1994

PRIMARY IMPLEMENTOR: BSP

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s):

OTHER IMPLEMENTOR TYPE(s):

COLLABORATOR(s): Various

CONTACT: BSP: Kate Newman (202) 778-9524; Jim Webster (202) 778-9786

LOCATION: Africa, Various

BIOME: Various

PURPOSE: Africa II is made up of three sub-projects: 1) the Biodiversity Analysis for Africa (BAA) project (see PD926C), 2) the Global Climate Change for Africa (GCCA) project (see PD926B), and 3) a study of how attitudes are formed or changed (see PD926A). The purpose of the BAA project is to advance the conservation of biodiversity in Africa while promoting sustainable development through the analysis of biodiversity conservation initiatives, strategies and approaches. The purpose of the GCCA project is to improve African expertise on both deforestation and biomass burning and their impacts on the environment in order to enable the sub-Saharan countries to manage their resources more sustainably and to participate more effectively in international policy discussions. The purpose of the attitudes study is to further the understanding of how attitudes are formed and practices reinforced or changed in Africa.

DESCRIPTION: Based on its efforts under BAA I, BSP will continue to support activities in Africa that demonstrate innovative methods for the conservation of biodiversity. Results from these

activities will contribute to BSP's ongoing analysis of key issues and innovative techniques in biodiversity conservation. As part of BAA II, BSP will focus on the key issue of how to better monitor and evaluate the impact of biodiversity conservation efforts. BAA II activities will draw upon the expertise of the African Biodiversity Consultative Group established by BSP to contribute to the analysis of biodiversity conservation efforts in Africa.

Under the GCCA Project, BSP, with the assistance of its Global Climate Change Advisory Panel, will advise the Africa Bureau's design team on critical issues that will need to be addressed in a new climate change project and will provide some technical background information. In a parallel effort, BSP will support innovative research grants to U.S. and African scientists and NGOs addressing the key issues in climate change identified in the Central Africa Global Climate Change Study.

As part of the attitudes study, BSP will (i) assess the present state of knowledge on attitude and activity change in general, and in Africa in particular; (ii) identify and examine past and ongoing efforts in conservation education in Africa and analyzing their impact on both local level activity change and policy level decision making; (iii) design a series of case studies examining factors related to (a) policy changes among senior level decision makers and (b) changes in the activities of local people; and (iv) provide recommendations for a research plan that includes the implementation of the case studies and a longer term analysis of the impacts of selected conservation education projects.

SIGNIFICANCE: The Biodiversity Analysis for Africa project is BSP's primary, ongoing effort to advance the understanding of biodiversity conservation in Africa. The BAA African Biodiversity Consultative Group, comprised of leading African and U.S. natural and social scientists, represents an innovative and successful mechanism for integrating African perspectives into BSP's analysis and programming.

Last year's Central Africa Global Climate Change Study identified important issues related to Africa's contribution to global climate change, but more importantly to the impact of global climate change on the African continent. This year BSP will be able to explore these issues in more depth through field research grants in order to build a base of knowledge that will strengthen African's efforts to address the threat of climate change on their continent.

Understanding how people are motivated to modify their practices is essential for ensuring long-term change through project activities. BSP's study on attitudes will further the understanding of this critical issue.

TECHNICAL REPORTS or PUBLICATIONS: Under BAA II, BSP will produce two major reports.

The first report will examine the innovative project activities being funded by BAA I and II. The second report will provide guidelines for field implementors on monitoring and evaluating biodiversity conservation projects.

As part of GCCA, BSP will produce a technical report addressing issues identified by the Africa Bureau design team and a final report describing each grant and its significance to the field of climate change in Africa.

For the attitudes study, BSP will produce a final report summarizing the state of knowledge on attitude formation and activity change in general and in Africa, a summary document of the history and impact of conservation education efforts in Africa, and an analytical plan for continued research on this topic.

OTHER OUTPUTS: BSP will develop databases and a library on monitoring and evaluation of biodiversity conservation projects and conservation education activities in Africa.

UPDATE:

REVISION DATE: November 9, 1992

STATUS: new

TITLE: Attitudes toward Conservation of Biodiversity

CA COMPONENT: Pilot Demonstration

TYPE OF ACTIVITY:
PRIMARY: Education/Public Awareness

FUNDING: \$100,000 (AFR Bureau)

START DATE: August 1992

END DATE: September 1993

PRIMARY IMPLEMENTOR: BSP

PRIMARY IMPLEMENTOR TYPE:

OTHER IMPLEMENTOR(s):

OTHER IMPLEMENTOR TYPE(s):

COLLABORATOR(s): U.S. education institutions; African, U.S., and European NGOs in the field; USAID missions that have implemented conservation education programs

CONTACT: Barbara Pitkin, 202/861-8338

LOCATION: Africa, various

BIOME: various

PURPOSE: The purpose of this project is to further the understanding of how attitudes are formed and practices reinforced or changed in Africa. The study will achieve this goal by:

(i) assessing the present state of knowledge on attitude and activity change in general, and in Africa in particular;

(ii) identifying and examining past and ongoing efforts in conservation education in Africa and analyzing their impact on both local level activity change and policy level decision making;

(iii) designing a series of case studies examining factors related to (a) policy changes among senior level decision makers and (b) changes in the activities of local people;

(iv) providing recommendations for an analysis and research plan that includes the implementation of the case studies and a longer term analysis of the impacts of selected conservation education projects.

DESCRIPTION: A literature search will be conducted on attitude formation and change and an inventory of USAID and other experience with conservation education in Africa will be assembled. A methodology for the study will be developed based on the findings of the literature search. Consultants with expertise in social marketing, social psychology and environmental education will be hired to examine the literature, conduct site visits, and interview scholars and practitioners in order to: (i) summarize the state of knowledge on attitude formation and activity change in general, and in Africa in particular and (ii) assess the impact of existing and past projects and activities involving conservation education in Africa.

SIGNIFICANCE: An analysis of the factors that determine the decision making process, including cultural, spiritual and geographic factors, is key to designing, implementing and monitoring effective conservation and/or development projects. Understanding how people are motivated to modify their practices is essential for ensuring long-term change through project activities.

TECHNICAL REPORTS or

PUBLICATIONS: a detailed methodology for the study; a final report summarizing the state of knowledge on attitude formation and activity change in general, and in Africa in particular; a summary document of the history and impact of conservation education efforts in Africa; and an analytical/research plan for continued research on this topic.

OTHER OUTPUTS: a database of relevant literature and a database of USAID and other conservation education activities in Africa.

UPDATE:

REVISION DATE: November 9, 1992

STATUS: New

TITLE: Global Climate Change for Africa II

CA COMPONENT: Pilot Demonstration Project

TYPE OF ACTIVITY:
PRIMARY: Various

FUNDING: \$300,000 (AFR Bureau)

START DATE: September 1992

END DATE: September 1993

PRIMARY IMPLEMENTOR: BSP

PRIMARY IMPLEMENTOR TYPE:

OTHER IMPLEMENTOR (S): Various

OTHER IMPLEMENTOR TYPE (S):

COLLABORATOR (S): Various

CONTACT: BSP: Kate Newman (202) 778-9524;
Barbara Pitkin (202) 863-3338

LOCATION: Africa, Various

BIOME: Various

PURPOSE: The purpose of the Global Climate Change for Africa (GCCA) Project is to improve African expertise on both deforestation and biomass burning and their impacts on the environment in order to enable the sub-Saharan countries to more effectively (1) manage their resources more sustainably and (2) participate in international policy discussions that will influence both their own economic development and future greenhouse gas emissions from the rest of the world.

DESCRIPTION: The GCCA Project has two major components: 1) advise and assist Africa Bureau's African Global Climate Change design effort and 2) support innovative research grants to test implementation approaches in the field.

Based on the results of last year's Central Africa Global Climate Change Study, the Africa Bureau is undertaking the design of a long-term global climate change activity in Africa. Through consultancies and the continuation of BSP's Global Climate Change Advisory Panel, BSP will advise the Africa Bureau's design team on critical issues that will need to be addressed in a new

climate change project and will provide some technical background information.

In a parallel effort, BSP will support innovative research grants to U.S. and African scientists and NGOs addressing the key issues in climate change identified in the Central Africa Global Climate Change Study. The results of the research will provide essential data for the development and implementation of field activities for the mitigation of emissions and of potential negative impacts of land use change and global climate change in Africa.

SIGNIFICANCE: Last year's Central Africa Global Climate Change Study identified important issues related to Africa's contribution to global climate change, but more importantly to the impact of global climate change on the African continent. These issues were widely disseminated through the project document, significantly raising the visibility of climate change as a critical problem affecting the future of Africa. This year BSP will be able to explore these issues in more depth through field research grants in order to build a base of knowledge that will strengthen African's efforts to address the threat of climate change on their continent.

TECHNICAL REPORTS or

PUBLICATIONS: This activity will produce several reports. The BSP consultant will produce trip reports following her attendance at two climate change conferences and a technical report addressing issues identified by the Africa Bureau design team. BSP will produce a final report describing each grant and its significance to the field of climate change in Africa.

OTHER OUTPUTS:

UPDATE:

REVISION DATE: December 4, 1992

STATUS: New
 TITLE: Biodiversity Analysis for Africa II
 CA COMPONENT: Pilot Demonstration Project
 TYPE OF ACTIVITY:
 PRIMARY: Various
 FUNDING: \$400,000 (AFR Bureau)
 START DATE: October 1992
 END DATE: September 1994
 PRIMARY IMPLEMENTOR: BSP
 PRIMARY IMPLEMENTOR TYPE: International NGO
 OTHER IMPLEMENTOR(s):
 OTHER IMPLEMENTOR TYPE(s):
 COLLABORATOR(s): Various
 CONTACT: BSP: Kate Newman (202) 778-9524; Jim Webster (202) 778-9786
 LOCATION: Africa, Various
 BIOME: Various

PURPOSE: The purpose of the Biodiversity Analysis for Africa (BAA) project is to advance the conservation of biodiversity in Africa while promoting sustainable development through the analysis of biodiversity conservation initiatives, strategies and approaches. This analysis is expected to help the Africa Bureau, A.I.D. missions in Africa, governments, and NGOs shape organizational strategies and programs that will be more effective in conserving biodiversity and promoting sustainable development through improved use of biological resources.

DESCRIPTION: During Phase II of the BAA project, the Biodiversity Support Program (BSP) will award innovative research grants, analyze ongoing biodiversity conservation initiatives, and examine techniques for monitoring and evaluating the impact of biodiversity projects.

Based on its efforts under BAA I, BSP will continue to support activities in Africa that demonstrate innovative methods for the conservation of biodiversity. Results from these activities will contribute to BSP's ongoing analysis of key issues and innovative

techniques in biodiversity conservation. This ongoing analysis will capture lessons learned, advance the understanding of critical biodiversity conservation issues, and contribute to strategies to guide future project selection, design and implementation.

Under BAA II, BSP will focus on improving monitoring and evaluation of the impacts of biodiversity conservation efforts. This initiative will examine monitoring and evaluation techniques such as the use of impact indicators, and explore the crucial links between monitoring and evaluation and project selection, design and implementation. The links between monitoring and evaluation and sustainable community-based natural resources management will also be analyzed.

BAA II activities will draw upon the expertise of the African Biodiversity Consultative Group established by BSP to contribute to the analysis of biodiversity conservation efforts in Africa.

SIGNIFICANCE: The Biodiversity Analysis for Africa project is BSP's primary, ongoing effort to advance the understanding of biodiversity conservation in Africa. The BAA African Biodiversity Consultative Group, comprised of leading African and U.S. natural and social scientists, represents an innovative and successful mechanism for integrating African perspectives into BSP's analysis and programming. The Consultative Group and other BAA project activities are in the forefront of existing biodiversity conservation efforts in Africa. Results from these activities are expected to help influence the future direction of conservation initiatives and strategies in Africa.

**TECHNICAL REPORTS or
PUBLICATIONS:**

Under BAA II, BSP will produce two major reports. The first report will examine the innovative project activities being funded by BAA I and II. The second will provide guidelines for field implementors on monitoring and evaluating biodiversity conservation projects. It will also provide recommendations to A.I.D. missions on approaches for developing impact indicators.

OTHER OUTPUTS: BSP will develop a bibliographic database and library on monitoring and evaluation of biodiversity conservation projects.

UPDATE:

REVISION DATE: November 19, 1992

STATUS: Ongoing

TITLE: Cameroon Biodiversity Assessment

CA COMPONENT: Pilot Demonstration Project

TYPE OF ACTIVITY:

PRIMARY: Public Policy

SECONDARY: Ecological Research/Inventory

MINOR: Protected Areas

FUNDING: \$25,000 (USAID\Cameroon)

START DATE: September 1992

END DATE: September 1993

PRIMARY IMPLEMENTOR: BSP

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s):

OTHER IMPLEMENTOR TYPE(s):

COLLABORATOR(s):

CONTACT: BSP: Kate Newman (202) 778-9524; Jim Webster (202) 778-9795

LOCATION: Africa, Cameroon, Various

BIOME: Tropical Moist Forest

PURPOSE: The purpose of the Cameroon Biodiversity Assessment is to provide support to USAID Cameroon's efforts to develop a multi-year, national-level natural resources management plan and project design. The mission has decided to become involved in the National Environmental Action Plan development and is seeking advice on the critical issues related to biodiversity conservation in Cameroon.

DESCRIPTION: BSP will provide technical support to this assessment through one or two consultants. BSP may also, upon request, assist in other activities leading towards national-level biodiversity conservation planning, such as supporting study tours for key Cameroonians to innovative conservation activities in other countries.

SIGNIFICANCE: BSP's Central Africa Global Climate Change Study identified Cameroon as one of the few countries in Africa with significant amounts of tropical moist forest remaining intact.

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Of these countries, it is the only one with a major USAID mission. The opportunity to assist this mission at this very important planning stage will enable BSP to make an important contribution to helping conserve this extremely valuable resource.

TECHNICAL REPORTS or
PUBLICATIONS:

The BSP consultant will produce an assessment report for the mission.

OTHER OUTPUTS:

UPDATE:

REVISION DATE: November 19, 1992

STATUS: New

TITLE: Technical Assistance to Fundación VIDA

CA COMPONENT: Pilot Demonstration Project

TYPE OF ACTIVITY: Various

FUNDING: \$135,000 (USAID/Honduras)

START DATE: September 1992

END DATE: April 1993

PRIMARY IMPLEMENTOR: Various

PRIMARY IMPLEMENTOR TYPE: Various

OTHER IMPLEMENTOR(s): Various

OTHER IMPLEMENTOR TYPE(s): Various

COLLABORATOR(s): Various

CONTACT: BSP: Meg Symington 202-778-9727; fax 202-293-9211; USAID/Honduras: Rafael Rosario or Margaret Harritt 504-323120; fax 504-312776; Fundación VIDA: Vicky Diaz ph/fax 504-391645

LOCATION: Latin America, Honduras, Various

BIOME: Non-specific

PURPOSE: To provide institutional strengthening assistance to Fundación VIDA in three distinct areas: environmental strategy and project development, conservation finance and financial management, and organizational development and training.

DESCRIPTION: In 1992, as part of a debt reduction agreement with the United States, the Government of Honduras committed the lempira equivalent of US \$5 million (to be allocated over a period of five years) to establish an environmental fund. The Foundation for Environment and Development (Fundación VIDA), created to manage this environmental fund, is a private, non-profit organization. The core membership of Fundación VIDA are environmental NGOs. Private citizens and business enterprises are also members of the institution. Fundación VIDA's mandate is not to implement projects, but to receive, analyze, evaluate, and approve environmental project proposals submitted by NGOs. Fundación VIDA will also have the responsibility of monitoring and supervising the implementation of grant projects by

participating NGOs.

USAID/Honduras is planning a new project for FY93 that will provide financial and technical support to local and international NGOs to enhance sustained use of ecosystems, maintain biodiversity, and prevent further degradation of Honduran tropical forests. This project will be implemented through Fundación VIDA. The purpose of the technical assistance to be provided by BSP is to strengthen Fundación VIDA's capacity to effectively program and manage the Environmental Fund by assisting them in the development of priorities, evaluation criteria, technical norms, and systems and procedures for the Environmental Fund.

Drawing on the expertise of the BSP consortium, as well as other NGOs and individuals where appropriate, this institutional strengthening assistance will be carried out in the form of seminars, workshops, one-on-one training, discussion groups, and informal collegial interchange.

SIGNIFICANCE: Fundación VIDA has the potential to become the largest source of funds for environmental initiatives in Honduras over the next five years at least; therefore, their capability as an institution is of paramount importance.

This project addresses BSP's mandate to build the capacity of host-country individuals and institutions to define and develop programs for the conservation of biodiversity.

**TECHNICAL REPORTS or
PUBLICATIONS:**

OTHER OUTPUTS:

UPDATE: Project has just gotten underway within current reporting period.

REVISION DATE: 11/19/92

STATUS: New

TITLE: Costa Rica II

CA COMPONENT: Pilot Demonstration Project

TYPE OF ACTIVITY:

- PRIMARY: Environmental Impact Assessment
- SECONDARY: Sustainable Use
- MINOR: Community Development
- MINOR: Buffer Zone Management
- MINOR: Institutional Support

FUNDING: \$56,309 (USAID/Costa Rica)

START DATE: August 1992

END DATE: March 1993

PRIMARY IMPLEMENTOR: Various

PRIMARY IMPLEMENTOR TYPE: Various

OTHER IMPLEMENTOR(s): Various

OTHER IMPLEMENTOR TYPE(s): Various

COLLABORATOR(s): Various

CONTACT: BSP: Meg Symington 202-778-9727; fax 202-293-9211; USAID/Costa Rica: Enrique Barrau 506-204545; fax 506-203434 or 317476

LOCATION: Latin America, Costa Rica, Various

BIOME: Tropical Moist Forest

PURPOSE: Two separate activities are planned under this add-on. 1) BSP will provide technical assistance to Fundación Neotrópica, assisting them in the development of a proposal for follow-on funding from USAID/Costa Rica for the Fundación's BOSCOSA project. 2) BSP will provide technical assistance to USAID/Costa Rica in carrying out the required environmental assessments for the planned extension of the BOSCOSA project as well as the new Forestry Regulations for Sustainable Management Project.

DESCRIPTION: The two separate activities are: 1) BOSCOSA follow-on proposal: In June 1992, BSP carried out an evaluation of the BOSCOSA project's progress to date in achieving its stated purpose. The evaluation identified relative strengths and weaknesses of BOSCOSA's organization and methodological

approaches and provided USAID/Costa Rica with an analysis of how project implementation might be improved and how future USAID support to BOSCOA might be structured (see PD924).

Current USAID/Costa Rica support for BOSCOA ends on March 31, 1993. The Mission would like to continue to support the project, and will support BSP to assist Fundación Neotropica in thinking through their strategic objectives for the next three years, and in developing a proposal for follow-on funding.

2) Environmental Assessments: Section 533(C)(3) of the FY 91 Foreign Assistance Appropriation Act contains prohibitions on the use of A.I.D. funds for "any program, project, or activity which would result in any significant loss of tropical forests; or involve industrial timber extraction in primary tropical forest areas unless an environmental assessment: (i) identifies potential impacts on biological diversity; (ii) demonstrates that all timber extraction will be conducted according to an environmentally sound management system which maintains the ecological functions of the natural forest and minimizes impacts on biological diversity; and (iii) demonstrates that the activity will contribute to reducing deforestation."

USAID/Costa Rica has two projects planned for the first quarter of calendar year 1993 which require special environmental assessments (EAs) as described above (BOSCOA and Forestry Regulations for Sustainable Management). BSP has had experience with these specially mandated environmental assessments, and will put together a team to carry out these EAs jointly.

SIGNIFICANCE:

TECHNICAL REPORTS or

PUBLICATIONS: 1) A proposal to USAID/Costa Rica from Fundación Neotrópica for continued funding of the BOSCOA project. 2) Two environmental assessments, one for the BOSCOA project and one for the new Forestry Regulations for Sustainable Management Project. All three documents should be in final form by the end of January, 1993.

OTHER OUTPUTS:

UPDATE: The project was just getting underway by the end of the current reporting period. The EA team (Jim Tolisano, Robert Lawton and Peter Frumhoff) will be in Costa Rica December 1-19. Mike Kiernan of WWF will be in San Jose providing technical assistance to Fundación Neotrópica on their proposal November 30-December 5.

REVISION DATE: 11/24/92

STATUS: Ongoing

TITLE: Interagency Workshop on Biodiversity
Data Base for Indonesia

CA COMPONENT: Pilot Demonstration

TYPE OF ACTIVITY:
PRIMARY: Public Awareness
SECONDARY: Institutional Support

FUNDING: \$18,079 (APRE Bureau)

START DATE: November 1991

END DATE: January 1992

PRIMARY IMPLEMENTOR: The Nature Conservancy (TNC)

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s):
1. Lembaga Ilmu Pengetahuan Indonesia (LIPI)

OTHER IMPLEMENTOR TYPE(s):
1. NGO

COLLABORATOR(s):

CONTACT: BSP: Janis Alcorn/Richard Richina, 202-
778-9697, fax 202-293-9211; The Nature
Conservancy: Dennis Grossman, 703-841-
5305 fax: 703-841-1283

LOCATION: Asia, Indonesia, Jakarta

BIOME: Non-specific

PURPOSE: BSP provided funding for a three-day workshop of all interested parties to discuss existing databases and to explore optional cost-effective approaches, priority investments and sustainability of investment in relation to the proposed development of a National Biodiversity Database for Indonesia at the Lembaga Ilmu Pengetahuan Indonesia (LIPI).

DESCRIPTION: The workshop, hosted at LIPI and conducted by a team from The Nature Conservancy, brings together representatives of land-use planning and natural resource Ministries as well as from institutions that manage conservation information to discuss options for a National Biodiversity Database.

SIGNIFICANCE: The activity brings together interested parties to

provide input early in the process of designing a national biodiversity database.

TECHNICAL REPORTS or
PUBLICATIONS: Participants notebook.

OTHER OUTPUTS: Participant evaluation questionnaire and summary of comments from questionnaire.

UPDATE: Final accounting has been received and is being reviewed in preparation for closing the activity.

REVISION DATE: November 19, 1992

STATUS: Ongoing

TITLE: Kiang West National Park Plan II

CA COMPONENT: Special Project

TYPE OF ACTIVITY:
PRIMARY: Protected Areas

FUNDING: \$250,000 (USAID/The Gambia)

START DATE: August 1991

END DATE: November 1992

PRIMARY IMPLEMENTOR: BSP

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s):

OTHER IMPLEMENTOR TYPE(s):

COLLABORATOR(s):

CONTACT: BSP: Kate Newman 202-778-9524, fax 202-293-9211; AID/The Gambia: Don Drga 220-28533

LOCATION: Africa, The Gambia, Kiang West National Park

BIOME: Tropical Seasonal Woodlands and Grasslands and Wetlands/Freshwater

PURPOSE: To assist the Department of Wildlife Conservation and Management and AID/The Gambia to develop a management plan for the Kiang West National Park (KWNP) and surrounding area that includes specific conservation and development activities suitable for donor funding. The project will also initiate the formation of a National Agency for Conservation and Development; formalize KWNP management objectives for biodiversity conservation and sustainable rural development in collaboration with the Government of The Gambia (GOTG), USAID and participating villages; and augment information and develop strategies for the design and implementation of conservation and development activities consistent with KWNP management objectives.

DESCRIPTION: The area in and around the Kiang West National Park is one of the last critical habitats for wildlife in the small country of The Gambia. It is severely threatened, however, by

human-related factors such as livestock production, agriculture, fire and poaching. Although Kiang West has been a designated national park for some years, there has been no financing to protect it from invasive activity.

In 1989, GOTG requested the assistance of AID/The Gambia to assess the present ecological situation in the park and suggest measures to conserve this key national resource, as well as utilize it on a sustainable basis for the benefit of the local inhabitants and the nation as a whole. In 1990, upon the request of AID/The Gambia, BSP carried out the initial assessment of KWNP. A team of 16 international and Gambian specialists in park management, sociology, ornithology, botany, zoology, natural resource economics, conservation education, ecotourism and fisheries completed the assessment and made recommendations to USAID and GOTG for follow-on actions (see TA902).

In 1991, USAID requested that BSP continue to work in KWNP and follow through on recommendations (TA902) as Phase II of the development of the Kiang West National Park management plan.

SIGNIFICANCE: The management plan will be designed to provide the GOTG with a protected area conservation and sustainable development model that can be transferred to other protected areas throughout the country.

TECHNICAL REPORTS or

PUBLICATIONS: 1) KWNP management plan in looseleaf format to facilitate continued input and modification as new information and techniques are incorporated. 2) Final report on project activities.

OTHER OUTPUTS:

UPDATE: A multidisciplinary team was assembled to develop the Park management plan. Community participation in the planning was accomplished through several community meetings in the project area. Field research to support the plan has been conducted. A five-year plan for Kiang West National Park management and rural development has been prepared.

REVISION DATE: November 30, 1992

STATUS: Ongoing

TITLE: Linkages Between Enterprises and Conservation

CA COMPONENT: Special Project

TYPE OF ACTIVITY:
PRIMARY: Resource/Ecological Economics

FUNDING: \$56,952 (WRI and APRE Bureau)

START DATE: November 1991

END DATE: December 1992

PRIMARY IMPLEMENTOR: BSP

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s):

OTHER IMPLEMENTOR TYPE(s):

COLLABORATOR(s):

CONTACT: BSP: Janis Alcorn /Richard Richina,
202-778-9697, fax 202-293-9211; AID:
Molly Kux, 202-647-9875, fax 202-647-
7368; WRI: Walter Arensberg, 202-638-
6300, fax 202-638-0036

LOCATION: Asia, Various

BIOME: Non-Specific

PURPOSE: The activity supports analysis of current efforts to link enterprises for improving rural livelihoods with conservation of biodiversity.

DESCRIPTION: David Richards was hired to work collaboratively with BSP and USAID/Washington to provide background analysis for developing activities linking business, social science and biological conservation. He is producing an issues paper, case studies, and background information related to establishing a Biodiversity Conservation Network for Asia under the US-Asia Environmental Partnership.

SIGNIFICANCE: The activity helps to better inform environmental organizations, NGOs, aid agencies and development banks about the pitfalls and promises of the linkages between improving livelihoods and conservation of biodiversity.

TECHNICAL REPORTS or
PUBLICATIONS: Issues paper, background information on BCN, and
case studies expected.

OTHER OUTPUTS:

UPDATE: Consultant has delivered draft copy of case studies.
REVISION DATE: November 19, 1992

STATUS: Ongoing

TITLE: Profitable Environmental Protection

CA COMPONENT: Special project

TYPE OF ACTIVITY:

PRIMARY: Program/project evaluation and monitoring

SECONDARY: Community Development

MINOR: Sustainable Use

FUNDING: 90,000 (Foundation for the Peoples of the South Pacific (with funds from USAID/Suva)

START DATE: May 1992

END DATE: April 1993

PRIMARY IMPLEMENTOR: BSP

PRIMARY IMPLEMENTOR TYPE: International NGO

OTHER IMPLEMENTOR(s):

1. World Wildlife Fund

OTHER IMPLEMENTOR TYPE(s):

1. International NGO

COLLABORATOR(s):

CONTACT: BSP: Janis Alcorn, 202-778-9697, fax 202-293-9211

LOCATION: South Pacific, Various

BIOME: Non-specific

PURPOSE: BSP has been contracted to provide scientific advice for the project and assume responsibility for elements of the required scientific technical support services for the project.

DESCRIPTION: BSP, in conjunction with World Wildlife Fund's South Pacific Program, will: participate as a member of the Project Steering Group; will design and implement an on-going monitoring and evaluation program for the project; compile appropriate background and support materials for the Environmental coordinator of the project; participate in a pre-departure workshop for the Enterprise advisory and the Enterprise Technical Support Group; participate in the review of guidelines

being developed by the Enterprise Technical Support Group; participate as a member of the Project Advisory Group; recruit qualified candidates for the Environmental Coordinator/Conservation Biologist Position; and serve as a focal point for securing direction from the Scientific Support Group.

SIGNIFICANCE: PEP is an effort to demonstrate working models of small scale profitable commercial and community enterprises that enable long term conservation of biologically vital ecosystems.

This activity helps to integrate development activities with management of biodiversity in a grassroots setting and explores options for providing conservation projects with a sustainable future.

**TECHNICAL REPORTS or
PUBLICATIONS:**

OTHER OUTPUTS:

UPDATE: The PEP project has appointed and stationed an environmental coordinator and enterprise specialist in Vanuatu. In September, a meeting of the proposed steering committee for the project was held to discuss and confirm a 1993 work program for the project. The functions of the steering committee and proposed advisory committee were confirmed at this meeting. WWF's Wildlands and Human Needs Program has completed a scope of work and discussion paper about the design and training for implementation of a monitoring and evaluation program for the project.

BSP and WWF-US have supervised the selection process for the environment coordinator for the project; been involved with confirmation of staff selection for the enterprise specialist; provided advice on the make up and functioning of a technical steering committee for the project; attended a meeting of the majority of steering committee members in Vanuatu in September 1992; participated in the development and confirmation of work programs for the staff of the project; provided advice to project staff; and prepared a scope of work and discussion paper for the design and training for implementation of a monitoring and evaluation program for the PEP project.

REVISION DATE: December 2, 1992

STATUS: Ongoing

TITLE: 1990 Research Grants Competition

CA COMPONENT: Research

TYPE OF ACTIVITY: Various

FUNDING: \$613,504 (S&T/FENR)

START DATE: August 1990

END DATE: August 1993

PRIMARY IMPLEMENTOR: Various (Universities, NGOs, government institutes and ministries, museums, herbariums, etc.)

PRIMARY IMPLEMENTOR TYPE: Various

OTHER IMPLEMENTOR(s): Various

OTHER IMPLEMENTOR TYPES(s): Various

COLLABORATOR(s): Various

CONTACTS: BSP: Meg Symington 202-778-9727, fax 202-293-9211, Ilana Locker 202-778-9793, fax 202-293-9211; AID/W: Sy Sohmer, Chair, Research Review Committee 703-875-4669; fax 202-875-4394

LOCATION: Various

BIOME: Various

PURPOSE: To fund studies addressing specific research issues relevant to A.I.D.'s conservation activities worldwide.

DESCRIPTION: In August 1990, BSP initiated a small grants program to fund biodiversity-related research. A research review committee was convened following the guidelines in the Cooperative Agreement (one representative from WWF, one representative from a cooperating PVO--WRI or TNC, one representative from A.I.D. who chairs the Research Review Committee, two representatives from the academic community, and one representative from a private foundation). A request for proposals (RFP) was drafted with input from the research review committee, and distributed widely to conservation professionals, academics, and NGOs in the U.S. and developing countries. The RFP solicited proposals with an ecological, economic,

anthropological, or socio-political focus, or utilizing an interdisciplinary methodology combining two or more of these approaches. Sample research topics particularly mentioned in the RFP included: techniques to facilitate rapid assessments of biodiversity; impact of different harvesting practices on maintaining biodiversity; effectiveness of buffer zones; restoration ecology; dependence of tribal peoples; land tenure and traditional access; and impacts of macroeconomic policies on exploitation of biological diversity. The maximum award was \$15,000.

BSP received 165 proposals for research from 46 A.I.D.-assisted countries by the November 15 deadline. Over half of these (87) were from Latin America, with the rest fairly evenly divided between Asia and the Near East (41) and sub-Saharan Africa and Madagascar (36). Proposals were accepted in four languages (English, Spanish, French or Portuguese) with BSP staff and reviewers having capability in all four. The research review committee met in late January 1991 to review the proposals, and, as a result of their review, 45 proposals totaling just under \$627,000 were approved for funding. Preference was given to projects designed and implemented by scientists from A.I.D.-assisted countries and/or studies in which funding provided by BSP permitted the participation of host-country researchers in larger team projects. Priority was given to those proposals in which a host-country scientist was a principal investigator, and projects could not exceed two years in duration. Another 22 proposals were classified by the committee as acceptable, but of lower priority given the limited funds available.

Mission concurrence was sought and obtained for those proposals selected for funding by the committee, and award disbursement began in April 1991.

SIGNIFICANCE: The Research Review Committee was impressed by the generally high quality of the proposals and the demonstrated need for such small grant support to developing-country researchers.

The Cooperative Agreement calls for a small grants program that supports research relevant to A.I.D.'s conservation activities worldwide.

TECHNICAL REPORTS

or **PUBLICATIONS:** Each grantee is required to write interim and final technical reports.

OTHER OUTPUTS: Outputs of individual grants vary widely. (See individual project descriptions for more detail.) The expected product for the 1990 research grants program will be research results that may be of use to A.I.D. missions and bureaus in planning future projects, and a cadre of developing country researchers that are better-trained and more qualified to be stewards of their country's biodiversity as a result of their research.

UPDATE: About 10 of the original 44 grants have been completed, most are scheduled for completion within the next 6-8 months. Interim reports have been distributed to other BSP grantees working on similar or related projects in an attempt to increase dissemination and awareness of research results among those working in the field. BSP staff have met with various grantees during their trips to the field, and have visited several project sites.

REVISION DATE: November 23, 1992

STATUS: Ongoing
 TITLE: 1991 Research Grants Competition
 CA COMPONENT: Research
 TYPE OF ACTIVITY: Various
 FUNDING: \$500,000 (R&D/ENR)
 START DATE: August 1991
 END DATE: August 1994
 PRIMARY IMPLEMENTOR: Various
 PRIMARY IMPLEMENTOR TYPE: Various
 OTHER IMPLEMENTOR(s): Various
 OTHER IMPLEMENTOR TYPE(s): Various
 COLLABORATOR(s): Various
 CONTACT: BSP: Meg Symington, 202-778-9727, fax
 202-293-9211; Ilana Locker, 202-778-
 9793, fax 202-293-9211
 AID/W: Sy Sohmer, 703-875-4669, fax
 202-875-4394
 LOCATION: Various
 BIOME: Various

PURPOSE: To fund studies addressing specific issues relevant to USAID's conservation activities worldwide.

DESCRIPTION: On 15 August 1991, BSP released a second call for proposals to fund biodiversity-related research in USAID-assisted countries worldwide. The program will be based on last year's (see Activity RE901) with modifications as suggested by the USAID Project Implementation Advisory Committee and the Research Review Committee. Proposals are due on November 15, 1991, and grant funds will be available to successful applicants the following April.

SIGNIFICANCE: Through this activity, BSP offers funding to projects of short-term and/or in need of low-level financing. Many innovative research projects have led to long-term or creative management schemes. Thirty out of 34 of this year's grantees are from developing countries; the remaining four grants allocated the funds to host-country collaborators. By keeping

the funding level low, BSP can support a variety of innovative projects without having to rely on expatriate talent.

TECHNICAL REPORTS or

PUBLICATIONS: Outputs of individual grants will vary widely, but each grantee is required to write both interim and final technical reports.

OTHER OUTPUTS: The results of these research projects may be of use to USAID missions and bureaus in planning future projects. In addition, it is hoped that this program can contribute to the professional enhancement of these developing country researchers so that they are better-trained and more qualified to be stewards of their countrys' biodiversity.

UPDATE: All except two of the 34 grants made have been disbursed; in two cases the original proposals selected was not carried out as planned. In those cases, alternates chosen by the Research Review Committee have been selected for funding and those grants should go out before the end of the year. The first interim reports from this set of grants should begin arriving soon.

REVISION DATE: 11/19/92

BSP's RESEARCH GRANTS 1991-1992

Latin America and Caribbean

Argentina/Bolivia

Marquet, Pablo A., et. al.
University of New Mexico
Small Mammals Conservation in the Puna Area of Bolivia and
Argentina

Bolivia

Arrazola Rivero, Lic. Susana
Navarro Sanchez, Dr. Gonzalo
Herbario Forestal Nacional "Martin Cardenas"
Evaluacion de la diversidad ecologica y potencialidad del
territorio en los valles secos interandinos del dep. de
Cochabamba (Bolivia)

Brazil

Russo, Ricardo
Mendonca, Ana Lucia Furquim de
Sociedade de Defesa do Litoral Brasileiro
Levantamento Etnobiologico na Estacao Ecologica Jureia-Itatins

Chile

Stotz Uslar, Wolfgang B.
Alvarez, Sergio A. Gonzalez
Universidad Catolica del Norte
Biodiversidad y Pesca Artesanal: Manejo Experimental de Recursos
Marinos Bentonicos en la Costa del Centro-Norte de Chile

Colombia

Botero, Dr. Leonor, INVEMAR
Marshall, Dr. Michael J., Mote Marine Lab.
Rapid Assessment of Biodiversity in the Living and Dead Mangrove
Forests of the Cienaga Grande de Santa Maria, Colombia

Castro, Mauricio
Imamoto, Marcia
Fundacion Herencia Verde
Manejo de Bosques Privados y Repoblacion Forestal con Especies Nativas en la Franja Altoandina Colombiana

Reichel D., Elizabeth, et. al.
Universidad de los Andes
The Role of Indigenous Women in the Reproduction of Plant Cultivars in the Colombian Amazon: The Relation of Biodiversity with Gender Ethno-Ecology in Four Indian Resguardo Reservations

Guatemala

MacVean, Dr. Charles
Universidad del Valle de Guatemala
Identification of Nij insects and their wax: deriving a sustainable industry from biological resources used by the Maya

Skinner, Juan Cristobal
Margoluis, Richard
Defensores de la Naturaleza
La interrelacion entre conservacion, desarrollo de la comunidad, y calidad de vida humana: un analisis de la poblacion indigena Kekchi en la Reserva de la Biosfera Sierra de las Minas

Lesser Antilles - St. Kitts

Horwith, Dr. Bruce, IRF
Cramer-Armony, Jackie, St. Christopher Heritage Society
Promoting the Development of a National Parks and Protected Areas system: An NGO led research program to protect the biological heritage of St. Kitts

Mexico

Hernandez, Hector M.
Instituto de Biologia, UNAM
Patrones de Distribucion Geografica de Cactaceas Amenazadas del Desierto Chihuahuense

Negreros, Dr. Patricia
INIFAP & Green Cross Certification Company
A research project to study practices for sustainable silviculture at the "Plan Piloto Forestal" in Quintana Roo, Mexico

Panama

Ibanez, Roberto
ANCON & Smithsonian Tropical Research Institute
The Implementation of a Long-Term Monitoring Project of Amphibian Populations in Panama

Peru

Alban Castillo, Joaquina A.
Museo de Historia Natural

La Mujer y Las Plantas Silvestres en la Comunidad Aguaruna
Huambisa del Rio Maranon

Ascorra, Cesar F.

Wilson, Don E.

Proyecto Peruano de Primatologia, IVITA

Manejo Sostenido del Bosque Tropical: El Rol de la Interaccion
Quiroptero - Planta

Africa

Burundi

Anderson, Dean

Jane Goodall Institute

The Kibira Chimpanzee Project

Cameroon

Loung, Jean-Felix

Ngima Mawoung, Godefroy

Ministere de l'Enseignement Superieur, de l'Informatique et
de la Recherche Scientifique

Consequens de l'exploitation forestiere industrielle sur
l'ecosysteme de foret dense equatoriale et sur le mode de vie des
populations indigenes: exemple du secteur Nkoumbala-Mboule

Madagascar

Shyamsundar, Priya

Kramer, Randall A.

Duke University

The Economic Implications of Biodiversity Protection in
Madagascar

Rwanda

Kanyamibwa, Dr. Samuel

Projet Conservation de la Foret de Nyungwe

Potentialites et Facteurs Affectant la Diversite Biologique dans
les Forets de Montagne du Rwanda

Tanzania

Mvena, Z.S.K.
Sokoine University of Agriculture
Social Constraints in Community Forestry: A Case Study of Iringa Rural District

Uganda

Lwanga, Jeremiah S.
Struhsaker, Thomas T.
University of Florida
The role of seed predation and herbivory on forest regeneration and community composition in the Kibale Forest Reserve, Uganda

Zambia

Kaweche, Mr. G.B.
Lewis, Dr. D.M.
c/o Nyamaluma Training and Research Center
Support for Land Use Planning of Zambia's Wildlands National Parks and Wildlife Services of Zambia

Asia/Pacific

Bangladesh

Sarker, Dr. Sohrab Uddin
Department of Zoology, University of Dhaka
Conservation of Faunal Resources of Hail haor (Wetland) and their Utilization by Local Communities

India

Mistry, Shahroukh
University of New Mexico
Ecology of Indian Megachiropteran Bats

Raju, G.
VIKSAT, Nehru Foundation for Development
Development of people's institutions for participation in management of forest resources

Indonesia

Widjaja, Dr. Elizabeth, Bogor Herbarium
Forsyth, Dr. Adrian, Conservation International
Asmat Ethnobotany

Papua New Guinea

Mercer, Christopher W.L.
PNG University of Technology
Maintaining Biodiversity through the Establishment of a Wildlife
Management Area in Madang Province, Papua New Guinea

Philippines

Arano, Dr. Roberto R.
Aquino, Romero
Isabela State University
Non-Timber Forest Products and Biodiversity in the Palanan
Wilderness Area

Sri Lanka

Jayatilaka, Dr. M.W.A.P., et. al.
Forest Department, University of Peradeniya
Evaluation of Forest Use Methods by Peripheral Village
Communities in the Knuckles Range

Pathirana, R.
Weerasinghe, K.D.N.
University of Ruhuna
A Phytosociological Study of the Angiosperms in Lowland Wet
Tropical Forests of Sri Lanka

Weerakkody, Dr. Upali
Spatial and Temporal Diversity of Coral and Algal Communities of
SW Sri Lanka with Special Emphasis on Destructive Human
Activities

Thailand

Srikrachang, Mattana, et. al.
Wildlife Conservation Division, Royal Forest Department
Ecology and Numbers of the Asian Elephants in Huai Kha Khaeng
Wildlife Sanctuary, Thailand

Eastern Europe

Hungary

Kovacs-Lang, Dr. Edit, et. al.
Hungarian Academy of Sciences
Exploratory Biodiversity Studies in the Former "Iron Curtain"
Zone on the Western Border of Hungary

Grant Number: I7578
Title: Small Mammals Conservation in the Puna Area of Bolivia and Argentina
Amount: \$13,205
Source of Funds: R&D/ENR
Previous Funding: None
Anticipated Future Funding: None
Administrator: Ilana Locker
Project Officer: Margaret Symington
Commencement Date: August, 1992
Expiration Date: March, 1994
Taxa: Rodents
Biome: Temperate Forest & Grasslands
Reviewed by: BSP/AID Research Review Committee
Conservation Methods: 100% Ecological Research & Monitoring

Project Description:

The Central Andes, extending from Cajamarca, Peru to Antofogasta in Chile and Catamarca in Argentina, passing through the highlands of Bolivia, are characterized by a preponderance of high plateaus above 3,500 meters called "Puna" or "Altiplano." This area has been subjected to a heavy human influence dating back 12,000 years and is currently the most populated area of the Andes.

The Puna region is also known for its rich and diverse biota. This is especially true with regard to Sigmodontine rodents, for which 35 species have been recorded, 20 being endemic. However, this fauna is practically unknown in terms of the basic ecological traits of the species. Given the threat of a burgeoning human impact on this ecosystem, a comprehensive study of the conservation status of this fauna is required.

The objectives, therefore, of this project are:

- 1) To perform a large scale survey of rodent species in localities within the Bolivian and Argentine Puna with an emphasis on the characterization of the fauna found in the area's national parks and reserves;

2) To characterize species with regard to their habitat requirements, conservation status and conservation priorities;

3) To identify potential areas of special value for the preservation of biodiversity.

The principal investigator, a Ph.D. graduate student at the University of New Mexico, has been doing research on the vertebrates of the Puna area in northern Chile, with an emphasis on mammals, since 1985. Mr. Marquet is a member of the IUCN rodent specialist group and he hopes that the information obtained in this study will provide the basis for the formulation of recommendations for conservation action.

Project Executant: Pablo A. Marquet
 Department of Biology
 University of New Mexico
 Albuquerque, NM 87131

Grant Number: I7563

Title: Bolivia - Evaluación de la diversidad ecológica y potencialidad del territorio en los valles secos interandinos del dep. de Cochabamba

Amount: \$14,260

Source of Funds: R&D/ENR

Previous Funding: None

Anticipated Future Funding: None

Administrator: Ilana Locker

Project Officer: Margaret Symington

Commencement Date: May, 1992

Expiration Date: May, 1994

Taxa: Non-Specific

Biome: Temperate Forest & Grasslands

Reviewed by: BSP/AID Research Review Committee

Conservation Methods: 90% Ecological Research & Monitoring;
10% Protected Area Establishment

Project Description:

Although Bolivia is well-known for its mining industries, relatively little is known about its resources with respect to biological diversity. This is especially true in the dry inter-Andean valleys of the departments of Cochabamba, Chuquisaca, Potosí, Tarija and Santa Cruz.

In the hopes of reducing this dearth of knowledge about these areas, the investigators will, over the next two years, inventory the biodiversity of, and identify the existing ecosystems in, the semi-arid inter-Andean valleys of the Mizque and Campero provinces in the department of Cochabamba, paying special attention to indicator species and to the wild species used by the local people.

In addition, using a methodology which integrates research and evaluation, the investigators hope to develop a chart of the region with different ecological units and their potential for use, as well as determine the impact of human activity on this area. The researchers also expect to recommend that certain

zones be classified as protected. Currently, this ecosystem is not at all represented within Bolivia's network of protected areas.

At the conclusion of the two years, the researchers hope to develop and recommend sound management practices that will ensure the viability of future development of this semi-arid zone of high biological interest, which is currently threatened by desertification, erosion and the accelerated loss of non-renewable resources.

The project will be carried out by staff and associates of the National Forest Herbarium "Martin Cardenas" of Cochabamba. This Herbarium is part of the Faculty of Science and Technology of the Universidad Mayor de San Simón.

Project Executant: Susana Arrázola Rivero
Dr. Gonzalo Navarro Sanchez
Herbario Forestal Nacional "Martín
Cárdenas"
Centro de Investigaciones Botánicas y
Ecológicas
Casilla 538
Cochabamba, Bolivia

Grant Number: I7587
Title: Brazil - Ethnobiological Survey in the Jureia-Itatins Ecological Station
Amount: \$15,000
Source of Funds: R&D/ENR
Previous Funding: None
Anticipated Future Funding: None
Administrator: Ilana Locker
Project Officer: Margaret Symington
Commencement Date: May, 1992
Expiration Date: May, 1993
Taxa: Non-Specific
Biome: Tropical Moist Forest
Reviewed by: BSP/AID Research Review Committee
Conservation Methods: 100% Ecological Research & Monitoring

Project Description:

The Jureia-Itatins Ecological Station, covering an area of 79,830 hectares, was created in 1986 for the purpose of studying the important ecological region of the Atlantic Coastal Forest. This area, located on the southern coast of the Brazilian state of Sa-o Paulo, is unique not only because of its rich biological diversity, but also because of the "Caicara" communities living within it. Although this mestizo population of indigenous peoples, Portuguese colonists and black slaves, has been living in the area for generations, their knowledge of the flora and fauna of the area has yet to be studied extensively.

The proponents of this project have two main objectives. They want to: 1) conduct an inventory of the biodiversity contained within the Jureia-Itatins Ecological Station, and, 2) gather and help preserve the knowledge of resource management methods held by the existing "Caicara" communities.

The importance of researching the knowledge of these populations is critical, not only from an anthropological point of view, but also in order to evaluate the relationship of cultural diversity

and biology/ecology. This research will also provide an important contribution to the management plan of the Jureia-Itatins Ecological Station.

The "Sociedade de Defesa do Litoral Brasileiro" has been working to preserve the history, culture and ecology of coastal Brazil since 1978.

Project Executant:

Ricardo Russo
Sociedade de Defesa do Litoral
Brasileiro
Rua Mourato Coelho, no. 1404
Vila Madalena
Sao Paulo, Brazil
CEP: 05417

Grant Number: I7592

Title: Chile - Biodiversity and Artisanal Fishing: Experimental Management of Benthic Marine Resources on the Coast of Central Northern Chile

Amount: \$14,981

Source of Funds: R&D/ENR

Previous Funding: None

Anticipated Future Funding: None

Administrator: Ilana Locker

Project Officer: Margaret Symington

Commencement Date: May, 1992

Expiration Date: June, 1994

Taxa: Marine Invertebrates/Corals

Biome: Wetlands/Coastal

Reviewed by: BSP/AID Research Review Committee

Conservation Methods: 40% Education;
40% Ecological Research & Monitoring;
20% Sustainable Use

Project Description:

Around the world, the littoral marine biodiversity is strongly influenced by the activities of artisanal fishermen. In Chile, even though many of the fish resources exhibit a high level of endemism and play a significant role in the structure of marine communities, there are no effective strategies in existence designed to conserve these resources. At present, the maintenance of these species depends principally on the awareness that the fishermen have of their responsibility towards their environment.

The proponents of this project hope that, by providing basic information to the fishing communities about the management of benthic environments and, through active collaboration with these communities, they will be able to have a positive influence on the interaction between the fishermen of north-central Chile and the marine environment from which they derive their livelihoods.

The researchers plan first to evaluate, in coordination with the fishermen, the status of the marine resources (including

distribution, population structure and densities, etc.) of a specific inlet, Puerta Aldea. Management plans will then be designed, incorporating the practical experience of the fishermen, and based on the findings of the first stage of the project, as well as on information gained from the subject literature. These management plans will be evaluated as the project progresses.

By following this plan of action, the investigators hope to gather the practical knowledge necessary to implement sustainable marine resource management strategies. Through the teaching and collaboration, the researchers hope to create within the fishing community an awareness of the responsibility they have to their given environment and the resources they extract. If successful, this project could serve as a valuable model for the development of durable management plans which would ensure the conservation of littoral marine biodiversity throughout Chile.

The principal investigator has been a professor of marine biology at the Universidad Catolica del Norte in Chile since 1981.

Project Executant: Dr. Wolfgang B. Stotz Uslar
 Universidad Catolica del Norte
 Facultad de Ciencias del Mar
 Departamento de Biologia Marina
 Casilla 117
 Coquimbo, Chile

Grant Number: I7565

Title: Colombia - Rapid assessment of biodiversity in the living and dead mangrove forests of the Ciénaga Grande de Santa Marta, Colombia

Amount: \$14,990

Source of Funds: R&D/ENR

Previous Funding: None

Anticipated Future Funding: None

Administrator: Ilana Locker

Project Officer: Margaret Symington

Commencement Date: July, 1992

Expiration Date: December, 1992

Taxa: Non-Specific

Biome: Wetlands/Coastal

Reviewed by: BSP/AID Research Review Committee

Conservation Methods: 100% Ecological Research & Monitoring

Project Description:

The Ciénaga Grande de Santa Marta is a large (138,000 hectares) coastal lagoon system located on the Caribbean coast of Colombia. The area, because of its once extensive mangrove forests, was a major feeding and nesting ground for many resident birds and was a stopping point for migratory birds from North America. In 1956, construction began on a coastal causeway which, after its completion, disrupted most of the natural flow between the sea and the Ciénaga. Today, a large portion of the mangrove forest that once provided food and shelter for birds is dead.

The purpose of this project is to provide an updated assessment of the impacts on biodiversity caused by the coastal causeway and the agricultural flood control structures built in the 1970s by local farmers. The project includes five components: 1) measurement of forest structure; 2) a quantitative survey of the fauna and flora on mangrove prop roots; 3) a quantitative survey of benthic fauna; 4) a quantitative survey of mangrove-associated fish communities; and 5) bird censuses. These data will be

incorporated into a quantitative description of the impact of the loss of mangrove forest on marine biodiversity within the Ciénaga Grande de Santa Marta.

The work will be conducted within five subenvironments so that statistical comparisons of each of these components can be made between impacted and unimpacted areas. This will allow the researchers to define the ecological consequences of the mangrove loss in terms that will be easily understood by Colombian governmental authorities and funding agencies. This study will serve as a baseline report for pre- and post-restoration attempt comparisons.

It is hoped that it will be possible to involve local governments, citizen groups and university programs in the planning and implementation of this project in order to demonstrate that the loss of the mangroves has had an adverse impact on the lives of local residents because of a large reduction in biodiversity levels.

INVEMAR, a Colombian government institution, is concerned about the problems of the Ciénaga and has produced several studies describing the general conditions within the area. All of the scientists associated with this project have had experience studying both pristine and disturbed tropical and subtropical marine environments and have worked on the problems of the Ciénaga Grande for many years.

Project Executant:

Dr. Leonor Botero
Instituto de Investigaciones Marinas de
Punta de Betin (INVEMAR)
Apartado Aereo 1016
Santa Marta, Colombia

Grant Number: I7566
Title: Colombia - Manejo de Bosques Privados y
Replantación Forestal en la
Franja Altoandina Colombiana
Amount: \$15,015
Source of Funds: R&D/ENR
Previous Funding: None
Anticipated Future
Funding: None
Administrator: Ilana Locker
Project Officer: Margaret Symington
Commencement Date: May, 1992
Expiration Date: May, 1993
Taxa: Non-Specific
Biome: Tropical Moist Forest
Reviewed by: BSP/AID Research Review Committee
Conservation Methods: 20% Ecological Research & Monitoring;
60% Sustainable Use; 20% Public Policy

Project Description:

Human settlement has long occurred in the Andean region of Colombia and today, 70% of the country's population lives in this area. However, the abundant natural resources, which once drew people to the region, are now being threatened by this increased population.

In order to ensure the conservation of biodiversity in the remnant high Andean forests, the quality of life of the local communities must improve. The proponents of this proposal believe this can, and must, be achieved through the sustainable development of the region - providing local people with various opportunities to conserve their resources. The goals of this project include the promotion of: reforestation programs; forestry research; environmental education; training; the application of appropriate technology; and an investigation into various legal mechanisms which would support private conservation action in the Upper Andean forests.

Specifically, the researchers plan to:

- 1) conduct inventories of privately-held and public forest fragments;
- 2) identify and collect the seeds of native tree species from the Upper Andean belt and then conduct a massive propagation effort for these species;
- 3) conduct experiments on the natural regeneration of forests, the enrichment of recovering forests, and the planting of species used for firewood and foraging; and
- 4) map the present vegetation of the upper basin of the Quindio River.

In addition, the researchers believe that the privately-owned forest fragments would more likely be conserved if the land owners could realize a benefit from the environmental goods they provide to nearby urban centers. To this end, the investigators will try to correlate the impact the remnant forests have on the Quindio River Basin to the benefits received by the urban centers downriver. The investigators will then propose models by which these owners would receive payment for the waters used by the urban centers but generated within the forested lands.

Most reforestation policy focuses on introduced species. This project, however, would provide insights on managing natural regeneration, remnant forests and native species. It would complement a WWF funded project ("Proyecto Integral para la Conservación de la Biodiversidad, Educación Ambiental y el Desarrollo Sostenible de la Cuenca del Alto Quindío,") but goes way beyond this particular site to a range of important watersheds in the central range of the Andes. This project is noteworthy because of its potential for conservation, broad application and replication.

The Fundación Herencia Verde has been working in the area for many years and has built an excellent reputation because of its management capabilities and dedicated and qualified staff.

Project Executant: Mauricio Castro
 Marcia Imamoto
 Fundación Herencia Verde
 Calle 4 Oeste #3A32 El Peñón
 A.A. 32802
 Cali, Colombia

Grant Number: I7586

Title: Colombia - The Role of Indigenous Women in the Reproduction of Plant Cultivars in the Colombian Amazon: The Relation of Biodiversity with Gender Ethno-Ecology in Four Indian Resguardo Reservations

Amount: \$14,988

Source of Funds: R&D/ENR

Previous Funding: None

Anticipated Future Funding: None

Administrator: Ilana Locker

Project Officer: Margaret Symington

Commencement Date: April, 1992

Expiration Date: September, 1993

Taxa: Plants

Biome: Tropical Moist Forest

Reviewed by: BSP/AID Research Review Committee

Conservation Methods: 100% Ecological Research & Monitoring

Project Description:

Research on the role of indigenous women in the reproduction or enhancement of biodiversity in the Colombian Amazon rainforests is practically non-existent. And yet, as owners of inherited seeds and tubers, keepers of gardens, and gatherers in their jungle habitats, indigenous women are key custodians to dozens of plant species.

The proponents of this project feel that the role of indigenous women deserves further study. Specifically, the researchers hope to:

- 1) analyse the correlations between gender and biodiversity conservation in three indigenous cultures in the Colombian Amazon;
- 2) investigate the role of indigenous women as transmitters and inheritors of certain plants and plant knowledge;
- 3) diagnose the impact of non-Indian forces on indigenous control

of local biodiversity.

The investigators will conduct their research using a participatory methodology among the Guayabero, Yukuna, Tanimuka, and Siona Indians.

The body of ecological and socio-cultural knowledge that indigenous women hold is invaluable not only for their own communities, but also for the global community. There may be lessons on cultural strategies for the conservation of biodiversity, on strategic utilization of plants, and on the appropriate valuation of the role of women in conserving biodiversity.

The project will be conducted by three Colombian women anthropologists who have extensive experience working with the three Amerindian groups mentioned above.

Project Executant:

Dr. Elizabeth Reichel
Universidad de los Andes
Departamento de Antropologia
Nucleo de Estudios Amazonicos (NEAM)
A.A. 4976
Bogota, Colombia

Grant Number: I7577

Title: Guatemala - Identification of Nij Insects and their Wax: Deriving a Sustainable Industry from Biological Resources Used by the Maya

Amount: \$14,433

Source of Funds: R&D/ENR

Previous Funding: None

Anticipated Future Funding: None

Administrator: Ilana Locker

Project Officer: Margaret Symington

Commencement Date: May 1, 1992

Expiration Date: May 31, 1994

Taxa: Insects

Biome: Tropical Moist Forest

Reviewed by: BSP/AID Research Review Committee

Conservation Methods: 50% Ecological Research & Monitoring;
50% Sustainable Use

Project Description:

Scale insects in the genus Llaveia (Homoptera: Margarodidae) produce within their bodies a wax that has been used as a decorative finish and chemical preservative for wood and clay by Guatemalan Maya Indians since at least the early 16th century. This wax has been used on eating utensils for centuries, with no toxic or undesirable effects. The wax finish has been described as very durable and repeated washing in warm water does not remove the luster.

Despite the use of the wax, its chemical nature has not been previously investigated. Similarly, neither the diversity nor the abundance of insects in the genus Llaveia has been documented. The research proposed, an investigation into the biosystematics and chemistry of Llaveia, is a pioneering effort in "chemical prospecting" with the goal of developing economically important compounds (with structural or protective functions, in this case) of tropical biological origin. This process has the potential to be extremely valuable in justifying environmental protection for tropical species and their habitats.

The researchers will collect data on insect and host plant diversity and abundance in Guatemala and adjacent regions of Mexico, Honduras and El Salvador in order to determine the feasibility of establishing insect cultures which could supply expanded artisan and industrial markets, thus providing a significant and sustainable source of income for native communities. The investigators will isolate and chemically identify the wax (or waxes) produced by Llaveia insects, and then consult with experts in the commercial wax industry to determine its potential applications.

This study will be conducted at the Universidad del Valle de Guatemala by local scientists working in collaboration with an expert in scale-insect systematics and an expert in insect biochemistry from two U.S. institutions. Charles MacVean is an economic entomologist who is familiar with the insects of Guatemala, their host plant ecology and their distribution.

Project Executant: Dr. Charles MacVean
 Universidad del Valle (M-187)
 1705 N.W. 79th. Avenue
 Miami, Florida 33126

Grant Number: I7590

Title: Guatemala - The Interrelationship
Between Conservation, Community
Development, and Human Quality of Life:
A Needs Assessment of the Kekchi
Indigenous Populations of the Sierra de
la Minas Biosphere Reserve of Guatemala

Amount: \$14,100

Source of Funds: R&D/ENR

Previous Funding: None

Anticipated Future
Funding: None

Administrator: Ilana Locker

Project Officer: Margaret Symington

Commencement Date: May, 1992

Expiration Date: July, 1993

Taxa: Non-Specific

Biome: Tropical Moist Forest

Reviewed by: BSP/AID Research Review Committee

Conservation Methods: 60% Ecological Research & Monitoring;
40% Protected Area Management

Project Description:

The Sierra de la Minas Biosphere Reserve, which contains more than 70% of the species found in Guatemala and Belize, is one of the most biodiverse regions of Latin America. Until recently, it remained virtually isolated and forgotten because of the difficulty in penetrating its thick tropical vegetation and rugged mountains. However, as human population pressure expands, there is increased pressure to exploit the abundant natural resources which lie within the boundaries of the reserve. If these resources are not utilized in a wise and sustainable manner, the future of the reserve could be in serious jeopardy.

The reserve is inhabited by the Kekchi, indigenous people who have lived in the region for centuries. The Kekchi possess an enormous wealth of knowledge of the reserve's natural resources that has yet to be adequately studied. The proponents of the project hope to make up for this lack of information by researching the knowledge, attitudes and practices of the Kekchi with regard to natural resource conservation and use. They also

plan to investigate the utilization by the Kekchi of wild, semi-domesticated and domesticated species of plants and animals for food, economic, medicinal and cultural purposes. Finally, this study will examine the relationship between the small-scale exploitation of natural resources for commercial gains and human quality of life as measured through indicators of health such as nutrition, morbidity and mortality.

Defensores de la Naturaleza, a local non-governmental organization involved in the project, plans to use the information gathered to:

- 1) identify and analyze more thoroughly the needs and priorities articulated by the residents of the Reserve with respect to future projects implemented by Defensores;
- 2) plan and implement an environmental education program through different media, especially radio; and
- 3) design an appropriate and effective conflict resolution strategy for all parties and interest groups which will be involved in the use of the Reserve's natural resources.

It is hoped that these efforts will ensure the health and future of the biodiversity found within Sierra de las Minas.

Defensores de la Naturaleza has been commissioned by the government of Guatemala to plan and implement the conservation and development of the Sierra de las Minas Biosphere Reserve. Defensores has worked extensively with WWF and The Nature Conservancy for the protection of this reserve.

Project Executant: Juan Cristobal Skinner
 Defensores de la Naturaleza
 Edificio La Cúpola
 7a Avenida 13 Calle, Zona 9
 Guatemala, Guatemala

Grant Number: I7569

Title: St. Kitts - Promoting the development of a National Parks and Protected Areas System: An NGO-led research program to protect the biological heritage of St. Kitts

Amount: \$15,000

Source of Funds: R&D/ENR

Previous Funding: None

Anticipated Future Funding: None

Administrator: Ilana Locker

Project Officer: Margaret Symington

Commencement Date: April, 1992

Expiration Date: June, 1993

Taxa: Non-Specific

Biome: Islands

Reviewed by: BSP/AID Research Review Committee

Conservation Methods: 30% Institutional Support;
30% Ecological Research & Monitoring;
10% Protected Area Establishment;
30% Public Awareness

Project Description:

For its size, the Eastern Caribbean supports quite a diverse flora and fauna and the island of St. Kitts is no exception. St. Kitts has also been fortunate in that several undeveloped areas furnished a de facto zone of modest protection for most important wildlife on the island. These areas have, until recently, functioned as an unfunded, unofficial, unnamed and mostly unvisited wildlife protection zone.

However, one of these areas, the Southeast Peninsula, has just been opened by a new highway, and a comparable road is planned across the mountain in the mainland. Development of the Peninsula has already started and, unfortunately, it is not progressing with adequate regard for the biological value of the area.

This proposal, submitted by the St. Christopher Heritage Society and the Island Resources Foundation (IRF), would use local experts and skilled amateurs, assisted by leading researchers concerned with the biology and ecology of the West Indies, to update and expand the base of environmental information about the island. Research sites would include both relatively undisturbed, as well as more disturbed areas of representative habitats. Specifically, the program would:

- 1) Develop the environmental capacity of the St. Christopher Heritage Society so that the Society could assume the lead role in ensuring that biodiversity concerns become part of the planning process in the expansion of the national parks and protected areas system.
- 2) Upgrade the environmental information base for the country by:
 - i) compiling baseline data on the flora and fauna of selected sites; ii) establishing a monitoring system for these areas, as well as for other high priority species; and iii) developing the Society's environmental reference collection and computerized database to store and manage information on the biological resources of St. Kitts.
- 3) Raise public awareness about the value of the country's biological resources through activities such as field trips, preparation of fact sheets on priority sites and species, and media releases.

The data generated from this project would be used in attempts to address policy-level decisions which impinge on conservation.

The St. Christopher Heritage Society was established in July 1989, with the mandate to safeguard and preserve the environmental, historical and cultural heritage of St. Kitts. The Island Resources Foundation is an A.I.D.-registered private voluntary organization that, since 1972, has carried out development planning and natural resources management programs in small tropical islands, primarily in the Eastern Caribbean.

Project Executant:

Dr. Bruce Horwith, Director
IRF NGO Instit. Develop. Program
c/o Antigua-Barbuda Museum
P.O. Box 103
St. John's, Antigua, West Indies
or
Mrs. Jackie Cramer-Armony
President
St. Christopher Heritage Society
c/o P.O. Box 338
Basseterre, St. Kitts

Grant Number: I7568
Title: Mexico - Patrones de distribución geográfica de cactáceas amenazadas del Desierto Chihuahuense
Amount: \$15,000
Source of Funds: R&D/ENR
Previous Funding: None
Anticipated Future Funding: None
Administrator: Ilana Locker
Project Officer: Margaret Symington
Commencement Date: April 1, 1992
Expiration Date: March, 1993
Taxa: Plants
Biome: Arid Lands
Reviewed by: BSP/AID Research Review Committee
Conservation Methods: 100% Ecological Research & Monitoring

Project Description:

The cactaceae family is a group of plants with enormous ecological importance and great economic potential. In the American continent, Mexico, especially in its arid and semi-arid zones, is the country with the highest concentration of genera and species of this family, most of which are endemic.

Although a large number of cactaceae species are listed by CITES and IUCN as rare, threatened or in danger of extinction, these species continue to be threatened by habitat conversion for agriculture and illegal harvesting practices.

This situation makes it imperative to implement actions for conservation, preferably of populations in their natural environment. However, in order for any in situ conservation attempts to be effective, they must be based on a profound knowledge of the geographic distribution of the cactaceae. Unfortunately, at this point in time, the level of knowledge of the biogeography of these plants is incipient and scattered.

The objectives of this study, therefore, are to: 1) determine the major areas of concentration of threatened cactaceae species in

the Chihuahuan desert and, 2) develop an integrated map, identifying the species' areas of distribution. The researchers will also study the geologic history, climate, vegetation types, and soil conditions, etc. of the area and will try to determine if there is any correlation between these variables and the concentration of the cactaceae.

The investigators also hope to establish a data bank on the threatened cactaceae of the Chihuahuan desert. This data bank will include information on the need for conservation, as well as the taxonomy and geography of the species in question.

The results of this study will be publicized in various scientific journals. However, the actual locations of the analyzed species will remain confidential and will not be included in any articles. It is hoped that these results will serve as a catalyst for the implementation of concrete steps leading to the conservation of this important plant family.

The principal investigator is a Mexican botanist who is currently working at the Institute of Biology, an institute known for its high standards of research, at the National University of Mexico.

Project Executant:

Dr. Héctor M. Hernández
Instituto de Biología
Universidad Nacional Autónoma de México
Apartado Postal 70-367
Deleg. Coyoacán
04510, México, D.F.

Grant Number: I7582

Title: Mexico - A Research Project to Study Practices for Sustainable Silviculture at the "Plan Piloto Forestal" in Quintana Roo, Mexico

Amount: \$14,950

Source of Funds: R&D/ENR

Previous Funding: None

Anticipated Future Funding: None

Administrator: Ilana Locker

Project Officer: Margaret Symington

Commencement Date: July, 1992

Expiration Date: November, 1993

Taxa: Plants

Biome: Tropical Seasonal Woodlands & Grasslands

Reviewed by: BSP/AID Research Review Committee

Conservation Methods: 100% Sustainable Use

Project Description:

Ninety percent of the state of Quintana Roo, located on the eastern portion of Mexico's Yucatan peninsula, was once covered with forest. Today, only about 30 percent of the state remains forested. Mahogany occurs in the natural forest and, until recently, had been the most important commercial timber tree in the area. The harvesting, processing and sale of mahogany continue to form an important element in the economy of central and southern Quintana Roo. However, markets are now beginning to open up for other tree species, in part because the amount of mahogany has declined. Now, some 24 species in addition to mahogany appear to have commercial potential.

Although the people of Quintana Roo have extracted forest products for generations, only recently have they begun to practice forest management. In 1983, the Mexican government, recognizing that forestry was the most appropriate sustainable use of land in many areas of Quintana Roo, initiated a model community project called "Plan Piloto Forestal." The project began with ten communities whose lands comprised an area of 125,000 hectares. Today the project has grown to include 43

communities with total land holdings of 362,000 hectares. About 85 percent of forest production in Quintana Roo comes from the communities in the project. However, these communities realize that future forest industries depend on expanding the number of species entering the market and also on balancing extraction with natural replacement of the forest through regeneration and growth. Therefore, they and the government have embraced sustainable forest management.

The proponents of this project believe that the best way to produce mahogany on a sustained basis is by way of natural forest management that maintains biodiversity and operates with a broad group of commercial species. The research proposed here will produce information that will help test the validity of that belief.

Specifically, the objectives of this project are to:

- 1) determine the effects of logging on regeneration and stand composition;
- 2) compare regeneration and stand composition on logged sites with those of unlogged sites;
- 3) accumulate data for optimum growth and regeneration which can be used to guide forest management decisions while simultaneously minimizing adverse effects on the biodiversity within the forest;
- 4) predict long-term effects of current forest management practices on biodiversity in managed forests; and
- 5) strengthen forest management capacity in the Plan Piloto Forestal by incorporating research results directly into forest management practices.

Project Executant: Green Cross Certification Company
1611 Telegraph Avenue, Suite 1111
Oakland, CA 94612

Attn: Debbie Hammel

Grant Number: I7570

Title: The Implementation of a Long-Term
Monitoring Project of Amphibian
Populations in Panama

Amount: \$15,000

Source of Funds: R&D/ENR

Previous Funding: None

Anticipated Future
Funding: None

Administrator: Ilana Locker

Project Officer: Margaret Symington

Commencement Date: May 1, 1992

Expiration Date: June 30, 1993

Taxa: Amphibian

Biome: Tropical Moist Forest

Reviewed by: BSP/AID Research Review Committee

Conservation Methods: 100% Ecological Research & Monitoring

Project Description:

Zoologists have recently recognized that amphibian populations are declining in several places around the world. Much of the decline can be attributed to obvious modification or destruction of habitat. However, the decline of amphibian populations has been observed even in well protected areas, suggesting that more subtle factors are involved.

In order to find out how amphibians are faring in Panama, the proponents of this project plan to start a coordinated amphibian monitoring program at five sites around the country. The researchers hope to find out: 1) whether the amphibian populations are declining in Panama; 2) whether some species are more affected than others because of factors such as altitude or habitat; and 3) whether the changes in population can be attributed to variables of the physical environment, such as temperature or rainfall. In addition, the monitoring program will provide valuable information about the breeding phenology, diversity and population dynamics of tropical amphibians at two elevations. This is important because the kinds and magnitudes of population fluctuations in tropical forest organisms are still

poorly understood.

ANCON, The National Association for the Conservation of Nature, is a private, non-profit organization, founded on August 15, 1985 by a group of prominent Panamanian scientists, business and community leaders. ANCON works with other public and private Panamanian organizations to conserve and protect Panama's natural resources and biodiversity for present and future generations.

Project Executant: Roberto Ibañez
c/o ANCON
Apartado Postal 1387
Panama 1
Republic of Panama

244

Grant Number: I7560

Title: Peru - La Mujer a las Plantas Silvestres
en la Comunidad Cocama de los Rios
Marañon y Samiria (Nor-Este del Perú)

Amount: \$15,100

Source of Funds: R&D/ENR

Previous Funding: None

Anticipated Future
Funding: None

Administrator: Ilana Locker

Project Officer: Margaret Symington

Commencement Date: May 1, 1992

Expiration Date: April 31, 1993

Taxa: Plants

Biome: Tropical Moist Forest

Reviewed by: BSP/AID Research Review Committee

Conservation Methods: 75% Ecological Research & Monitoring;
25% Sustainable Use

Project Description:

The purpose of this project is to conduct ethnobotanical research in the Cocama indigenous community of Peru, specifically with regard to the daily activities of women. The Cocama community lives in the Loreto Province in northeast Peru, between the Marañon and Samiria rivers.

The major goals of this project are to: 1) retrieve the knowledge that women (especially older women) possess about the use of plant resources, paying special attention to medicinal plants, plants used in the regulation of fertility, and plants used to make crafts; and, 2) evaluate the traditional methods used by the community to achieve sustainable harvests.

The researcher plans to visit the area three times in 12 months, each time for 25 days. While at the sites, she will gather information, particularly from the women of the community, on the uses they attribute to each plant, the methods by which they cultivate such plants, and the plants' seasonality and availability. She will also ask the community for their ideas on how to rationally use these resources so as to ensure their

conservation. The samples collected will be preserved, catalogued and identified, using standard botanical techniques, by the researcher and other staff at the Herbarium at the Natural History Museum.

It is important that this work be undertaken now, before this ethnobotanical knowledge, acquired over generations, disappears as the Cocama community experiences greater cultural disintegration and the plants within the high-altitude tropical forest become more threatened. The researcher, Joaquina A. Alban Castillo, a Peruvian botanist with ten years of experience, is the head of the ethnobotany department at the Museum of Natural History in Lima.

Project Executant: Joaquina A. Alban Castillo
 Museo de Historia Natural
 Universidad Nacional Mayor de San Marcos
 Av. Arenales 1256
 Lince., Apart. 140434
 Lima 14, Peru

Grant Number: I7564
Title: Peru - Manejo Sostenido del Bosque Tropical: El Rol de la Interacción Quiroptero - Planta
Amount: \$15,000
Source of Funds: R&D/ENR
Previous Funding: None
Anticipated Future Funding: None
Administrator: Ilana Locker
Project Officer: Margaret Symington
Commencement Date: March, 1992
Expiration Date: May, 1993
Taxa: Bat
Biome: Tropical Moist Forest
Reviewed by: BSP/AID Research Review Committee
Conservation Methods: 100% Ecological Research & Monitoring

Project Description:

Tropical forests are disappearing at an alarming rate throughout the world and the forests of Peru are no exception. At the present rate, it is estimated that 65% of Peru's tropical forest will be cut down by the end of this century. Because tropical forests contain many economically important wood and fruit species, conservationists are increasingly championing the sustained utilization of tropical resources as one alternative for the management of tropical forests.

One important aspect of sustained management is the natural regeneration of the forest, in which chiropteran species play an important role by contributing to the pollination and seed dispersal processes.

This project seeks to determine to what degree valuable tropical plant species depend on chiropterans for successful propagation, as well as what form this dependence takes. The research will take place in both a pristine forest and in a forest where human intervention has occurred. The first location is the Reserva Comunal Tamshiyacu-Tahuayo, a recently designated protected area 80 km. south of Iquitos, where economically important species

grow naturally. The second area is the Padre Isla Biological Station, 8.5 km. northeast of Iquitos, where certain economically important species are cultivated.

The researchers hope that the information gathered during this investigation will strengthen the potential for sustainable management of tropical forests.

Cesar Ascorra, the principal investigator, is a Peruvian biologist currently working for the Natural History Museum of Peru. Don Wilson, an advisor to the project, is a renowned expert on neotropical mammals. Dr. Wilson will assist Mr. Ascorra in the systematic identification of the chiropertaran species and in the analysis of the trophic structure of their communities.

Project Executant:

Cesar F. Ascorra
Don E. Wilson
Proyector Peruano de Primatología
Instituto Veterinario de Investigaciones
Tropicales y de Altura (IVITA)
Calle 24, No. 222
Lima 27, Peru

Grant Number: I7561
Title: Burundi - The Kibira Chimpanzee Project
Amount: \$15,000
Source of Funds: R&D/ENR
Previous Funding: None
Anticipated Future Funding: None
Administrator: Ilana Locker
Project Officer: Margaret Symington
Commencement Date: May 1, 1992
Expiration Date: April 30, 1994
Taxa: Primates
Biome: Highlands; Tropical Moist Forest
Reviewed by: BSP/AID Research Review Committee
Conservation Methods: 20% Ecological Research & Monitoring;
30% Training; 50% Protected Area Management;

Project Description:

The Central African nation of Burundi is experiencing serious wildlife habitat destruction due to over-population and unregulated exploitation. Socio-economic difficulties limit the Burundian government's ability to protect these areas. Being a crossroads for wildlife-oriented tourists visiting parks in Zaire, Tanzania and Rwanda, Burundi has the potential to develop tourism that would generate revenue to help finance appropriate natural resource management.

The Kibira National Park, in northwestern Burundi, offers not only the diverse flora and fauna of a large tropical highland forest, but also the special attraction of chimpanzees. The 38,000 hectare Kibira forest is contiguous with the 90,000 hectare Nyungwe forest in Rwanda and together they were listed in the "IUCN Primate Action Plan" as a priority area for primate conservation.

The objective of the project is to habituate a single community of chimpanzees in order to study their ecological needs, and to develop well-controlled, low-impact, chimpanzee tourism that would help finance an effective conservation program for the

Kibira National Park. Once the chimpanzees have been habituated, small groups of tourists will have the opportunity to see, without disturbing the chimpanzee's social life, the animals behaving normally in their natural habitat.

The project will be divided into four phases, the first three of which (project preparation, habituation and tourism preparation), will have a duration of two and a half to three years. The fourth and final phase, tourism implementation/supervision, will have a duration of approximately one year.

Although the project's manager is an ex-patriate, he will collaborate very closely with the Burundian National Institute for the Environment and Nature Conservation. In addition, Burundian nationals will be trained at all levels to assure the proper long-term management of the park and of chimpanzee tourism. The sponsoring organization, the Jane Goodall Institute, is renowned for its work on chimpanzee behavior and ecology.

There are several chimpanzee populations in Burundi, other than those found in the Kibira Park, that are subject to encroachment from human activities. The information generated from the proposed research will have implications for the protection of the other chimpanzee populations in other regions of Burundi and, perhaps, in other countries along the Nile crest.

Project Executant: Dean Anderson
 The Jane Goodall Institute
 B.P. 2416
 Bujumbura, Burundi.

Grant Number: I7575

Title: Cameroon - Consequences de l'Exploitation Forestiere Industrielle sur l'Ecosysteme de Foret Dense Equatoriale et sur le Mode de Vie des Populations Indigenes: Exemple du Secteur Nkoumbala-Mboule

Amount: \$14,900

Source of Funds: R&D/ENR

Previous Funding: None

Anticipated Future Funding: None

Administrator: Ilana Locker

Project Officer: Margaret Symington

Commencement Date: November, 1992

Expiration Date: July, 1993

Taxa: Plants

Biome: Tropical Moist Forest

Reviewed by: BSP/AID Research Review Committee

Conservation Methods: 85% Ecological Research & Monitoring;
15% Public Policy

Project Description:

The industrial removal of wood from tropical forests is usually quite controversial, from both an ecological and socioeconomic point of view. The same is certainly true in Cameroon where opponents and supporters of this type of activity have made their opinions well known. To date, however, no one has investigated the point of view of the indigenous populations living within the confines of the forestry concessions. The proponents of this project hope to make up for that lack of knowledge in ways that will result in a meaningful contribution to the debate surrounding the harvest of tropical woods in Cameroon.

The researchers intend to study the case of the West Cameroon Forestry Corporation (Société Forestiere de l'Ouest-Cameroun: SFOC) which, since 1986, has been tapping forest resources within a concession of approximately 300 square kilometers, located in the Makak, Eséka, Mvengué and Lolodorf districts in the southwestern part of the country. The researchers plan to

evaluate the ecological and socioeconomic consequences of industrial harvesting of forest resources as perceived and experienced by the local population: Bakola Pygmy communities and Bassa, Béti and Ngoumba villagers.

In addition to the scientific objective of the project, the results of the research will lead to the formulation of recommendations for the appropriate governmental agencies and concerned international organizations, so that measures may ultimately be taken to ensure that the interests of the local population and the forest ecosystem will be safeguarded as much as possible.

The principal investigator, Jean-Felix Loung, is the head of research at the Center for Social Science Research, at the Institute for Social Sciences, in Yaounde. His specialty is the study of rural economies, with an emphasis on hunter-gatherer and agricultural societies that live within the tropical moist forest.

Project Executant: Jean-Félix Loung
 Maitre de Recherche
 B.P. 483
 Yaoundé, Cameroon

Grant Number: I7589
Title: Madagascar - The Economic Implications
of Biodiversity Protection in Madagascar
Amount: \$15,000
Source of Funds: R&D/ENR
Previous Funding: None
Anticipated Future
Funding: None
Administrator: Ilana Locker
Project Officer: Margaret Symington
Commencement Date: May, 1992
Expiration Date: February, 1993
Taxa: Non-Specific
Biome: Tropical Moist Forest
Reviewed by: BSP/AID Research Review Committee
Conservation Methods: 100% Public Policy

Project Description:

The protection of biodiversity is increasingly being recognized as a global need. It is also becoming extremely clear that economic factors can play a critical role in enabling and disabling attempts to protect natural resources. An in-depth understanding of the underlying economic constraints and requirements is often the missing variable when different regions are being considered for protection. The proposed research seeks to add to the limited fund of knowledge on the economic implications of biodiversity protection.

Any project with a goal of conserving natural resources will result in a number of costs and benefits to different sets of people. The proposed research will address economic issues related to the opportunity costs and the successful protection of biodiversity protection in Madagascar.

The specific objectives of this project are:

- 1) to assess the economic impacts of biodiversity protection by considering the eastern rain forests in the Andasibe region of Madagascar;

- 2) to estimate the costs of such protection to the local people living there;
- 3) to establish the economic inducements necessary for the successful protection of natural resources in this area.

The Mantadia National Park in eastern Madagascar will be used as a frame of reference to estimate the costs of protection to local villagers. Based on an understanding of these costs, the economic requirements for sustained protection of natural resources will be considered. Possibilities for developing buffer zones will be assessed. Data on local needs, market potential and government plans and constraints will be gathered and used to develop a model for biodiversity protection.

The principal investigator is a Ph.D. student in Resource and Environmental Economics at Duke University. She has already spent some time in Madagascar gathering data for this project and has also worked in India on issues related to resource economics.

Project Executant: Priya Shyamsundar
Duke University
Resource and Environmental Economics and
Policy Center
Duke University
Durham, North Carolina 27706

Grant Number: I7572
Title: Rwanda - Potentialites et Facteurs Affectant la Diversite Biologique dans les Forets de Montagne du Rwanda
Amount: \$14,998
Source of Funds: R&D/ENR
Previous Funding: None
Anticipated Future Funding: None
Administrator: Ilana Locker
Project Officer: Margaret Symington
Commencement Date: June, 1992
Expiration Date: January, 1994
Taxa: Birds
Biome: Highlands
Reviewed by: BSP/AID Research Review Committee
Conservation Methods: 100% Ecological Research & Monitoring

Project Description:

Zones of refuge during the dry periods of the Pleistocene, the mountain forests of central Africa accordingly serve as habitat for a great diversity of species. Yet, like all tropical ecosystems, they are faced with enormous problems of human-induced fragmentation, which significantly reduces species diversity because of the loss and isolation of individual habitats. The mountain forests of central Africa have not been the subject of extensive study, with the result that efforts to promote their conservation and the sustainable use of their resources frequently run up against a lack of biological knowledge.

Several studies have shown that birds and mammals represent two major groups in the maintenance of diversity and evolutionary potential as well as the dynamics of tropical forest ecosystems. The work proposed here has two major objectives: 1) an inventory of the bird and mammal species of the largest mountain forest in central Africa, the Nyungwe natural forest in Rwanda, in order to update their status and determine target species and sites for conservation and 2) clarification of the environmental and human factors that affect this diversity, specifically the influence of

various types of human interference on the composition and distribution of species. The study will focus primarily on bird and mammal species, two major groups in the dynamics of tropical forests.

The study will be based on field work. In the wooded mountains of Nyungwe, the researchers will first define typical habitats based on altitudinal gradient, forest structure and degree of human interference. Throughout the year, they will conduct direct observations and gather data on sample parcels located within each typical habitat. The visual data will be complemented by sound recordings and by capturing birds with a net.

This project will be directed by Dr. Samuel Kanyamibwa, in coordination with the Nyungwe Forest Conservation Project (Projet Conservation de la Foret de Nyungwe: PCFN). The PCFN is financed by Wildlife Conservation International and USAID/Rwanda.

Project Executant: Dr. Samuel Kanyamibwa
 Projet Conservation de la Foret de
 Nyungwe (PCFN)
 B.P. 363
 Cyangugu, Rwanda

Grant Number: I7581

Title: Tanzania - Social Constraints in
Community Forestry: A Case Study of
Iringa Rural District

Amount: \$15,000

Source of Funds: R&D/ENR

Previous Funding: None

Anticipated Future
Funding: None

Administrator: Ilana Locker

Project Officer: Margaret Symington

Commencement Date: May, 1992

Expiration Date: February, 1994

Taxa: Plants

Biome: Tropical Seasonal Woodlands & Grasslands

Reviewed by: BSP/AID Research Review Committee

Conservation Methods: 60% Ecological Research & Monitoring;
30% Sustainable Use; 10% Public Policy

Project Description:

Tanzania has witnessed a major growth of population since its independence in 1961. Due to this demographic transformation, the demand for wood products such as fuelwood and building poles, has overwhelmed the ability of vegetation to regenerate. In addition, the clearing of forests for agricultural purposes has created an environmental catastrophe in rural areas such as Ismani, Iringa.

In response to this environmental predicament, government and non-governmental organizations have launched various afforestation programs and development experts are now advocating the inclusion of trees in farming systems as the only viable alternative to current farming practices. However, factors that may affect the adoption of these forestry innovations have not been well studied and forestry extension and sociological studies have not adequately addressed the social component of forestry. For example, very little site-specific information exists that explains the extent to which local people use and value indigenous and exotic tree species. Without such information,

any forestry conservation strategy will not be sustainable. However, once this type of information is available, foresters will be able to determine the extent to which local people are willing to adopt trees as an integrated part of their farming activities.

The proponent of this study hopes to help bridge the gap between what local people know about their environment and what scientists (particularly foresters and environmentalists) do not know. The specific objectives of this study are:

- 1) to investigate the attitudes and beliefs towards different tree species (both indigenous and exotic);
- 2) to establish the reasons why certain tree species and woodlots (natural and planted) have been planted and maintained;
- 3) to rank, according to farmer preferences, both indigenous and exotic tree species;
- 4) to gather relevant literature on social forestry;
- 5) to provide some seedlings of preferred species to farmers who have participated in the research; and
- 6) to make policy recommendations with respect to forestry extension workers.

Dr. Mvena is a senior lecturer at the Sokoine University of Agriculture. His doctorate is in rural sociology and he has worked on various issues, including social forestry, agroforestry and urban agriculture, for over ten years.

Project Executant:

Dr. Z.S.K. Mvena
Sokoine University of Agriculture
P.O. Box 3002
Morogoro, Tanzania

Grant Number: I7576
Title: Uganda - The Role of Seed Predation and Herbivory on Forest Regeneration and Community Composition in the Kibale Forest Reserve, Uganda
Amount: \$15,000
Source of Funds: R&D/ENR
Previous Funding: None
Anticipated Future Funding: None
Administrator: Ilana Locker
Project Officer: Margaret Symington
Commencement Date: April, 1992
Expiration Date: September, 1993
Taxa: Non-Specific
Biome: Tropical Moist Forest
Reviewed by: BSP/AID Research Review Committee
Conservation Methods: 75% Ecological Research & Monitoring;
25% Protected Area Management

Project Description:

In the past decade, tropical rain forests have received major international attention. Unfortunately, the rate at which these unique ecosystems are being transformed or eliminated is extremely high. Realizing the danger inherent in clear-cutting forests for short-term gains, the Ugandan government set aside forest reserves for providing hardwood timber and other forest produce on a sustainable basis.

However, scientists are now seeing that the regeneration of certain tropical tree species is somewhat problematic with high mortality rates among some adult tree populations and an underrepresentation or total absence of trees between 7 and 14 centimeters diameter at breast height. It has been theorized that seed, seedling and sapling predation can have a serious impact on forest regeneration and thus on species composition, yet until recently, this field received limited attention. Seed and seedling predators can play an important role in determining

the distribution and abundance of forest tree species.

This study, designed to explore that theory, has the following objectives:

- 1) To determine whether seed and floral predation by red colobus monkeys reduces regeneration of some forest trees;
- 2) To determine the influence of seed, seedling and sapling predation on tree regeneration;
- 3) To determine whether the impact of predators differs between mature and logged forest tracts;
- 4) To suggest ways of improving the regeneration of species.

The research will take place in the Kibale Forest Reserve, one of the reserves set aside by the Ugandan government. The reserve is approximately 24 kilometers east of the Ruwenzori Mountains and ten kilometers from the town of Fort Portal.

The researchers hope that the results from this study may provide the background information required for successful regeneration of certain tropical tree species not only in the Kibale Forest but also in other tropical forests.

Mr. Lwanga, a native of Uganda, is currently enrolled in the Ph.D. program at the University of Florida, Gainesville.

Project Executant:

Jeremiah Lwanga
University of Florida
Department of Wildlife and Range
Sciences
118 Newins-Ziegler Hall
Gainesville, Florida 32611

Grant Number: I7573
Title: Zambia - Support for Land Use Planning
of Zambia's Wildlands
Amount: \$14,800
Source of Funds: R&D/ENR
Previous Funding: None
Anticipated Future
Funding: None
Administrator: Ilana Locker
Project Officer: Margaret Symington
Commencement Date: July, 1992
Expiration Date: February, 1994
Taxa: Non-Specific
Biome: Tropical Seasonal Woodlands & Grasslands
Reviewed by: BSP/AID Research Review Committee
Conservation Methods: 10% Training; 20% Ecological Research &
Monitoring; 70% Institutional Support

Project Description:

Approximately 32% of Zambia's land area is zoned for wildlife protection - the country's 18 national parks are surrounded by 36 buffer zones known as game management areas. Game management areas (GMA) are occupied by traditional villagers who may utilize the areas' natural resources in ways consistent with Zambian law. Enforcing these laws is the responsibility of the National Parks and Wildlife Service (NPWS).

In response to an increase in poaching in both the national parks and the game management areas in the late 1970s and early 1980's, the NPWS, in 1987, initiated a program called ADMADE - Administrative Management Design for Game Management Areas. ADMADE is a self-financing, community-based approach to wildlife management outside national parks. Under this program, revenues from the sustainable uses of wildlife are used to support the costs of resource management as well as the needs of the community in the GMA. This is done by active participation by local residents and through resource use policies adopted and enforced by Wildlife Management Authorities, the members of which are selected by the local community. One of the goals of ADMADE is the development of land use

policies for each game management area. In 1990, NPWS initiated a geographical data processing system to help produce land use recommendations for the Wildlife Management Authorities. Since then, 26 of Zambia's 36 game management areas have been reproduced in digital map form for a range of geographical features, whose attributes are stored in data bases for use in formulating land use plans. To ensure the future viability of this project, Zambians have been trained in the use of geographic information systems.

This grant would help pay for certain items that the researchers feel are essential if the work is to progress in a timely manner. These additional resources would help ensure that Wildlife Management Authorities have their own land use and resource inventory maps to guide them in their resource management efforts. In particular, the investigators seek financial assistance for the following: a) procurement of a geographic positioning system (GPS), GEOLINK and ARCView software, and additional Landsat Thematic imagery, b) per diem and running costs for trained field staff to carry out ground truthings, and c) in-Zambia training of another ARC/INFO user.

Mr. Kaweche has over 25 years of research experience working for the National Parks and Wildlife Service. He is currently the co-administrator for ADMADE and the Chief Wildlife Research Officer for NPWS. Dr. Lewis is the technical advisor and training coordinator for ADMADE and has lived in Zambia for the last 15 years.

Project Executant: Mr. G.B. Kaweche
 Dr. D.M. Lewis
 c/o Nyamaluma Training & Research Center
 P.O. Box 82
 Mfuwe, Zambia

Grant Number: I7588

Title: Bangladesh - Conservation of Faunal Resources of Hail Haor (Wetland) and their Utilization by Local Communities

Amount: \$15,000

Source of Funds: R&D/ENR

Previous Funding: None

Anticipated Future Funding: None

Administrator: Ilana Locker

Project Officer: Margaret Symington

Commencement Date: May, 1992

Expiration Date: May, 1994

Taxa: Non-Specific

Biome: Wetlands/Coastal

Reviewed by: BSP/AID Research Review Committee

Conservation Methods: 90% Ecological Research & Monitoring;
10% Protected Area Establishment

Project Description:

Hail Haor is a large wetland located near Dhaka, Bangladesh. This wetland is rich in aquatic vegetation, insects, molluscs, shrimp and fish. Thousands of migratory and resident waterfowl, amphibia, reptiles and mammals use the wetland as their feeding and roosting habitats in winter months. To date, however, very little research has been conducted on the ecology of the wetland and the extent to which local people make use of its resources.

The proponent of this project plans to conduct an inventory of the wildlife of the Hail Haor, identifying species composition, population status, habitats and other significant factors that might affect the conservation of the wetland's biodiversity. In addition, the researcher will investigate the ways in which the local communities can benefit from the wetland resources while still maintaining the area's ecological integrity. Finally, the investigator intends to outline recommendations as to how local communities can be incorporated into any development activities of the wetland.

Although there are no designated wetland sanctuaries in Bangladesh, the government is considering creating one for the

Hail Haor. The researcher hopes that his findings will contribute to a management plan of the area in a way that will benefit both its wildlife and its people.

The principal investigator is a zoologist with an appointment at the University of Dhaka. He has been conducting research on the biological diversity of Bangladesh for over twenty years.

Project Executant: Dr. Sohrab Uddin Sarker
 Department of Zoology
 University of Dhaka
 Dhaka 1000
 Bangladesh

Grant Number: I7580
Title: India - Ecology of Indian Megachiropteran Bats
Amount: \$7,400
Source of Funds: R&D/ENR
Previous Funding: None
Anticipated Future Funding: None
Administrator: Ilana Locker
Project Officer: Margaret Symington
Commencement Date: May, 1992
Expiration Date: January, 1993
Taxa: Bats
Biome: Tropical Seasonal Woodlands & Grasslands
Reviewed by: BSP/AID Research Review Committee
Conservation Methods: 100% Ecological Research & Monitoring

Project Description:

Bat-plant interactions play an important role in the pollination and dispersal of plants throughout the world. Unfortunately, very little work has been done on these systems. Most of the current research is conducted in the neotropics and the role of Old World Pteropodid bats has been quite neglected. In addition, present research trends still emphasize the study of only one species of bat or plant. Researchers are bound to miss many of the complexities of natural systems when they study them at this small scale. There is then, a great need to study pollination and dispersal systems at a multi-species community level of analysis.

This project proposes a two-year field study of a fruit bat community in northeast India, and focuses on the interaction between various members of this community, the effects they have on plant reproductive success via pollination and seed dispersal, and the role of other pollinators and dispersers such as birds, moths and ants. The study raises questions about the differences between phytophagous (plant feeding) bats of the Old World and the New World, with reference to their dispersal abilities, and nutritional needs. It also examines one of the tightest co-evolution patterns known between bats and plants, that of

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Eonycteris and Oroxylum. A secondary theme which the researcher will explore is the evaluation of the interaction between these fruit bats and commercial fruit crops. These bats are believed to be pests and are classified as vermin because they are thought to destroy crops. The beneficial role of these animals as pollinators and seed dispersers is often overlooked, and they thus have a great conservation implication for the forests of India.

Sharoukh Mistry is a Ph.D. graduate student at the University of New Mexico.

Project Executant: Mr. Sharoukh Mistry
 University of New Mexico
 Biology Department
 Albuquerque, New Mexico 87131

Grant Number: I7585

Title: India - Development of People's Institutions for Participation in Management of Forest Resources

Amount: \$14,000

Source of Funds: R&D/ENR

Previous Funding: None

Anticipated Future Funding: None

Administrator: Ilana Locker

Project Officer: Margaret Symington

Commencement Date: July, 1992

Expiration Date: December, 1993

Taxa: Plants

Biome: Tropical Seasonal Woodlands & Grasslands

Reviewed by: BSP/AID Research Review Committee

Conservation Methods: 100% Institutional Support

Project Description:

India's forest resources are rapidly being degraded. This depletion affects not only the ecology of the area, but the socio-economic status of the rural-tribal communities that depend on forest resources for sustenance. In the past, strategies for development of forest resources were designed either to protect the forests or to provide for the local people, and so these strategies often came into conflict with one another. Today, however, there is a growing recognition that active participation of local communities is required for the restoration of degraded forest lands and the maintenance of existing good forests. In fact, the Government of India has issued a directive to all state governments to develop suitable policies to encourage community participation in forest protection and regeneration. This initiative is known as participatory forest management.

However, there are still a number of questions that need to be researched if participatory forest management is to be a sustainable policy. These questions include: what form of people's institution is appropriate, should it be a formal or informal association; what should the institutional mechanisms be for conflict resolution within communities and with external

authorities; what training is required for the catalyst agency providing support for these institutions; how should a people's institution participate in the marketing of forest products; how should benefits be shared; etc.

The researchers hope that, in gathering information associated with these questions, they will develop a paradigm for participatory forest management that will ensure the long-term sustainability of this policy.

VIKSAT is one of the voluntary agencies actively implementing participatory forest management in the Indian state of Gujarat. The principal investigator has been involved in setting up people's institutions (the Tree Growers' Cooperative Societies) as well as in the formulation of the new policy directive of the Gujarat State government.

Project Executant: G. Raju
 VIKSAT, Nehru Foundation for Development
 Thaltej Tekra
 Ahmedabad 380 054
 India

Grant Number: I7593
Title: Indonesia - Asmat Ethnobotany
Amount: \$14,950
Source of Funds: R&D/ENR
Previous Funding: None
Anticipated Future Funding: None
Administrator: Ilana Locker
Project Officer: Margaret Symington
Commencement Date: May, 1992
Expiration Date: April, 1993
Taxa: Plants
Biome: Tropical Moist Forest
Reviewed by: BSP/AID Research Review Committee
Conservation Methods: 100% Ecological Research & Monitoring

Project Description:

The Asmat region of Indonesia, a vast lowland area of southern Irian Jaya covering three to four million hectares, is well known for its diverse flora and fauna. The people living in the area are also collectively known as Asmat. This population of approximately 70,000 is scattered throughout the region in small villages that subsist on sago, fishing, and small gardens.

With an increase in uncontrolled logging in the Asmat region, it is becoming increasingly important to generate specific case studies on the value biological resources have when used for purposes other than logging. Such a case study might include how these resources are already contributing to the region's economy and to local people's livelihoods, and the potential for increasing those benefits. To this end, the proposed project will document the ecological and economic interdependencies between key forest species and the Asmat people. Of particular concern is the impact of logging on the availability of wood used for Asmat carving and in subsistence activities such as boat-building. The value of medicinal and nutritional plants will also be considered.

The immediate purpose of this project is to promote the conservation and development of the Asmat ecosystem, including the indigenous culture, natural resources, flora and fauna. More

generally though, the researchers believe that by providing solid information to government officials on the importance of biological diversity for rural communities, they can accelerate policy change in the disciplines of land use planning and natural resource management. The overall intent of the researchers is to make government agencies more aware that a "people-centered" approach to conservation can foster socio-economic stability and enhance the standard of living for local people.

Dr. Widjaja is a well-respected botanist and has over 15 years of experience doing field research in Irian Jaya.

Project Executant:

Dr. Elizabeth A. Widjaja
Herbarium Bogoriense
Jl. Raya Juanda 22
Bogor, 16122
Indonesia

Grant Number: I7579

Title: Papua New Guinea - Maintaining Biodiversity through the Establishment of a Wildlife Management Area in Madang Province, Papua New Guinea

Amount: \$15,000

Source of Funds: R&D/ENR

Previous Funding: None

Anticipated Future Funding: None

Administrator: Ilana Locker

Project Officer: Margaret Symington

Commencement Date: June, 1992

Expiration Date: May, 1994

Taxa: Non-Specific

Biome: Tropical Moist Forest

Reviewed by: BSP/AID Research Review Committee

Conservation Methods: 70% Protected Area Establishment;
30% Ecological Research & Monitoring

Project Description:

The land tenure system in Papua New Guinea (PNG) is unique in that over 97% of the land is owned by clans and family groups. Therefore, any effort to maintain biodiversity through reserve establishment will be successful only if the local villagers are involved. The Fauna (Protection and Control) Act of 1966 recognized this reality, and provided a mechanism for local landowners and the government to manage, in partnership, an area known as a Wildlife Management Area (WMA).

In an area near Madang on the north coast of PNG where a clear-fell logging operation has been proposed, two villages have expressed a wish to have all their land (800 hectares) declared a WMA. This proposed WMA is an area of primary tropical lowland forest with a rich fauna and flora, including Ornithoptera paradisea paradisea, the Paradise Birdwing butterfly which, until recently, was believed to have been extinct. There is also a diverse bird and reptile fauna.

This research project hopes to:

- 1) provide support to the villagers in setting up and managing a Wildlife Management Area;
- 2) conduct a boundary survey of the WMA as well as ongoing flora and fauna surveys, with the help of PNG University students;
- 3) determine the effect of logging on the biodiversity of the reserve, using indicator species;
- 4) carry out an enrichment planting of the foodplant vine of the Paradise Birdwing Butterfly to better its chances of survival and to monitor the population levels of this rare butterfly;
- 5) train a local landowner to be warden of the reserve;
- 6) promote alternative economic development to the villagers, including insect farming and ecotourism.

Two of the three researchers, Chris Mercer and Larry Orsak, have been working in PNG since 1983, conducting studies on, among other topics, insect behavior and insect farming. Matthew Jebb, the third investigator, is the Director of the Christensen Research Institute in Madang, a privately funded research station specializing in marine and terrestrial biological and related sciences.

Project Executant:

Christopher Mercer
Forestry Department
PNG University of Technology
Private Mail Bag
Lae, Papua New Guinea

Grant Number: I7562
Title: Philippines - Non-Timber Forest Products and Biodiversity in the Palanan Wilderness Area
Amount: \$14,992
Source of Funds: R&D/ENR
Previous Funding: None
Anticipated Future Funding: None
Administrator: Ilana Locker
Project Officer: Margaret Symington
Commencement Date: March, 1992
Expiration Date: December, 1993
Taxa: Plants
Biome: Tropical Moist Forest
Reviewed by: BSP/AID Research Review Committee
Conservation Methods: 70% Sustainable Use; 30% Public Policy

Project Description:

The Palanan wilderness area, in the northern Sierra Madre mountains in Northeast Luzon, is one of the most biologically important areas in the Philippines. It is home to over 30 endangered species of wildlife and contains up to one-third of the Philippines remaining primary lowland forest. As many as 20,000 lowland farmers and 5,000 indigenous hunter-gatherers inhabit the area.

Palanan has been receiving increased attention lately because of the size of its virgin forest and because the Philippine Department of Environmental and Natural Resources (DENR), in its redesign of the country's park system, designated the area as one of ten priority sites for its Integrated Protected Area System (IPAS).

Understanding the relationship local people have with the forest will be crucial in the planning, management and implementation of programs for the new protected areas. The Protected Area and Wildlife Bureau (PAWB) of the DENR is particularly interested in the relationship between protected area management and the activities of local people with respect to the harvesting of non-

timber forest products (NTFP) (e.g.: fuelwood, rattan, etc.). This relationship will only increase in importance as the ban on logging in virgin forest is implemented. Because of this ban, local communities will have to rely more and more on the extraction of non-timber forest products as a major source of income.

The purpose of this study is to evaluate the impact the extraction of non-timber forest products has on local and household economies and site biodiversity. To achieve its goal, the research team will: conduct a rapid rural appraisal to gather some preliminary background on the non-timber forest products of the area, including which products are gathered, utilized and/or traded by area residents; determine what, if any, tribal and/or other laws, affect such extraction; produce household income models using multiple regression analysis; evaluate the impact of non-timber forest product utilization on biodiversity using two major groups of sampling plots; evaluate the sustainability of each NTFP; and finally, determine the optimal extraction rate of non-timber forest products using classical benefit/cost analysis/optimization techniques.

The results of this study will be presented to local government officials, the Regional Development Council, NGOs and local people. It is hoped that the information gathered here will be used in the design and management of the IPAS.

The principal investigator, Dr. Araño, is currently a professor of Forest Resource Management at Isabela State University. He also holds the position of Director of the Land Use Planning and Development Center as well as Coordinator of the Cagayan Valley Programme on Environment and Development. Dr. Araño has over 20 years of experience researching forestry issues in the Philippines.

Project Executant:

Dr. Roberto R. Araño
Cagayan Valley Programme on Environment
and Development
Isabela State University
College of Forestry
Garita Slopes
Cabagan, Isabela, Philippines 3328

Grant Number: I7571

Title: Sri Lanka - Evaluation of Forest Use Methods by Peripheral Village Communities in the Knuckles Range

Amount: \$14,806

Source of Funds: R&D/ENR

Previous Funding: None

Anticipated Future Funding: None

Administrator: Ilana Locker

Project Officer: Margaret Symington

Commencement Date: June 1, 1992

Expiration Date: May 31, 1994

Taxa: Non-Specific

Biome: Tropical Moist Forest

Reviewed by: BSP/AID Research Review Committee

Conservation Methods: 50% Protected Area Management;
40% Ecological Research & Monitoring;
10% Public Awareness

Project Description:

In 1986, the government of Sri Lanka, worried about the rapid decline of natural forest cover in that country, declared the Knuckles range of forests a protected zone. The hills in this range are covered with a mosaic of different types of forest and scientists are only beginning to discover the rich biodiversity and endemism of the area.

However, despite the area's status as a protected zone, there are 48 peripheral village communities that continue to follow agricultural and extractive activities in these forests, sometimes resulting in ecological damage. The Forest Department, the agency responsible for the protected area, has found it a major challenge to enforce the laws associated with the area's new status. The researchers contend that, in order to avoid a major conflict between the users and the Forest Department, both sides need objective information on the degree to which the villagers depend on the forests and on possible alternatives to

any destructive dependencies. With such information, the Forest Department could develop a coherent conservation program for this range of forests.

The researchers will attempt to: evaluate the impact of different land use systems in the reserve area, identify the biodiversity and determine how it has been affected by the various extractive activities traditionally practiced by the villagers, and recommend alternative land use systems to preserve the biodiversity of the area.

The study will be undertaken jointly by the Forest Department, the Department of Agriculture and the University of Peradeniya. This research will be part of a major project on ethnobotanic studies of peripheral village communities in tropical rain forests in Sri Lanka.

Project Executant:

Dr. M.W.A.P. Jayatilaka
Department of Agricultural Economics and
Extension
Faculty of Agriculture
University of Peradeniya
Sri Lanka

Grant Number: I7584

Title: Sri Lanka - A Phytosociological Study of the Angiosperms in Lowland Wet Tropical Forests of Sri Lanka

Amount: \$14,980

Source of Funds: R&D/ENR

Previous Funding: None

Anticipated Future Funding: None

Administrator: Ilana Locker

Project Officer: Margaret Symington

Commencement Date: June, 1992

Expiration Date: May, 1994

Taxa: Plants

Biome: Tropical Moist Forest

Reviewed by: BSP/AID Research Review Committee

Conservation Methods: 50% Ecological Research & Monitoring;
50% Sustainable Use

Project Description:

The extreme localization of flora and the high level of endemism in the southern low country wet zone of Sri Lanka make this area a prime target for further study in order to learn more about the area's diversity and to develop strategies for its conservation.

The proposed research program envisages phytosociological studies in three small forest reserves where species diversity is currently highly vulnerable. The reserves are in an area of low altitude (0 - 300 meters) that has not been studied intensively. Illegal settlers have already encroached upon five to ten percent of these forests. This situation allows the researchers to study the effect varying degrees of forest exploitation can have on species diversity. Large tree species as well as the understory will be studied for species diversity.

In addition to the studies on species diversity in selected sampling areas, genetic variability of endemic species of the families Lauraceae and Arecaceae will be assessed in larger sectors of the forests and surrounding areas. These plant families include some economically important genera such as

Cinnamomum, Caryota (kitul), and Calamus (rattan). Attempts will be made to quantify the dependence of the rural populations on these genera and the effect such exploitation has on the plants' survival and regeneration. The different genetic forms of Caryota, Calamus and Cinnamomum will be collected and conserved ex-situ at the research farm of the Faculty of Agriculture at the University of Ruhuna. Nurseries of Caryota and Calamus will be established for the first time in Sri Lanka. Finally, attempts will be made to cultivate these two economic crops with the help of a non-governmental organization, school children and settlers.

The principal investigators, both senior lecturers in agronomy at the University of Ruhuna, have doctorates in agriculture and have each been studying agricultural issues in Sri Lanka for over ten years.

Project Executant:

Dr. R. Pathirana
Department of Agronomy
Faculty of Agriculture
University of Ruhuna
Kamburupitiya
Sri Lanka

Grant Number: I7598

Title: Sri Lanka - Spatial and Temporal
Diversity of Coral and Algal Communities
of SW Sri Lanka with Special Emphasis on
Destructive Human Activities

Amount: \$14,100

Source of Funds: R&D/ENR

Previous Funding: None

Anticipated Future
Funding: None

Administrator: Ilana Locker

Project Officer: Margaret Symington

Commencement Date: December 1, 1992

Expiration Date: September 30, 1993

Taxa: Marine Invertebrates/Corals

Biome: Coastal

Reviewed by: BSP/AID Research Review Committee

Conservation Methods: 100% Ecological Research & Methods

Project Description:

Coral and algal communities of SW Sri Lanka form diversified biomes in the coastal waters of SW Sri Lanka. These reefs and ledges can be divided into two types: raised reefs and living reefs. The raised reefs extend some 2-3 km. in the hinterland while the living reefs are more accessible and, therefore, attract thousands of local and foreign tourists. Unfortunately, coral mining, collection of debris for lime and for ornamental purposes, the dumping of waste, etc. are also observed along the entire SW coast and are gradually destroying these living reefs.

This study will attempt to inventory the living species of the reefs as well as the species preserved in the raised reefs with the objective of revealing the succession of the communities in a chronological order. In addition, species distribution of the living and raised reefs will be studied to unravel their spatial diversity. The local community's impact on the coral and algal reefs will also be analyzed. Based on the findings of this study, the investigator will formulate recommendations for appropriate policies to ensure the health of SW Sri Lanka's coastal region.

Dr. Upali Weerakkody is a senior lecturer with the Department of Geography at the University of Ruhuna.

Project Executant:

Dr. Upali Weerakkody
Department of Geography
University of Ruhuna
Matara, Sri Lanka

Grant Number: I7591

Title: Thailand - Ecology and Numbers of Asian Elephants in Huai Kha Khaeng Wildlife Sanctuary

Amount: \$15,000

Source of Funds: R&D/ENR

Previous Funding: None

Anticipated Future Funding: None

Administrator: Ilana Locker

Project Officer: Margaret Symington

Commencement Date: June, 1992

Expiration Date: June, 1994

Taxa: Elephants

Biome: Tropical Moist Forest

Reviewed by: BSP/AID Research Review Committee

Conservation Methods: 100% Ecological Research & Monitoring

Project Description:

Thailand's elephant population has severely declined in the past few years due to severe habitat loss, poaching of baby elephants and collecting of ivory tusks. Today the fragmentation and isolation of elephant populations continues at a steady pace. Therefore, protected areas such as Wildlife Sanctuaries and National Parks are imperative to the elephant's future survival. Huai Kha Khaeng Wildlife Sanctuary, a UNESCO World Heritage Site, is probably one of the most important protected areas still left in Thailand, since it is of significant size to maintain a viable elephant population for the long term. Moreover, Huai Kha Khaeng is bordered by Thung-Yai Naresuan Wildlife Sanctuary, Umphang Wildlife Sanctuary, Mae Wong National Park and the Burmese forest. The area is rich in wild flora and fauna representative of South-East Asian and tropical zone species. It also has various kinds of tropical and sub-tropical forest types, which are still in virgin condition.

Despite the elephant's status within the international conservation movement, very little is known about the elephants in Thailand. The proponents of this project hope to gather basic ecological information on Thailand's elephants including: habitat use; land and food requirements; population densities; movement

strategies; behavior patterns including feeding, female and young relationships, and antipredator behavior; sex ratios; age structure; and group size of each herd.

The data gathered by the researchers will be used in conservation and management plans for elephants not only in Huai Kha Khaeng Wildlife Sanctuary, but also other ranges in Thailand. Another reason for acquiring information about the elephant population is to protect the area from any future development projects, such as large dams or irrigation schemes that would further fragment the elephant's habitat.

The principal investigator, who has a masters degree in forest biology, has been studying the wildlife, especially the elephants, of Huai Kha Khaeng Wildlife Sanctuary for the last seven years.

Project Executant: Mattana Srikrachang
Wildlife Conservation Division
Royal Forest Department
Phaholyothin Road, Chatuchak
Bangkok, 10900
Thailand

Grant Number: I7574

Title: Hungary - Exploratory Biodiversity Studies in the Former "Iron Curtain" Zone on the Western Border of Hungary

Amount: \$15,000

Source of Funds: R&D/ENR

Previous Funding: None

Anticipated Future Funding: None

Administrator: Ilana Locker

Project Officer: Margaret Symington

Commencement Date: May 1, 1992

Expiration Date: May 31, 1993

Taxa: Non-Specific

Biome: Temperate Forest and Grasslands

Reviewed by: BSP/AID Research Review Committee

Conservation Methods: 65% Ecological Research & Monitoring;
35% Protected Area Establishment

Project Description:

In 1989, when the "Iron Curtain" was lifted from the Hungarian-Austrian border, ecologists, botanists and biologists regained access to one of the most untouched areas of Hungary. After some preliminary research, scientists discovered that many rare and endemic species had flourished during the 40 years the area was designated a military buffer zone, completely closed to the public and scientists.

The purpose of this project is to gather information on the area's resources in order to educate the public and the Hungarian Parliament of the area's value. The researchers hope that the area will eventually be designated a national park or protected area.

The investigators will select five or six especially characteristic sites for further detailed study. Experts will be assigned to research the recent ownership, land use pattern, flora, and key animal species of each site.

The end result of the project will be a plan of action, to be presented to the Ministry of Environmental Protection and the Hungarian Parliament's Committee on Environmental Protection, outlining the steps that need to be taken to designate this area a national park or protected area.

The researchers also hope to disseminate their findings to local councils, mass media, professional people, local teachers, and others to raise public support and awareness. A two-hour video will be prepared to show the natural, cultural and historical values of this area.

This type of work is urgently needed before the former "Iron Curtain" zone is opened up to Austrian and Hungarian developers under various state "privatization" plans.

Dr. Edit Kovacs-Lang, Director of the Hungarian Institute for Ecology and Botany, has worked as a botanist for the past twenty years in Hungary. The Institute has given this project highest priority as they fear that any delay in conducting this work may result in serious destruction and loss of the area's biological diversity.

Project Executant:

Dr. Edit Kovacs-Lang
Director
Institute of Ecology and Botany
Academy of Sciences
H-2163 Vácrátót
Hungary

Biodiversity Support Program



A U.S.A.I.D.-funded consortium of World Wildlife Fund, The Nature Conservancy, and World Resources Institute

BIODIVERSITY SUPPORT PROGRAM STRATEGY (July 1992 - September 1994)

I. INTRODUCTION

The Biodiversity Support Program (BSP) was established in 1988 with funding from the Research and Development Bureau (then the Science and Technology Bureau) of the U.S. Agency for International Development (USAID). BSP is implemented by a consortium of World Wildlife Fund, The Nature Conservancy, and the World Resources Institute. The central purpose of the program is to promote efforts to conserve biological diversity¹ in developing countries through technical assistance, training, research, information/networking and pilot demonstration projects. This document outlines BSP's strategy for supporting biodiversity conservation over the next two years.

The October 1991 mid-term evaluation of BSP concluded that the first three years of program implementation were "extraordinarily successful." The evaluation praised BSP's implementation of over 100 conservation activities in more than 60 countries and collaboration with 50 other institutions, and noted that BSP's professional staff and program flexibility allowed the program to be responsive to USAID's needs. The evaluation encouraged BSP to build upon its strengths while at the same time developing a strategy that targets a select number of specific conservation opportunities.

¹The definition of biological diversity used by BSP is that proposed by the Office of Technology Assessment in 1987: the variety and variability of living organisms and the ecological complexes in which they occur. BSP addresses biological diversity conservation at the genetic, species and ecosystem levels with an emphasis on in situ conservation. Biological diversity is often called "biodiversity" for short. The term "biological resources" refers to biological organisms used by humans (e.g., in forestry, agriculture, medicine, industry, biotechnology, textile production).

This strategy statement reflects the lessons BSP has learned in the first three years of implementation. It is intended to focus BSP efforts to achieve maximum impact in the conservation of biological diversity during the remaining two years of the cooperative agreement and to position the project's for the next five years.

II. MISSION

The mission of BSP is to promote efforts to conserve biological diversity while enhancing human livelihoods in developing countries, through improved conservation and use of biological resources.

BSP works to improve the capacities of individuals, local communities, non-governmental organizations and governmental institutions in USAID partner countries and of USAID assistance programs to identify the need for and economic potential of conservation and wise management of biological resources, including safeguarding ecological processes and maintaining the variety of genetic resources.

III. CRITICAL ISSUES IN THE CONSERVATION OF BIODIVERSITY AND BSP'S GOALS AND OBJECTIVES.

Global loss of biological diversity has reached crisis levels. This loss threatens not only the livelihoods of the billions of people who depend directly on biological resources for subsistence, but also the earth's ecological functioning and, therefore, the quality of life for all people, both present and future. The challenge of conserving biodiversity will require interdisciplinary attention to a wide array of critical issues, at local, national, regional and global levels.

Five critical issues and necessary actions for improved biodiversity conservation are outlined below. The specific goals and objectives that BSP will focus on in fulfilling its mission statement and in responding to those critical issues are listed after each issue.

1. Biodiversity Conservation Strategies, Techniques and Sustainable Land-Use Practices

Issue: In recent years there have been many changes in biological conservation techniques, along with an increased awareness of the need to integrate conservation with development. Early conservation models and strategies tended to focus total ecosystem protection with strict control of human use/activity. Conversely, many introduced production systems (agriculture, forestry, fisheries, etc.) have not adequately emphasized ecological sustainability. Efforts to conserve biodiversity will

be greatly enhanced by increased attention to establishing complementarity between protection and sustainable use systems.

Need: There is a need to support and assess the effectiveness of innovative conservation methods that seek to conserve biodiversity while promoting sustainable development, and to disseminate that information.

BSP Goal: To increase understanding and successful practice of innovative conservation techniques and programs.

- a. **Objective:** Critique conservation strategies, techniques and practices.
- b. **Objective:** Support a select number of innovative pilot projects and evaluate their effectiveness.
- c. **Objective:** Disseminate information to field practitioners, donors, and others on the findings of BSP assessments.

2. Participation and Strengthening Conservation Capacity

Issue: Sustainable conservation depends on strengthening the capacity of local individuals, communities and institutions to implement conservation initiatives. In the past local communities were often marginalized from the decision-making process, largely due to lack of recognition of their knowledge, and non-efficient utilization of that knowledge in the development process. Through genuine participation, local communities, NGOs and governments can empower themselves, especially in relation to issues of biodiversity utilization and management.

Need: There is a critical need to create and implement processes that include local communities and institutions as full participants in all analyses and decisions affecting biological resource management. At the same time, skills and technologies can be transferred to strengthen local capacity to implement biodiversity conservation initiatives. The provision of adequate information is a necessary prerequisite to the process of empowerment, participation, and biodiversity conservation.

BSP Goal: To strengthen institutional, community, and individual capacities to conserve biological diversity, while encouraging full participation of all stakeholders.

- a. **Objective:** Provide technical assistance and training to NGOs and government institutions for park planning and

management, community-based integrated conservation and development projects, community-based research, and organizational development.

b. **Objective:** Promote participation of as many "stakeholders" as possible in BSP endeavors. Support networking among host country individuals and institutions to share lessons south-south.

3. Research, Monitoring, and Assessment

Issue: Often, biodiversity projects and conservation programs have not included baseline assessments, inventory, monitoring and evaluation as a part of routine planning and implementation. This lack of monitoring and assessment frequently decreases the effectiveness of project implementation. In addition, available indigenous and scientific information has not been compiled, synthesized, and analyzed for application. There are a wide range of issues about which there is inadequate information. The challenge of conserving biodiversity is limited by inappropriate policies or inadequate understanding of two general areas:

- Interactions between people and natural systems; and
- Application of knowledge of ecological processes and principles of ecosystem structure and function to maintaining/managing natural ecosystems.

Need: There is a need for monitoring and assessment programs that generate information for evaluating impact, improving accountability, and strengthen implementation of biodiversity conservation programs. In addition, there is a critical need for research and analysis on the above topics for application to current conservation problems.

BSP Goal: To support applied research and the development of evaluation and monitoring systems in order to improve conservation program implementation and to assess impact.

a. **Objective:** Maintain an applied small research grants program for developing country researchers in NGOs, universities, or government institutions.

b. **Objective:** Develop simplified monitoring techniques and biodiversity conservation impact indicators, particularly those that might be used at the community level.

c. **Objective:** Support analyses of critical issues for conservation, such as policy and legislative incentives for conservation of biological diversity and maintenance of ecosystem functions.

4. Education and Awareness.

Issue: There is insufficient understanding from the international to the local level of the linkages between conservation and development. There is also a need to exchange information among organizations that strive to support such linkages. Donor agencies active in tropical countries are particularly well positioned to assist in the conservation of biodiversity, but those donors frequently lack trained personnel. In addition, local knowledge systems and values are not often integrated into the development process.

Need: Donors (e.g., USAID), NGOs, and citizens need assistance to access the technical expertise and knowledge of the conservation community, as well as the expertise of other disciplines concerned with conservation issues, such as social science and economics. There remains a critical need to build awareness at all levels of society about ways to link conservation and development. Donors also need assistance in applying conservation awareness to programming.

BSP Goal: To increase awareness of the linkages between conservation and development while facilitating improved biodiversity conservation.

a. **Objective:** To inform, influence and assist A.I.D. programming efforts for the conservation of biological diversity by providing quality programming assistance and technical advice to A.I.D. Missions and Bureaus.

b. **Objective:** Support conservation education and awareness building for governmental and non-governmental organizations and other donors.

5. Values and Knowledge Systems

Issue: Decisions are grounded in values -- economic and non-economic. Traditional cultures usually value biodiversity for non-economic reasons and their communities are often marginalized in the decision processes that affect biodiversity. At present, the overwhelming majority of stakeholders with power over resource management are making decisions that result in loss of biodiversity. Such decisions reflect values derived from incomplete information as well as economic and ethical systems that do not value biodiversity, cultural diversity, or a long-term perspective.

Need: To identify and support economic, ethical and other non-economic incentives that encourage decision-makers to choose to conserve biodiversity even at present-day economic cost.

BSP Goal: To identify and support economic, ethical and other non-economic incentives for conservation of biodiversity at the international, national, and local level.

a. **Objective:** Support analyses of values affecting decision-making about the use and management of biological resources (e.g., analyses of the relationships between conservation success and exploitation for commercial markets, local community participation in resource management, cultural diversity, and distribution of benefits).

b. **Objective:** Disseminate information, recognize indigenous values that support conservation, support public awareness campaigns to reinforce or change values that influence decision-makers' choices to manage resources in a sustainable manner.

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