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May 7, 1990

John P. McAvoy
Regional Contracting Officer
Regional Contracts Office
USAID/Guatemala
2a. Avenida 9-01, Zona 10
01010 Guatemala City
Guatemala

Dear Mr. McAvoy:

CARE, and its Consortium partners, The Nature Conservancy (TNC) and Conservation International (CI), are pleased to submit this proposal for the Regional Environmental and Natural Resource Management Project (RENARM). This proposal responds in an integrated fashion to the four Requests for Assistance (RFAs) presented by the Regional Office for Central American Programs (ROCAP), in the following order of presentation:

- * RFA No. 90-017: Wildlands Management;
- * RFA No. 90-016: Environmental Education and Awareness
- * RFA No. 90-018: Conservation Information
- * RFA No. 90-015: Strategic Planning

CARE, TNC, and CI fully support the objectives of the Project, and are well-qualified to carry out these important activities. We jointly bring to the effort complementary skills, experiences, and institutional relations in Central America in the areas of NGO development, wildlands management, environmental education, conservation information management, and natural resources strategic planning.

CARE has been a leader in sustainable agriculture and natural resources management since 1974. Over the past 16 years, the depth and range of CARE's activities has expanded considerably to include natural forest management, agroforestry, regenerative agriculture, vegetable gardening, aquaculture, and integrated pest management. CARE has country offices and programs in five Central American countries, with a current portfolio of over \$3,700,000 in RENARM-related projects. CARE also has experience in working as lead agency, consortium partner, and sub-contractor in large-scale consortium-managed projects.

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TNC and CI are recognized leaders in the global conservation of biological diversity. The Latin America Division of TNC currently is working with 18 conservation partners and a network of 12 Conservation Data Centers in Latin America and the Caribbean. TNC recently launched the "Parks in Peril" project to develop adequate on-site protection for some 200 critically threatened national parks and reserves in Latin America and the Caribbean that are of global biological significance.

CI has ongoing programs in Costa Rica, Guatemala, and Panama, and is collaborating with Conservation Data Centers in five Latin American countries. CI has been a pioneer in the application of remote sensing data and geographic information systems to conservation and development planning. In February 1990, CI presented "The Rain Forest Imperative," a ten-year strategy to save the earth's most endangered ecosystems.

Through the Consortium formed by these three organizations, we will draw on the broad range of skills and experiences of our respective professional staffs. In addition, other U.S. and international organizations with natural resource experience in the region will serve as Consortium Associates to provide specific technical assistance, training, evaluation and other services to country and regional activities.

This proposal seeks to improve environmental and natural resource management activities in Central America. We present this proposal as a united effort to take advantage of the many linkages and complementarities which exist between the management of protected areas and buffer zones, environmental education and awareness, conservation information and monitoring, and natural resource policy and planning. In addition, we will allocate the available funds to address conservation priorities in the region, rather than attempting to carry out the full range of activities suggested by ROCAP. By bringing together our three organizations in this consortium and integrating the four components of the RENARM project, we anticipate a more efficient use of funds and improved results than would be the case if the components were to be implemented separately.

The Consortium members will closely coordinate and integrate the four components of the RENARM Project. However, each member will have lead responsibilities to carry out the proposed activities of this proposal, as follows:

- o Project Administration: CARE
- o Wildlands Management: The Nature Conservancy
- o Environmental Education and Awareness: CARE
- o Conservation Information: The Nature Conservancy
- o Strategic Planning: Conservation International

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The overall strategy of this proposal is to work in full partnership with local non-governmental organizations (NGOs) in order to strengthen their capacity to address critical environmental and natural resource management issues. We have designed a "bottom-up" approach for project implementation which requires an initial phase of intensive consultation in the region to identify key problems and define effective solutions. Hence, this proposal outlines a preliminary set of activities that may be modified to fit the concerns of local NGOs, communities, and natural resource agencies. We seek to enhance local skills and experiences through intensive technical assistance and training efforts at all stages of the project. Furthermore, the Project will entail close consultation with USAID Missions, and will foster linkages with other ROCAP/RENARM activities, as well as with other USAID natural resource projects in the region.

Our consortium acknowledges ROCAP's requirement for a one-to-one match of project funds. Over the life of the project, we will directly invest Consortium funds in our local partners, and will endeavor to reduce the amount of overhead required to manage project activities. We are committed to the objectives of the project and will seek to identify additional funds to outperform the existing matching fund requirement. In the initial phases of the project, we will also focus on long-term financial mechanisms to ensure the sustainability of activities beyond the life of the RENARM project.

The Consortium is committed to working with local communities, national NGOs, government natural resource agencies, and regional and international organizations to accomplish the objectives of the RENARM project. At the discretion of USAID/ROCAP, we are willing to discuss the best possible combination of organizations to make this project a success.

We thank USAID/ROCAP for the opportunity to submit this proposal, and commend your efforts to organize this important initiative.

Sincerely,

R. Bernuth
for Rudy von Bernuth
Vice President, Program



International Program • Latin America Division

May 3, 1990

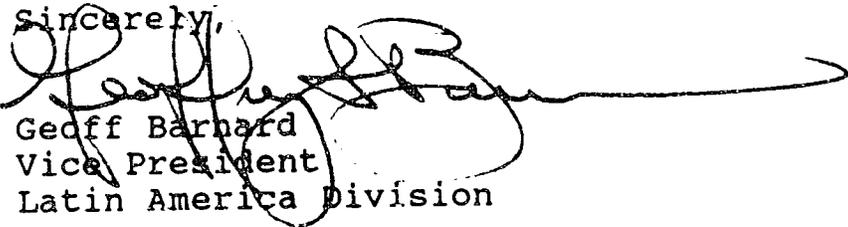
Mr. Rudolph von Bermuth
Vice President, Programs
CARE
660 First Avenue
New York, New York 10016

Dear Mr. von Bermuth:

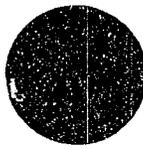
The Nature Conservancy is pleased to participate in the CARE, Conservation International and Nature Conservancy consortium as per our Memorandum of Understanding of May 3, 1990, signed by the three organizations, and as described in the attached proposal "Support to the NGO Component of the Regional Environmental and Natural Resource Management Project" of USAID/ROCAP.

We are enthusiastic about working together and look forward to combining the resources of our organizations through this Project to strengthen the capacities of NGOs in Central America to address their pressing natural resources management needs.

Sincerely,



Geoff Barnard
Vice President
Latin America Division



CONSERVATION INTERNATIONAL

May 2, 1990

Mr. Rudolph von Bernuth
Vice President, Program
CARE
660 First Avenue
New York, NY 10016

BEST AVAILABLE DOCUMENT

Dear Mr. von Bernuth:

Conservation International is pleased to participate in the CARE, The Nature Conservancy, and Conservation International managing consortium as per the Memorandum of Agreement for the Collaborative Implementation of the NCC Component of the RENARU project of AID/RCCAP, signed by our three organizations in May, 1990, and described in the attached proposal, "Regional, Environmental and Natural Resources Management Project for Central America," (REN Nos. 90-015, 90-016, 90-017, 90-018).

We are enthusiastic about working together, and look forward to combining resources to contribute to the strengthening of NCCs in Central America in their capacities to address the region's environmental and natural resource management needs.

Sincerely,

James D. Nations
Vice President
Latin America

JDN:tc

TECHNICAL PROPOSAL
REGIONAL ENVIRONMENTAL AND NATURAL RESOURCES MANAGEMENT PROJECT
FOR
CENTRAL AMERICA

RFA No. 90-015: Strategic Planning
RFA No. 90-016: Environmental Education and Awareness
RFA No. 90-017: Wildlands Management
RFA No. 90-018: Conservation Information

Submitted to:

Regional Contracts Office, USAID/Guatemala
Guatemala City, Guatemala

Submitted by:

CARE
660 First Avenue
New York, NY 10016

and

The Nature Conservancy
1815 N. Lynn Street
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and

Conservation International
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Washington, D.C. 20036

May, 1990

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ATTACHMENTS

- * CARE Agriculture and Natural Resources Strategy
- * Agroforestry Extension Training Sourcebook, CARE
- * "Parks in Peril" Project, The Nature Conservancy
- * "The Rain Forest Imperative" Project, Conservation International

EXECUTIVE SUMMARY

CARE, The Nature Conservancy (TNC), and Conservation International (CI) propose to jointly undertake a regional project to promote the conservation and sustainable use of natural resources in Central America. This proposal is being submitted in response to RFA Nos. 90-015, 90-016, 90-017, and 90-018, developed by the USAID Regional Office for Central America Programs (ROCAP) to support implementation of the Regional Environmental and Natural Resources Management (RENARM) Project. The Consortium members fully support the overall objectives of the four RFAs, and believe that this proposal provides a practical and workable framework for their achievement.

Rationale

The formation of this Consortium, and the decision to develop a proposal integrating all four RFAs, reflects our conviction that comprehensive, integrated approaches are required to effectively address the complex environmental and natural resource management challenges facing Central America. RENARM provides a unique opportunity to take such an integrated approach through coordinated action in wildlands management, environmental education, conservation information, and strategic planning. Integrating these four components will take advantage of their many complementarities, and will provide a more coherent framework for collaboration with local NGO partners. A coordinated approach to project planning and implementation is all the more important in light of the very broad scope of activities called for in the four RFAs, and the relatively limited resources available for their implementation. This places a premium on maximizing coordination and collaboration in order to allocate resources in the most efficient and effective manner.

Care, TNC, and CI have complementary capabilities well-suited to meeting the objectives of the four RFAs. Each organization has extensive environmental and natural resources management experience throughout the Central American region, with on-going activities in Belize, Costa Rica, Guatemala, Honduras, Nicaragua, and Panama. The Consortium has strong ties to NGOs, government agencies, research institutions, and development assistance agencies throughout the region.

The Consortium members' action-oriented, on-the-ground approach to conservation and development is based on a long-term commitment to strengthening local NGO and community capabilities to conserve natural resources and improve social and economic welfare. The Consortium members work in partnership with local

NGOs and adapt their programs to the particular cultural and environmental situations of each country. The Consortium will maximize the amount of resources that go to support project activities in the region. Each group has substantial capabilities to leverage additional funding in support of RENARM activities, and is committed to the continuity of the on-going programs of partner organizations beyond the life of the project.

Project Description

The overall goal of the project is to strengthen the capacity of Central American institutions, particularly NGOs, to plan, implement, and sustain effective environmental and natural resource management programs. Project activities will cut across three broad, interrelated issue areas: protected area management; sustainable agriculture and forestry; and coastal and marine resource management.

The project will follow a participatory, "bottom-up" approach to planning and implementation, in which local NGOs will be the primary implementors. Technical assistance, training, and direct support will be provided for selected activities to be carried out by NGOs, local communities, and other collaborators. Work plans and activities will be designed with local counterparts to ensure an appropriate response to local needs. In this sense, the project will maintain a great deal of flexibility to guarantee long-term partnership and success.

A project design and start-up phase will focus on consultation within the region in order to identify local NGO partners, and to provide a sound basis for the development of detailed work plans. Project management staff will discuss the project with local NGOs and relevant government agencies, ROCAP and the bilateral USAID missions, and other regional and international agencies with environmental and natural resource management activities in Central America. Consultations also will be held with U.S.-based organizations that have ongoing environmental and natural resource management programs in Central America, and/or the potential to contribute to the project.

Pilot protected areas will be selected to cover representative terrestrial, coastal, and marine ecosystems of the region. These areas, and adjacent buffer zones, will provide a geographic focus for project activities. Information dissemination, training, and other means of outreach at the national and regional levels will facilitate the sharing of experiences and lessons learned at the local level, and serve to broaden the impact of the project.

The project will consist of four technical components, which will be coordinated to provide a coherent, integrated approach to environmental and natural resource management challenges in the region. NGO institutional development will be a central concern addressed throughout the project.

(1) Wildlands Management. The purpose of this component will be to integrate the conservation of biological diversity of selected protected areas with the basic needs and economic aspirations of the local communities and nations who depend upon them for continued economic development. Proposed activities will enhance the management of selected protected areas in Central America; integrate protected area management with economic activities in adjacent buffer zones in order to meet the needs of local communities; and develop the institutional capacity and long-term funding mechanisms needed to sustain local management efforts.

(2) Environmental Education and Awareness. The purpose of this component will be to raise awareness and understanding of environmental and natural resource issues, and to promote environmentally sound management of the natural resource base. Proposed activities will develop and adapt appropriate environmental education curricula and resource materials for primary schools; strengthen non-formal environmental education and extension capabilities; and develop the institutional capacity and long-term funding mechanisms needed to sustain local environmental education and awareness efforts.

(3) Conservation Information. The purpose of this component will be to strengthen the basis for informed conservation planning and decision-making at the local, national and regional levels. Proposed activities will increase the quality, availability, and use of conservation information; prepare and distribute improved computer software, manuals, and other training materials; and develop the institutional capacity and long-term funding mechanisms needed to sustain local conservation information efforts.

(4) Strategic Planning. The purpose of this component will be to foster needed changes in national policies and institutions to promote the sustainable management of natural resources. Proposed activities will improve the quality and quantity of information and analysis on the environment and natural resource use in order to strengthen strategic planning; strengthen the role of NGOs in strategic planning and policy formulation; build public and decision-maker consciousness on the economic benefits of sustainable natural resource management and translate that consciousness into sound policies; and enhance the institutional capacity of Central American organizations to plan, finance, and implement strategies to improve natural resource management at local, national, and regional levels.

Project Management

A Management Consortium consisting of CARE as the lead agency, TNC, and CI will have overall responsibility for the design, implementation, management, and evaluation of the regional project in collaboration with local NGO partners. A Regional Coordinator and Assistant Regional Coordinator will be based in the region and will report to the Management Consortium. The Regional and Assistant Coordinators will facilitate project planning and administration, and will provide overall coordination of and support to project activities.

The project will employ a decentralized management structure in which the locus of decision-making will be at the country level. This approach will allow the project staff to be responsive to local conditions, and the management skills of local organizations to be strengthened. The Management Consortium will select a national coordinator in each country to coordinate, guide, and support country-level activities. A lead NGO will be identified in each country to serve as the primary implementor for one or more of the technical components. Country Working Groups consisting of NGOs, government agencies, and other relevant organizations will help ensure broad participation in the project, and will provide a forum for project planning and the sharing of information and experiences.

The Consortium will make every effort to coordinate the activities of this project with those of other environmental and natural resources management programs in the region. CARE, TNC, and CI have an extensive network of contacts with local, regional, and international organizations working in Central America. The Consortium has already engaged in preliminary discussions with many of these organizations regarding potential areas of collaboration and coordination within the project. In addition to promoting information-sharing and collaborative activities, these linkages will help strengthen the capacity of local NGOs to sustain activities beyond the life of the project.

Conditions for Success

Several important assumptions will influence the implementation and achievement of the project's objectives. A critical factor will be the ability of local NGOs and communities to form effective working relationships with involved government agencies. Another assumption is that both USAID and national government administrative and bureaucratic requirements do not impede effective implementation of the Project, and allow for the considerable flexibility needed to meet the needs of local communities and NGOs. A third critical assumption is that local and international NGOs will build the institutional capacity and diversified funding sources required for the long-term sustainability of project activities.

CARE, TNC, and CI welcome the opportunity to work with USAID/ROCAP in the implementation of the RENARM Project, and to assist in developing the capacity of Central American institutions to support the conservation and sustainable management of the region's environment and natural resource base.

I. PROJECT FRAMEWORK AND APPROACH

This proposal is based on the results of preliminary consultations with NGOs, government agencies, research centers, CARE country offices, donor agencies and other individuals and organizations during a four-week reconnaissance trip to Costa Rica, Guatemala, Honduras, and Belize. The proposal also reflects the extensive environmental and natural resource management knowledge and experience of CARE, TNC, and CI in Central America. The Consortium members' ongoing programs in the region, and relations with a broad array of NGOs and other entities, have provided a sound basis for defining this regional environmental and natural resources management program.

A. Rationale

Environmental and natural resource degradation has reached alarming levels in Central America. Throughout the region, increasing population and development pressures have led to a dramatic loss of tropical forests; declining agricultural productivity and widespread pesticide contamination; degradation of critical watersheds and coastal and marine ecosystems; and severe reductions in migratory, endemic and endangered species. Widespread environmental degradation, in turn, undermines economic growth and contributes to social and economic instability.

The current rate of deforestation and degradation of coastal and marine environments in the region is unequalled in its history. Fragile ecosystems representing millions of years of evolution are being overrun by inappropriate land use practices which are not sustainable even in the short run of 3 to 4 years. Poor water and soil conservation practices, extensive deforestation for agriculture and livestock grazing, growing landless populations, and short-sighted economic policies are among the major factors accounting for this serious situation.

Healthy terrestrial and marine ecosystems provide the underlying basis for the Central American region's environmental health and sustained economic growth. The continued degradation of this irreplaceable natural capital threatens the region with an impoverished future. Action is urgently needed to reverse these trends, and to promote the sustainable management of vital natural resources.

The formation of this Consortium, and the decision to develop a proposal integrating all four RENARM RFAs, reflects the conviction of CARE, TNC, and CI that comprehensive, integrated approaches that combine conservation and development objectives are required to effectively address the complex environmental and natural resource management challenges facing Central America. RENARM provides a unique opportunity to take such an integrated

approach through coordinated action in wildlands management, environmental education, conservation information, and strategic planning.

Care, TNC, and CI have complementary capabilities well-suited to meeting the objectives of the four RFAs. Each organization has extensive environmental and natural resources management experience throughout the Central American region, with on-going activities in Belize, Costa Rica, Guatemala, Honduras, Nicaragua, and Panama. The Consortium has strong ties to NGOs, government agencies, research institutions, and development assistance agencies throughout the region. RENARM will allow CARE, TNC, and CI to build upon and expand their shared commitment to promoting environmentally sound development in Central America.

B. Major Goals and Objectives

The Consortium members fully support the overall objectives of the four RFAs. The need to integrate conservation and development objectives is gaining widespread attention and acceptance. However, practical action to put theory into practice remains limited. Through this project, the Consortium will endeavor to move beyond the rhetoric of "sustainable development" by linking conservation and development objectives at the field and policy levels. The project will help develop and test innovative approaches to natural resource management "on the ground," while simultaneously seeking to improve the institutional framework for the sustainable management of natural resources. Project activities will cut across three broad, interrelated issue areas: protected area management; sustainable agriculture and forestry; and coastal and marine resource management.

Specific objectives will be to:

- * Integrate the conservation of biological diversity of selected protected areas with the basic needs and economic aspirations of the local communities and nations who depend upon them for continued economic development;
- * Raise awareness and understanding of environmental and natural resource issues, and promote sustainable natural resource management practices, through effective environmental education and extension programs;
- * Strengthen the basis for informed conservation planning and decision-making at the local, national, and regional levels through the improved availability and use of conservation information;

* Foster changes in national policies, laws, regulations, and institutions that improve the conditions for sustainable management of natural resources;

* Strengthen the capacity of Central American institutions, particularly NGOs, to plan, implement, and sustain effective environmental and natural resource management programs.

* Improve inter-agency and international cooperation in managing Central America's environment and natural resources.

C. Methodology

To achieve these objectives, a number of principles will guide the planning and implementation of the project.

1. Participatory, "bottom-up" approach

The project will follow a participatory, "bottom-up" approach to planning and implementation, in which local NGOs will be the primary implementors. Technical assistance, training, and direct support will be provided for selected activities to be carried out by NGOs, local communities, and other collaborators. Work plans and activities will be designed with local counterparts to ensure an appropriate response to local needs. The active involvement of participating communities and NGOs in project monitoring and evaluation will provide a feedback mechanism to strengthen, improve, and promote successful activities. In this sense, the project will maintain a great deal of flexibility to guarantee long-term partnership and success.

2. Local capacity-building

Through a combination of formal training mechanisms and a "learning-by-doing" approach, the project will focus on developing and strengthening the capacity of local institutions to promote the sustainable management of natural resources. Local communities and NGOs will engage in participatory approaches to identifying their priority needs, which will provide the basis for the design of project assistance. Particular emphasis will be placed on strengthening the operational and organizational capabilities of NGOs to plan, implement, and evaluate natural resource management programs.

3. Targeted field activities

The project will use a targeted approach in allocating resources for field activities in order to achieve maximum impact, and to learn lessons that can provide a sound basis for larger-scale efforts. Geographically-focused activities will develop, test, and demonstrate innovative techniques and

approaches to natural resource management at the local level. The project will seek to build upon the vast, largely untapped storehouse of locally-adapted natural resource management strategies.

4. Integration of project components

Rather than approaching the four components of the project as discrete sets of activities, they will be integrated wherever possible in order to maximize areas of complementarity, and to provide a more coherent framework for collaboration with local NGO partners. A coordinated approach to project planning and implementation is all the more important in light of the very broad scope of activities called for in the four RFAs, and the relatively limited resources available for their implementation. This places a premium on maximizing coordination and collaboration in order to allocate resources in the most efficient and effective manner.

5. Regional dissemination and outreach

Information-sharing and outreach activities will be strongly emphasized in order to maximize the impact of the project. Every effort will be made to communicate and coordinate project activities with other NGOs and with government agencies, regional institutions, and international agencies. The experiences and lessons learned at the local level will provide a guide at the national and regional level for protected area and buffer zone management strategies, environmental awareness and education campaigns, improved use of conservation information in land use decisions, and changes in policy and planning affecting environmental and natural resource management.

A variety of mechanisms will be employed to facilitate information-sharing and to strengthen region-wide expertise in each of the four project components. Country Working Groups consisting of NGOs, government agencies, and other relevant organizations will help ensure broad participation in the project, and will provide a forum for project planning and the sharing of information and experiences. Regional and national training institutions (such as CATIE, the Panamerican Agricultural School, and national universities) will be invited to assist in project technical assistance and training activities. A project newsletter, publications, and mobil training seminars will be used to extend project results. In this way, project resources will be put to maximum effect.

II. TECHNICAL DESCRIPTION

The project will provide technical assistance, training, and direct support for selected activities to be carried out by partner NGOs, local communities, and other collaborators. Work plans and activities will be designed with local counterparts during an initial project planning and design phase to ensure an appropriate response to local needs. Proposed activities and expected outputs are described in this section for the four major technical components of the project:

- * Wildlands Management;
- * Environmental Education and Awareness;
- * Improved Conservation Information Availability and Use;
- * Regional Environmental Strategic Planning, Monitoring, and Information Dissemination

The Consortium, however, firmly believes that a regional project to be implemented in partnership with Central American NGOs must be defined with the full participation of local NGO partners, and in close consultation with government agencies and other relevant local interests. Thus, the activities proposed herein are considered to be preliminary, and will provide a basis for more intensive consultation within the region and the development of a detailed strategy and workplan.

A. Project Planning and Design

The participation of a broad spectrum of Central American and U.S.-based organizations will be critical to project success. An initial project planning and design phase will focus on establishing institutional linkages with partner organizations in Central America and the U.S., and the collaborative development of country work plans to provide a framework for implementation and coordination of the four project components.

1. Project start-up

Following the signing of a Cooperative Agreement with USAID/ROCAP, the Management Consortium will initiate project start-up activities. The Management Consortium will establish an Executive Committee, which will have overall responsibility vis-a-vis USAID/ROCAP for project design, implementation, management, and evaluation. A Regional Coordinator and Assistant Coordinator (hereinafter, the Regional Coordinator) will be appointed to facilitate project planning and administration, and to provide overall coordination of and support to project activities.

The Management Consortium and the Regional Coordinator will initiate a consultative process to facilitate broad participation in project planning and design. In the U.S., the Management Consortium will consult with U.S.-based organizations involved in environmental and natural resource management in Central America. The proposed project activities and management plan will be reviewed, and the potential role(s) of U.S.-based organizations in the project will be assessed.

In Central America, the Regional Coordinator will convene a workshop in each of the participating countries in collaboration with local NGOs. Each workshop will result in the establishment of a country project management structure, beginning with the formation of a Country Working Group. The Country Working Groups will consist of NGOs, government agencies, and other relevant organizations. They will not serve a management function, but will help ensure broad participation in project planning, and will provide a useful forum for information-sharing and coordination throughout the life of the project.

The workshops will contribute to the development of an overall project operational plan for submission to USAID/ROCAP. Final preparation of the operational plan will be the responsibility of the Regional Coordinator, and will be subject to the approval of the Steering Committee. The workshops will also serve to identify the steps needed to design and carry out country assessments and to develop country work plans.

In each country, lead NGOs or other appropriate lead organizations will be selected through a consultative process to manage implementation of each of the four technical components (in some cases, an NGO may be the lead agency for more than one component). Upon mutual consent and discussion, the Consortium will establish a Memorandum of Agreement with each lead NGO which will provide the basis for a sub-contract to cover activities to be performed by the NGO. A National Coordinator will be selected in each country (subject to the approval of the Management Consortium) to coordinate, guide, and support country-level activities. The Consortium and local partner NGOs will define the roles of other collaborating organizations, particularly other local NGOs and government institutions involved in environmental and natural resources management. Section III of the proposal provides more detail on organizational structure, functions, and responsibilities at each level within the project.

2. Regional surveys and needs assessments

In each participating country, teams will be fielded to carry out surveys and needs assessments for the wildlands management, environmental education, conservation information, and strategic planning components. The assessments will focus on identifying ongoing programs in each of these areas and

collecting existing information and materials. The assessments will also focus on identifying the organizational development needs of local NGOs and other partner organizations. This will involve a participatory process of self-analysis by the local NGOs with the assistance of the assessment teams. The country assessments will be carried out in sequence to allow the participation of the Regional Coordinator in each exercise. The assessments are described in more detail under each of the technical components in Sections II.B through II.E.

3. Country strategies and work plans

The country assessments will provide the basis for developing country strategies and work plans. The purpose of the work plans will be to provide an agreed-upon framework for project implementation and coordination. The Country Working Groups will provide a mechanism for translating the results of the assessments into action plans. USAID/ROCAP, the bilateral USAID missions will be invited to comment on the action plans before they are finalized.

B. Wildlands Management

Purpose and Objectives

The purpose of the Wildlands Management component will be to integrate the conservation of biological diversity of selected protected areas with the basic needs and quality of life aspirations of the local communities and nations who depend upon them for continued economic development.

The rapid destruction of the world's biological diversity is nowhere more evident than in Central America. Throughout the region, increasing population and development pressures have led to a dramatic loss of tropical forests, degradation of coastal and marine ecosystems, and severe reductions in migratory, endemic and endangered species. Action is urgently needed to ensure the sustained conservation of the region's imperiled ecosystems. Of primary importance is the need to develop national systems of managed protected areas within integrated land use patterns that are designed to meet all human needs.

Specific objectives of this component will be to:

* Enhance the conservation of biological diversity in Central America through the demonstration and promotion of improved and innovative techniques in protected area and buffer zone management;

* Develop at least one exemplary protected area and surrounding buffer zone in each participating country to serve as a source of lessons learned and training for other protected areas in the region;

* Promote the management of at least one multi-country protected area;

* Ensure that local communities directly participate in and benefit from the management of protected areas and buffer zones;

* Strengthen the capacity of Central American NGOs and other institutions, improve institutional cooperation and collaboration, and develop long-term funding mechanisms to sustain local efforts to manage protected areas and buffer zones;

* Improve regional linkages to increase decision-maker and public awareness on the importance of wildlands, and promote the use of scientific information in the management of protected areas and natural resources.

Proposed Activities and Expected Outputs

1. Regional survey and needs assessment

Protected area and buffer zone management activities will be implemented through local private-sector conservation organizations. In the initial phase of the project, the Consortium will identify appropriate partner NGOs and, through a participatory process, assess their institutional development needs. The institutional assessment will include information on the NGO's history, organizational goals, and strategies; ecosystem conservation experience; human resources, administrative, and financial capacity; and fundraising and income generation abilities.

The Consortium and local partner NGOs, in consultation with governments and USAID/ROCAP, will jointly select a minimum of five (5) pilot protected areas that cover representative terrestrial, coastal and marine ecosystems of the region, including at least one multi-country protected area. An assessment will be completed in each of the participating countries using the following sets of criteria:

(a) Biological significance. The protected areas will be assessed on the basis of biogeographical coverage, size, and ecological integrity. In addition, consideration will be given to unique habitats, and presence of rare, threatened, endangered, and/or migratory species.

(b) Socioeconomic and cultural values. Economic resources of the protected areas and buffer zones (ie., watershed values, wildlife, fisheries, forest products, etc.), local land tenure and resource use, and regional infrastructure and access will be used to evaluate the importance of the area and feasibility of carrying out project activities with local communities. Special consideration will be given to indigenous groups and spiritual relationships with their cultural landscape.

(c) Endangerment. Specific threats to the protected areas will be identified and an attempt will be made to assess the rate of environmental change the area is currently experiencing.

(d) Management opportunity. The feasibility of establishing long-term management for the protected area and buffer zones is a key factor to the success of this project. Careful consideration will be given to the current level of management in each area (eg., personnel, assigned budgets, on-site infrastructure, etc.), existing legislation and inter-institutional coordination, local community participation, and NGO support. In addition, a preliminary cost calculation will be undertaken with the local government resource agency and conservation NGO to determine the costs of on-site protection and long-term management of the area and buffer zone.

The regional survey and assessment will serve to establish a baseline for future project monitoring and evaluation activities. The Project's Regional Information Support Group (RISG) will incorporate the survey information into the Conservation Information Management and Strategic Planning and Monitoring Components' activities. Appendix A contains an illustrative list of potential partner NGOs and pilot protected areas.

Schedule: Years 1 and 2.

Expected outputs will include:

* Local partner NGOs identified, institutional assessments carried out, and memoranda of understanding established;

* National protected area surveys completed in each participating country and conservation information stored, updated, and distributed to decision makers;

* Pilot protected areas and buffer zones selected.

2. Pilot protected area and buffer zone management plans

Community needs assessments and follow-up negotiation will facilitate direct local community participation in the initial stages of the project for all protected areas and buffer zones. This process will help ensure local community involvement in

subsequent planning and implementation of program activities. CARE, in particular, has extensive experience in community organization and participatory planning and assessment techniques. For example, CARE's work in the Sierra de las Minas area of Guatemala demonstrates successful empowerment of local communities to engage in sustainable agroforestry practices.

Local NGOs, with project assistance, will engage local communities in a process of participatory assessment to identify local needs and aspirations as they relate to the natural resource base on which the communities depend. Rapid rural appraisal techniques such as informal interviews, discussions with qualified informants, and focus group interviews will be employed. Criteria used to select priority communities for initial project activities will include community responsiveness, community location and access, ongoing community activities and existing community organizations and infrastructure, and related activities of CARE, TNC, and CI.

The protected area surveys and community assessments will provide the basis for the negotiation and development of joint strategies and management plans for each of the pilot protected areas and buffer zones. The project will involve local government officials and local farmer organizations in this process. Special attention will be directed to involving "informal" local organizations, such as church groups and local schools, that provide a focal point for community action. Two community promoters (a male and a female) will be identified within each community to act as liaisons and promoters of project activities. Yearly operational plans will be defined in collaboration with the partner NGOs, targeted local communities, and government agencies detailing specific programs, activities and budgets to implement the protected area and buffer zone management plans. The roles and responsibilities of all participating entities will be clearly delineated. CI's involvement in La Amistad Biosphere Reserve of Costa Rica will serve as a model for this effort.

Schedule: Years 1 and 2.

Expected outputs will include:

- * Community assessments completed, and target communities and community promoters selected, in each of the pilot protected areas and buffer zones;

- * A long-term strategy and management plan developed for each pilot area by the local NGO, with significant community and government agency input.

3. Protected area and buffer zone management

Protected area and buffer zone management activities will include, but will not necessarily be limited to, the following:

(a) Wildlands design. The Project will identify priority sites and review the design of the selected protected areas and buffer zones to ensure the optimal location, size, and configuration of the management unit for the conservation of biotic communities and species in a manner consistent with local social and economic needs. The Nature Conservancy's efforts to assist in the design of the recently decreed Maya Biosphere Reserve in Guatemala are an example of these techniques.

(b) Protection. Assistance will be provided for the development of a wide array of techniques for the protection of public and private lands which are adapted to the local land tenure situation. For example: communal forests, extractive reserve concessions, cooperative management agreements, or private reserves are possibilities.

(c) Management. The NGOs, local communities, and government agencies will receive assistance to develop and implement actions for the protected areas and buffer zone management including: training, infrastructure, education, recreation, restoration of degraded lands, recuperation of endangered species, wildfire control, selected harvests, and agroforestry.

The Project will assist in developing local capacity for the long-term management of the protected areas and buffer zones through endowments, privatization of management, nature tourism, proprietary funds, community development funds, and other techniques which generate income and local employment. The Nature Conservancy's involvement in the creation of the Guanacaste National Park Trust Fund in Costa Rica demonstrates a successful technique.

(d) Community Development. The project will strive to use local expertise for income generating activities which are sustainable beyond the life of the project. The project will attempt to "empower" the local communities to be economically self-sufficient in activities which are also ecologically sustainable.

Small grants will be provided to finance community-level sustainable development projects. The funds will be administered by the local communities for projects which they have defined to enhance and reinforce financial and administrative skills. Together with local leadership, the lead NGO will establish the criteria and create an appropriate mechanism for the use of these funds, and will assist the communities in their management.

Technical assistance will be available to support the communities in the actual implementation of activities which directly or indirectly promote conservation, such as: agroforestry and soil conservation, bio-intensive gardens, safe pesticide use and integrated pest management, small-scale processing of forest products, water and sanitation systems, etc. This effort will be linked to other ROCAP projects related to agroforestry, fuelwood, and watershed management.

Schedule: Years 1 through 5.

Expected outputs will include:

* In each of the participating countries, at least one pilot protected area and buffer zone managed;

* One multi-country protected area and its buffer zone managed;

* In each of the pilot areas, at least (5) local communities are fully integrated into the management of the protected area and buffer zone;

* In each of the buffer zones, at least (5) of the surrounding communities practicing sustainable agriculture and natural resource management techniques;

* In each of the pilot protected areas, park management and environmental education infrastructure developed.

4. Training

Technical assistance and training will be done at several levels to support activities in both protected area and buffer zone management. The principle of "training through performance" will be used to provide direct, in-country, on-site opportunities for learning while actually implementing project activities. Target recipients of training activities will include NGO staff, local communities, and protected area personnel.

In each of the five countries, one or more local NGOs will receive training to enhance their administrative and fundraising capabilities, to improve their operational capabilities at the field level, and to provide them with extension techniques and communications methodologies in order to strengthen their capacity to work with local communities. NGO extensionists will receive intensive training in community management.

At the local level, community promoters will be trained in the concepts behind biodiversity conservation, protected area management, communication and extension techniques, community organization, and sustainable agriculture and forestry. Farmers

will be trained in various aspects of protected area management, as well as sustainable agriculture and forest management in the buffer zones. Training will also be provided to strengthen community organization and negotiation skills to improve project sustainability.

Training opportunities offered will include, but not necessarily be limited to, the following:

(a) Training courses. A minimum of (2) regional workshops and (3) mobile training seminars will be developed for NGOs, local community leaders, and government counterparts. Regional and national training institutions (such as CATIE and the Panamerican Agricultural School) will be invited to assist in project technical assistance and training activities. South-south exchanges will be encouraged and facilitated.

(b) Training manual. A manual on protected area and buffer zone management extension training will be developed for use throughout the region by local and international NGOs, government agencies involved in protected areas, natural resource management, and rural development. The manual will be oriented toward the "training of trainers," and will be modelled after the successful "Agroforestry Extension Training Sourcebook" developed by CARE. The manual will be produced in year four of the project, and will be distributed and field-tested in year five.

Schedule: Years 1 through 5.

Expected outputs will include:

- * A regional manual on management of protected areas and buffer zones;

- * 2 regional-level wildlands management workshops;

- * 3 regional wildlands management mobile seminars;

- * Key protected area managers, technicians, community promoters, and farmers will be trained in appropriate natural resource management techniques. At least fifty (50) individuals will receive intensive on-site training to carry on project activities;

- * Non-technical skills in areas such as community organization and negotiation, will be strengthened;

- * In each of the participating countries, one or more local NGOs will have their administrative, fund-raising, and operational capabilities sufficiently strengthened to sustain the protected area management and buffer zone development activities initiated in this component.

5. Coordination, collaboration, and outreach

Every effort will be made to communicate and coordinate project activities with NGOs, community leaders, and government agencies in order to strengthen national and region-wide expertise in protected area and buffer zone management. Partnerships will be encouraged through the Country Working Groups to share experiences and leverage additional resources for the continued support of the protected areas systems throughout the region. In addition, a Regional RENARM Project Bulletin will be produced on a semester basis to integrate the ideas and experiences among the diverse participants and public affected by all components of the project. The USAID NRMS Project Newsletter will be used as a model.

Linkages with other RENARM components

The experiences gained at a local level through the Woodlands Management component will be linked to the other three RENARM project components. This "bottom - up" approach will serve to test basic assumptions about the management of protected areas and buffer zones, and will provide a guide at the regional level for environmental awareness and education campaigns, improved use of conservation information in land use decisions, and changes in policy and planning.

Schedule: Years 1 through 5.

Expected outputs will include:

- * Throughout the region, protected area management strategies and policies are reoriented to emphasize the integration of conservation and local development needs;

- * Scientific principles of biodiversity conservation are applied in NGO and government protected area management programs;

- * In each participating country, institutional linkages are established and strengthened to improve coordination and collaboration between conservation and rural development organizations in the non-governmental and public sectors;

- * Linkages are established between local and regional institutions to permit the sharing of experiences in protected area management.

C. Regional Environmental Education and Awareness

Purpose and Objectives

The purpose of the Environmental Education and Awareness component will be to increase awareness and understanding of environmental issues, and to stimulate attitude and behavior changes as manifested by the adoption of sustainable natural resource management practices in rural areas. The focus will be on formal and non-formal approaches to environmental education and extension. Activities to increase the environmental awareness of the general public and decision-makers will be carried out under the Strategic Planning component.

Environmental education is critical to the promotion of environmentally sound policies, programs, and natural resource management practices in the Central American region. Effective environmental education and extension programs are generally lacking where they are most needed -- in rural areas beyond the often limited reach of central government programs. As a result, little practical knowledge reaches rural populations who could most contribute to environmentally-sound management of the natural resource base. Both formal and non-formal means for extending environmental messages to rural populations, particularly women, must be developed and strengthened.

Specific objectives of the Environmental Education and Awareness component will be to:

- * Develop a cadre of primary school teachers who are informed about environmental issues and conservation practices;
- * Increase understanding of environmental concerns and conservation practices among primary school children;
- * Integrate environmental education curricula and materials into the primary schooling systems of each participating country;
- * Extend appropriate environmental messages to rural communities, particularly women, in order to promote sustainable natural resource management practices;
- * Reduce environmental contamination and pesticide intoxication caused by the misuse of agricultural chemicals;
- * Strengthen the capacity of selected Central American organizations, particularly NGOs, to develop and implement environmental education and awareness programs;
- * Improve local, inter-agency, and international collaboration in environmental education and awareness initiatives in the region.

Proposed Activities and Expected Outputs

Environmental education and awareness activities will be implemented primarily through local private-sector conservation organizations. These efforts will be coordinated with Ministries of Education, natural resource Ministries, local government, and rural extension services.

1. Regional survey and needs assessment

In the initial phase of the project, the Consortium will identify appropriate partner NGOs and, through a participatory process, assess their institutional development needs. This activity will be carried out in close coordination with the Wildlands Management component, and some overlap with the partner NGOs identified in the Wildlands component is likely. The institutional assessment will include information on the NGO's history, organizational goals, and strategies; environmental education and extension experience; human resources, administrative and financial capacity; and fundraising and income generation abilities.

The Consortium and local partner NGOs will jointly undertake an assessment of existing governmental and non-governmental environmental education and rural extension programs in each of the participating countries. Environmental education and extension materials will be surveyed and collected, and assessed for their potential use in project activities. The assessment will also examine the use of appropriate mass media mechanisms, such as radio, for extension of environmental messages to rural populations.

Schedule: Year 1.

Expected outputs will include:

* Local partner NGOs identified, institutional assessments carried out, and memoranda of understanding established;

* National environmental education and extension surveys completed in each participating country, and environmental education materials collected.

2. Pilot area environmental education and extension strategies

Environmental education and extension activities will be focused initially within the pilot protected areas and buffer zones. Strategies will be developed in conjunction with the community needs assessments to be carried out under the Wildlands Management component (described in Section II.B.2). Community-level-dialogue will help ensure that subsequent environmental

education and extension activities are relevant to local needs. The project will involve local government officials and local farmer organizations in this process. Special attention will be directed to involving "informal" local organizations, such as church groups and local schools, that provide a focal point for community action. Two community promoters (a male and a female) will be identified within each community to act as liaisons and promoters of project activities. Yearly operational plans will be defined in collaboration with the partner NGOs, targeted local communities, and government agencies detailing specific programs, activities and budgets to implement the environmental education and extension strategies.

Schedule: Years 1 and 2.

Expected outputs will include:

- * Community assessments completed, and target communities and community promoters selected, in each of the pilot protected areas and buffer zones;

- * Environmental education and extension strategies developed for each pilot area by the local NGO, with significant community and government agency input.

3. Primary school environmental education

Environmental education curricula and materials will be developed and tested within the pilot protected areas and buffer zones in close coordination with activities under the Wildlands Management component. Emphasis will be placed on developing a general environmental education program that can be adapted for use in rural primary schools throughout the region.

Two of the three critical elements in the development of an effective primary school environmental education program will be addressed here -- curriculum and classroom materials. The third factor, trained teachers, will be addressed under training activities in this component.

(a) Curriculum. Curriculum development is of fundamental importance because it provides the basis for classroom materials and teacher training. Input will be sought from classroom teachers, textbook writers, teacher training colleges, and others in developing environmental education curricula. The involvement of teachers will be stressed in order to ensure the local relevance of the curriculum, and to stimulate their commitment. Emphasis will be placed on integrating environmental lessons into the existing curriculum for the physical and life sciences, geography, and other core subjects. This approach will avoid the problem of overloading existing curricula.

(b) Materials. The primary activity in materials development will be the production and dissemination of an environmental education magazine. The magazine will be aimed at educating primary school students and their teachers about environmental and natural resource management issues, and their relationship to population growth, better health practices, improved agricultural skills, and other matters that are useful to students in their everyday life. The magazine will complement primary school curriculum in areas such as geography, natural sciences, and home sciences. Subject matter will be developed in close collaboration with government education ministries. Environmental education magazines aimed at the primary school level -- such as the CARE-sponsored "Pied Crow" magazine in Kenya -- have proven to be a very simple, useful, and cost-effective teaching and awareness-raising tool.

The magazine initially will be published three times a year and will be distributed within the pilot protected areas and buffer zones for testing and refinement. Local artists will be used to help present information in a simple, easily understood fashion through a lively comic book format. Each year, issues will focus on a particular development theme. The magazine will be published in San Jose under the direction of the Regional Coordinator office, with significant input from the Training and Communications Specialist. In addition to primary schools, the magazine will be sent to district education officers and teacher training colleges around the region. The magazine also will be used to supplement the activities of extensionists in the pilot wildlands and buffer zone areas, thereby serving as an effective tool for promoting development. Once established, opportunities to popularize the magazine through mass media outlets such as television and newspapers will be pursued.

Schedule: Years 2 through 5.

Expected outputs will include:

* Environmental education curricula and materials are developed and tested within the pilot protected areas and buffer zones in each participating country;

* An environmental education magazine is developed and adapted for use in each of the participating countries.

4. Non-formal environmental education and extension

This activity will develop and test extension-oriented approaches to non-formal environmental education in the pilot protected areas and buffer zones. Emphasis will be placed on the use of appropriate materials such as visual aids, and methods such as discussion groups and plays, which are often more suitable for poor and illiterate families and would greatly

improve the effectiveness of extensionists. Community activities such as markets, fairs, and festivals will be used to extend environmental messages. Contests among villages will be organized in order to tap local creativity in the development of environmental education materials, and to help gauge the degree to which campaigns are reaching the communities. Special emphasis will be placed on women, who are commonly left out in the dissemination of information and technical assistance.

These activities will be closely coordinated with the protected area and buffer zone management activities under the Wildlands Management component. Key participants will include local NGO partners, community promoters, and government extensionists.

A particular focus under this activity will be a pilot pest management education program in the buffer zones. The purpose of this program will be to significantly reduce pesticide poisonings and unnecessary pesticide use in the pilot areas through the introduction of safe and rational pest control, while maintaining agricultural production and profitability. After identifying the nature of local agricultural chemical contamination problems, the project will develop and disseminate educational materials on safe pesticides and their proper use. Suppliers and commercial houses will be contacted to provide promotional materials and safety equipment that will make farmers aware of the toxicity of agricultural chemicals and encourage their safe use. In collaboration with the Strategic Planning component, government standards on pesticide use will be reviewed, the enforcement of existing prohibitions will be encouraged, and proposals for needed revisions of pesticide policy will be developed. CARE's successful Safe and Rational Use of Pesticides Program in Nicaragua will provide a model for this activity.

Schedule: Years 1 through 5.

Expected outputs will include:

- * In each of the buffer zones, at least (5) surrounding communities are reached by environmental education activities;

- * 50% of farmers in the buffer zones will be trained in integrated pest management and safe pesticide use practices, and banned pesticides will not be used in these areas;

- * The environmental extension and community outreach capabilities of local partner NGOs are strengthened.

5. Training

Technical assistance and training will be provided in formal and non-formal environmental education and extension methodologies. Target recipients of training activities will include NGO staff, local teachers, extensionists, protected area personnel, and community promoters.

Primary school teachers will receive in-service training to increase their awareness of environmental issues, to upgrade their practical skills, and to participate in the development of environmental education materials. Small groups of primary school teachers will attend initial training workshops. These groups will develop teaching ideas based on the materials, which will be tested in the classroom and refined as needed. The initial emphasis will be on integrating topics such as deforestation, soil conservation, water, health and population into the basic science curriculum.

Key NGO staff and community promoters will be trained in the organizational, technical, and communication skills necessary for implementing and supervising effective extension programs. NGOs will develop the organizational capacity to provide the necessary follow-up and supervision in the field to ensure proper implementation and success of newly-introduced conservation practices. This activity will be carried out in collaboration with training under the Wildlands Management component.

Training opportunities offered will include, but not necessarily be limited to, the following:

(a) Training courses. A minimum of (2) regional workshops and (3) mobile training seminars will be developed for NGOs, local community leaders, and government counterparts. Regional and national training institutions will be invited to assist in project technical assistance and training activities. South-south exchanges will be encouraged and facilitated.

(b) Training manual. The experiences and lessons gained from the Environmental Education component will be incorporated into the manual on protected area and buffer zone management to be developed under the Wildlands component.

Schedule: Years 1 through 5.

Expected outputs will include:

- * 2 regional environmental education workshops;
- * 3 regional environmental education mobile seminars;

* Trained Central Americans in the development and operation of formal and non-formal environmental education programs;

* A cadre of primary school teachers trained in the development and application of environmental education materials;

* In each of the participating countries, one or more local NGOs will have their administrative, fund-raising, and operational capabilities sufficiently strengthened to sustain the environmental education and awareness activities initiated in this component.

6. Coordination, collaboration, and outreach

Every effort will be made to communicate and coordinate project activities with NGOs, community leaders, and government agencies in order to strengthen national and region-wide expertise in environmental education and awareness. Partnerships will be encouraged through the Country Working Groups to share experiences and leverage additional resources for the expansion of environmental education programs. In addition, a Regional RENARM Project Bulletin will be produced on a semester basis to integrate the ideas and experiences among the diverse participants and public affected by all components of the project. The USAID NRMS Project Newsletter will be used as a model.

Schedule: Years 1 through 5.

Expected outputs will include:

* An information center and clearinghouse for formal and non-formal environmental education and extension materials is established in each participating country.

* Linkages are established between regional and local organizations to address environmental education and awareness needs.

* In each country, institutional linkages will be strengthened to build upon and improve relationships between NGOs, government agencies, and other organizations involved in environmental education.

* Political support for environmental education programs is strengthened.

D. Improved Conservation Information Availability and Use

Purpose and Objectives

The purpose of the Conservation Information component will be to improve conservation planning by supporting the establishment and improved functioning of national-level centers for conservation information. This closely parallels the on-going effort to establish and support a network of Conservation Data Centers (CDCs) in the region and throughout Latin America and the Caribbean.

The central function of these computerized centers is to gather, analyze, and disseminate information needed by conservation and development planners to make informed decisions. The biodiversity and land use information managed by conservation data centers is of direct in:

- * Identifying areas critical for biodiversity protection;
- * Improving management of existing protected areas and other wildlands;
- * Carrying out environmental impact assessments and help to design ecologically sensitive development projects;
- * Establishing priorities for further biological and ecological research.

Most conservation decisions are made at local or national levels, but ideally should take the regional environmental context into consideration. For this reason, these national-level centers are capable of exchanging information in standardized formats, and through this network linkage have access to regional and global-level conservation information. Conservation data centers using software and methodologies developed and supported by The Nature Conservancy are currently operating in 12 countries of Latin America and the Caribbean, including three countries in Central America (Costa Rica, Guatemala and Panama). The existing data centers within the ROCAP region need strengthening, however, and the CDC network should be extended to include additional Central American countries.

Specific objectives of the Conservation Information component will be to:

- * Enhance the conservation of biological diversity in Central America by improving the ability of in-country information centers to provide up-to-date, reliable information to decision-makers at local, national, and regional levels;

* Strengthen the technical capacity of Central American conservation data centers, and assist them in achieving financial sustainability;

* Establish national-level conservation data centers in at least two additional countries in Central America;

* Improve regional linkages to increase the exchange of information among countries within the region;

* Establish a Regional Information Support Group to provide on-going technical assistance and training to national centers, to function as a regional information clearinghouse, and to provide specific linkages with other RENARM components;

* Promote the use of scientific information as a basis for conservation and development planning, and for wildlands management.

Proposed Activities and Expected Outputs

1. Regional survey and needs assessment

This activity will make existing sources of information better known and accessible to decision-makers through publication of a summary of conservation information resources in the region. It will also provide the detailed institutional analyses needed to determine appropriate institutional hosts for new conservation data centers and their organizational development needs (see Activity #4 below).

A comprehensive country-by-country survey of information sources will be carried out through a process of written queries, interviews, and site visits. The first phase of this survey will focus on identifying all public and private institutions that have conservation information available, as well as the types of information needed by institutions for land use and resource management decisions. An institution/information matrix will be prepared that includes such information as: goals and structure of institution, types of information available (i.e. subject area), form in which information is available (e.g. traditional library, maps, database, aerial photo or satellite image repository), quantity and quality of information, accessibility, analytical capabilities (e.g. image processing, GIS, databasing); and principal contacts. Particular emphasis will be placed on surveying map products available for each country within the region, including standard base map series and thematic maps available by category (e.g. protected areas, soils, geology, forest types, land use, etc.)

To provide the various RENARM project collaborators keys to the most important information, specific information sources will be compiled in a database format. These databases can be queried by users according to a variety of factors, including subject fields and geographic coverage. Information sources to be compiled will include literature (both published and unpublished), maps, satellite and aerial photographs, field surveys, etc.

The country-level surveys will be carried out by national-level data centers wherever possible and will be coordinated regionally by the Regional Information Support Group (or RISG, described under Activity #2 below). The RISG will also be responsible for conducting or contracting out surveys in countries not currently serviced by a national-level CDC. Information identified under this activity will be incorporated via the RISG into the development of strategic planning documents and thematic maps being prepared under the Strategic Planning component.

Schedule: Years 1 and 2.

Expected outputs will include a variety of products summarizing available information in easily understandable and accessible formats for use in educational campaigns, strategic planning, or wildland management efforts, including:

- * A regional institution/information source matrix will be prepared in a database format. These institutional overviews will be published to encourage decision-maker use of information found in different national and regional-level institutions;

- * Computer databases and manual libraries of conservation-related information will be compiled by national-level CDCs. Based upon these databases, country-level bibliographies or indexes will be prepared and distributed;

- * Continuously updated databases and map products will incorporate protected area surveys conducted by the Wildlands Management component. These databases will form the basis for updated protected area directories to be distributed periodically;

- * Existing conservation and land use information will be identified for the preparation of a series of thematic maps as part of the Strategic Planning component;

- * The status of biological diversity knowledge in the different countries will be summarized to provide guidance for future conservation research efforts;

2. Training on data quality and analysis

In order to ensure that information made available to decision-makers is of the highest quality, rigorous data quality control standards must be met. This is especially important when using computer databases, since errors introduced into such systems can be difficult to detect and consequently perpetuated. This activity will provide for training and technical assistance aimed at improving data quality and availability, and to help develop the institutional capacity needed to sustain local conservation information efforts.

(a) Regional Information Support Group. On-going training and technical assistance is critical to the successful functioning of the in-country data centers. This is particularly important as methods are enhanced, and as new software and analytical tools are developed (Activity #3). Furthermore, continued standardization of data formats among centers is necessary to facilitate information exchange. These training and technical support services will be provided largely by a Regional Information Support Group (RISG) that will be established in the region.

A central tenant of the Conservation Information component is to increase the capabilities of in-country institutions to effectively manage and use conservation information. For this reason, existing data centers will be used to carry out proposed activities to the extent possible, including cross-training among CDCs. Because of the regional nature of certain activities, however, and the on-going need for training and technical support to existing centers, a Regional Information Support Group (RISG) will be established and staffed with Central American nationals. This Regional Information Support Group will coordinate training and technical support activities to national level data centers, and backstop these national programs with respect to other RENARM activities. This group will also play a pivotal role in coordinating the workshops discussed below. Additional training and technical support needs will be provided by other Consortium staff, in particular TNC's Latin America Science Program and CI's Science Department.

(b) Workshops. Three regional workshops will be carried out to increase the exchange of information among data centers, and increase interaction and opportunities for data review with the scientific community. In collaboration with the Strategic Planning component, a series of national-level decision-maker workshops also will be held to familiarize decision-makers with information resources available to them.

The following regional workshops are planned:

Regional conservation information workshop. This workshop will establish procedures and workplans for carrying out activities under this project component; to share and apply lessons learned from existing CDC installations and other information management activities in the region; to discuss technical and methodological issues including data capture, quality control, and analysis; and to assess user community needs, and develop appropriate outreach and information dissemination strategies.

Schedule: Year 1.

Conservation science workshop. This workshop will bring together leading Central American biodiversity researchers with national and regional conservation information management specialists. This workshop will provide a forum for review of information being developed by in-country centers (improving quality control), will help determine regions and sites of highest biological priority, and will assess future conservation science information needs to be addressed by in-country centers.

Schedule: Year 2.

CDC network technical session. This workshop will allow for cross-training, sharing of experience, and information exchange among data center staff from throughout the region and other parts of Latin America and the Caribbean. This Technical Session will represent the 6th in an on-going series of such network-wide workshop sponsored by The Nature Conservancy and will address such topics as technical and methodological issues, effective outreach and information dissemination activities, strategic planning, program continuity and financial sustainability.

Schedule: Year 3.

National-level workshops will consist of:

Decision-maker workshops. A series of national-level workshops will be held in conjunction with the first round of decision-maker workshops to be carried out under the Strategic Planning component. Their purpose will be to increase the use of conservation information by governmental and non-governmental decision-makers by giving them an opportunity to become familiar with the capabilities of and data available through CDCs and other institutions that manage conservation information. This will also facilitate the inclusion in these strategic planning workshops of the most up-to-date information available for making policy decisions.

Schedule: Years 2 and 3.

Expected outputs will include:

- * Training in data quality control and analysis, and technical support services will be provided to existing and newly established CDCs;

- * Three regional workshops will be carried out to improve data quality control and analysis, and help review information developed;

- * The exchange and review of information will be facilitated and appropriate regional strategies for information collection, analysis, and dissemination developed;

- * Decision-makers will be informed of the variety of information available through CDCs and other sources, facilitating incorporation of conservation data into the planning process;

- * Data and CDC products will be disseminated to key decision-makers for use in environmental initiatives in the region;

- * Interactions between conservation information managers and the scientific community will be strengthened, and conservation science research priorities better defined;

3. Preparation and distribution of software and manuals

This activity will allow computer software, manuals, and other training materials to be improved to better meet the needs of data centers in the region. Assuring that standardized materials are available will facilitate the exchange of information and increase the usefulness of CDC services throughout the region.

The Nature Conservancy's computer software, documentation, and training materials form the basis of the operations of the conservation data centers. These materials have been continuously updated and refined over the last 15 years to meet the needs of the conservation and development community. The Biological and Conservation Data (BCD) system represents the sixth generation of computer systems developed and supported by The Nature Conservancy. This micro-computer software provides a standardized system that facilitates information exchange between centers, while allowing individual centers to make adaptations to meet specific needs. With over 75 installations throughout the western hemisphere, the system is available in both Spanish and English-language versions. Operational manuals covering methodological activities and computer use are also available in both languages, and have now been incorporated into the software system itself as on-line instructional screens, greatly

facilitating the use of the system. Upgrades of software and manuals are produced on a regular basis.

This project activity will allow the BCD software system, documentation, and CDC training manuals to be improved and updated in response to specific needs of the Central American region. As local needs are determined there are three levels at which the software system can be refined: the systems can be adapted locally through development of specialized databases; through the use of optional fields supplied in otherwise standardized databases; or, if the modifications are widely applicable, these can be incorporated system-wide through the formal review and modification process of the core software.

Methodology enhancement to improve the ability of CDCs to meet the unique challenges of conservation information management in Central America is also an important part of this activity. Enhancements to the system that are currently underway include: the development of techniques for integrating satellite imagery, aerial photography and videography, and targeted ground surveys into Rapid Ecological Assessments (REAs); expansion and improvement of databases useful for management of wildlands and protected areas; development of biological collections databases; and improvement of linkages with Geographical Information Systems (GIS) and image processing systems (e.g. ERDAS, MIPS). Additional enhancements would be developed collaboratively by the national-level CDCs, the Regional Information Support Group, The Nature Conservancy, Conservation International, and other RENARM collaborators.

Schedule: Years 1 through 5.

Expected outputs will include:

- * Enhancements to conservation data center methods designed to meet specific local, national, and regional conservation and development needs, and particular needs of the RENARM project;
- * Continued development of and improvement to the Biological and Conservation Data (BCD) system software, including continued development of linkages between the BCD and other relevant databases, GIS, and image processing systems;
- * Improvements to operation manuals (both methodology and software) and further incorporation of manuals into an on-line computer format;
- * Installation of BCD software and distribution of manuals to new CDCs; continued upgrading of software and manuals in existing centers.

4. Support to national conservation data centers

This activity will help provide decision-makers and other audiences high quality, useful conservation information through the establishment of new national-level conservation data centers and through on-going technical support and training to new and existing CDCs.

Material support, training, and on-going technical assistance are essential for conservation data centers to become fully functional, and ultimately self-sufficient financially and technologically. This activity will allow for the provision of material and technical support and training to new conservation data centers, as well as for on-going technical assistance to existing centers. These activities will be carried out in large part by the Regional Information Support Group, with assistance from other consortium members, principally TNC's Latin America Science Program.

(a) Establishment of new conservation data centers. The most critical factor in the successful operation of a conservation data center is the selection of an appropriate host institution. Institutional analyses of potential CDC hosts will be carried out in Belize, El Salvador, and Honduras, the three ROCAP countries that currently lack data centers. The institutional analyses will be conducted in conjunction with the country-level information survey (Activity #1). This analysis includes such factors as institutional mission, conservation information generation and analysis capabilities, relationship to decision-makers, to information generators (universities, mapping agencies, museums, etc.), and to the national and international conservation community, long-term financial solvency and prospects for assuming program support, and relationship to other RENARM activities. This institutional analysis process will provide USAID/ROCAP and the consortium with strong justification before investing in new CDC establishments.

Once appropriate institutional hosts have been identified, negotiations can take place with the institution's management to clarify such issues as staffing needs, operational financing, long-term continuity, and provision of training and technical assistance. Project funds will be available to provide certain needed equipment for these CDC start-ups.

(b) Strengthening of existing data centers. The ability of existing centers to provide high-quality useful information is dependent upon trained personnel, adequate operational support, and a commitment to establishing linkages and providing needed information to appropriate user groups. Limited financial support will be available through this project activity to strengthen existing CDCs in Costa Rica and Guatemala. This will include upgrading computer hardware and software to keep current

with system enhancements. In order to maximize the effectiveness of this support within the RENARM project context, additional support will be related to specific project activities wherever possible, for example the completion of national-level information surveys (Activity #1), participation in or sponsoring of training events or workshops (Activities #2 and #5), and carrying out needed information management work regarding environmental monitoring and information dissemination (Strategic Planning) and pilot wildlands (Wildlands Management).

Schedule: Years 1 through 3.

Expected outputs will include:

- * Institutional analyses regarding the establishment of additional CDCs in ROCAP countries will be completed;

- * Based upon the results of these institutional analyses and other factors at least two new conservation data centers will be established in ROCAP countries lacking these programs;

- * New and existing CDCs will be strengthened by the provision of material support;

5. Coordination, collaboration, and outreach

This activity will promote the dissemination of information to RENARM project collaborators, and decision-makers at local, national, regional, and international levels.

A central mission of conservation data centers is to disseminate information and promote its use by the various agencies and institutions involved in conservation and development decision-making. The support and establishment of these national-level conservation information "clearinghouses" particularly will increase the accessibility of information to decision-makers and researchers at national and local levels.

Conducting the RENARM project as a consortium between CARE, TNC, and CI will greatly facilitate coordination between this and other RENARM components. Conservation data centers benefiting under this project will be well suited to coordinating closely with other RENARM components as well as with US AID missions. The Regional Information Support Group, staffed jointly by TNC and CI will establish a continuum between information generation activities and strategic planning and monitoring. This organizational structure will guarantee the full integration of activities carried out under the Conservation Information and the Strategic Planning components. This group will also be responsible for ensuring that conservation information activities are responsive to other RENARM components.

The Strategic Planning, Monitoring and Information Dissemination component will be a particular focus for coordination since the preparation of thematic maps and county overviews of that component will rely heavily on information identified under Activity 1 of this component. The comprehensive assessment of wildlife species endangerment statuses by the CDCs will be directly applicable to the review and implementation of wildlife protection policies and legislation.

The needs of the Wildlands Management component will provide a focus for specific activities of the national-level conservation data centers. These CDCs will be able to direct their analytical capabilities towards these pilot wildlands and actively develop biological and ecological information relevant to local management efforts.

The compilation and analysis of conservation information will also directly assist with the Environmental Awareness initiative by providing detailed biological and ecological information for use in popular publications or educational curricula. In addition, CDCs work very closely with Universities, and it is anticipated that there will be active collaboration under the details of the yet unreleased Regional Training and Research RFA.

Expected outputs will include:

- * Specific workplans and projects will be developed with existing and newly established CDCs to address the information requirements of RENARM project collaborators;

- * Publication and distribution of the information sources survey will provide planners and land use managers concrete tools for accessing conservation related information;

- * The workshops planned under activity 2 will be a primary avenue of publicizing the availability of these information resources;

- * Each individual data center will be encouraged to aggressively develop an effective outreach capability relying upon brochures, publications, seminars, and personal contacts with researchers and decision-makers;

- * Essential information for the management of pilot wildlands will be provided to park and buffer zone managers;

- * Information necessary for the preparation of country-level overviews and thematic maps will be incorporated into the Strategic Planning activities.

E. Regional Environmental Strategic Planning, Monitoring, and Information Dissemination

Purpose and Objectives

The purpose of the Strategic Planning component will be to promote reforms in national and regional policies, laws, regulations, and institutions that will lead to the sustainable management of natural resources in Central America. Strategic planning activities will be closely coordinated with and build upon those under Wildlands Management, Environmental Education, and Conservation Information, and will complement the "Natural Resources Policy Initiatives" component also being implemented under RENARM, which will address a wider range of environmental policy issues.

Central Americans increasingly realize that, just as their national economies are tied to the world economy, so also are their national environments tied to those of the countries that border them. Damage to an ecosystem in one Central American country frequently means damage to those of a neighboring country as well.

A few pertinent examples:

* In Belize, Guatemala, and El Salvador, watersheds shared with another country occupy more territory than watersheds controlled by the individual countries alone. Deforestation in one country can mean environmental degradation for its neighbors;

* Forty percent of the surface water in Central America is carried by rivers that pass through more than one nation. Environmental pollution in one country produces degradation of agriculture and coastal zones in another;

* Refugees from environmental degradation and civil strife are flowing across Central America's borders: Guatemalans and Salvadorans become slash-and-burn farmers in Belize, Nicaraguans colonize and deforest the Rio Platano Biosphere Reserve in Honduras;

Natural resource specialists in Central America understand that they must focus on finding regional solutions to regional problems of resource management. Dialogue and coordinated actions toward this end are currently underway through regional groups such as CATIE, CCAD, and REDES.

However, these regional organizations are finding it difficult to influence activities at the national level where laws and institutions actually function. Thus, the Strategic Planning component will focus on providing crucial information on natural resource management within national boundaries, to

monitoring changes in national land use, and to identifying and promoting needed reforms of national laws and policies that lead to mismanagement of natural resources. These national efforts -- which will emphasize positive input from the NGO community -- will enable the Central American countries to produce a regional strategy that is based on accurate information on how natural resources are being utilized, and how national strategies and policies affect the region's environment as a whole.

Specific objectives of this component will be to:

- * Improve the quality and quantity of information on the environment and the use of natural resources within each participating country;

- * Facilitate strategic planning on priority issues that affect wildlands management, wildlife trade, sustainable agriculture and forestry, and coastal zone management;

- * Establish dialogues between NGOs and private and public sector institutions on issues affecting the sustainable management of natural resources;

- * Build public consciousness on the economic benefits of sustainable natural resource management and the threats to that sustainability;

- * Translate increased awareness into sound policies and regulations on the management of the environment and natural resources at the national and regional levels;

- * Enhance the capacity of Central American organizations to plan, implement, and finance strategies to improve natural resource management at local, national, and regional levels, and strengthen their capacity to sustain the activities begun through this project.

Proposed Activities and Expected Outputs

1. Natural resource management strategy papers

Within each participating country, one or more non-governmental organizations will be commissioned to develop national strategy papers that focus on priority natural resource management issues. The strategy papers will provide overviews and analyses of policies, laws, regulations, and institutions affecting natural resource management, and will present viable options for their improvement. The NGOs will compile the necessary information and conduct interviews required to produce draft national strategy papers. Specialists from the consortium and potential collaborators will provide guidance, assistance, and information for the production of the strategy papers.

Each strategy paper will identify and analyze relevant national policies and associated laws and regulations. National agencies responsible for implementing these policies will be reviewed, and their role in the management of natural resources and natural ecosystems will be assessed. Each paper will recommend changes and alternatives to limit environmental degradation and to improve the management of natural resources. Potential topics include:

(a) Wildlands management. The paper will draw on existing information in each country on wildlands management, and on new information being generated under the Wildlands Management and Conservation Information components. The paper will include a directory of national protected areas and suggested policy and institutional reforms to improve wildlands management, as well as discussions of ecotourism, the role of the private sector in funding and implementation, and innovative funding mechanisms such as debt-for-nature swaps.

(b) Wildlife conservation and illegal trade. The paper will focus on policy, legislative, and institutional changes required to improve the conservation of endangered species and biological diversity with respect to controlling the illegal trade of plants and animals across borders.

(c) Coastal zone management. The paper will focus on incentives and disincentives affecting the conservation and use of mangroves, coral reefs, and fisheries, and will recommend changes to improve their management on a regional and national basis.

(d) Colonization and land speculation in forest lands. The paper will analyze colonization, land speculation, land tenure, and other land use policies, laws, regulations, and institutions that impact forest land and resource use, and either aid or hinder the development of sustainable agriculture and forestry practices, particularly with respect to protected areas and buffer zones. Environmental monitoring activities, especially remote sensing, will be used to support the analysis with accurate, up-to-date information on regional trends.

(e) Cross-border environmental issues. The paper will focus on cross-border resource management issues including environmental pollution, shared hydroelectric resources, coastal and marine resources, the cross-border flow of Central American refugees, and on treaties and international conventions that govern cross-border environmental problems.

(f) Multi-country protected areas. The paper will focus on activities and reforms needed to improve the planning and management of existing and proposed international parks: (i) in Guatemala, on proposed international parks with Belize and

Mexico, and with El Salvador and Honduras; (ii) in Honduras, on proposed bi-national parks with Guatemala; (iii) in Belize, on proposed bi-national parks with Guatemala; (iv) in Costa Rica, on the existing La Amistad bi-national park with Panama, and the proposed bi-national park with Nicaragua; (v) in El Salvador, on the existing tri-national park with Guatemala and Honduras.

(g) Sustainable forest management. The paper will analyze policy changes required to promote improved forest management, sustainable logging, and extractive reserves, including the harvest of non-timber forest products from buffer zones and multiple-use zones of protected areas.

(h) Population growth and natural resource management. The paper will analyze the potential relationship between population growth, natural resource use, and environmental degradation, and policies and institutions affecting population growth and planning.

Schedule: Years 1 and 2.

Expected outputs will include:

- * Draft strategy papers that increase knowledge and awareness of the linkages between existing policies and natural resource degradation, and that recommend needed policy and institutional reforms to promote the conservation and sustainable use of natural resources;

- * In each participating country, one or more NGOs will have their capabilities in policy analysis strengthened.

2. Monitoring of deforestation and environmental degradation

In collaboration with the Regional Information Support Group, organizations in each participating country will produce new and integrated information on current trends in natural resource use and degradation through the use of remote sensing data, environmental monitoring, and geographic information systems. This activity will build and maintain the information management capabilities of national and regional institutions, and enable them to conduct strategic planning in support of sustainable development and natural resource conservation.

Concurrent with the development of the national-level strategy papers, Central American Conservation Data Centers and other organizations will be trained through the Regional Information Support Group and assisted in the production and analysis of biological and environmental information. Existing information identified through the Conservation Information component will be combined with new remote sensing and ground-truthing data to monitor trends in deforestation, coastal zone

degradation, and land use in critical areas, particularly in critical watersheds and the target protected areas under the Wildlands Management component.

Two major problems complicate the effective production of biological and environmental knowledge for use in natural resource planning and management: (1) the lack of personnel trained to design, execute, and utilize environmental information for strategic planning; and (2) the lack of adequate integration of existing information to support resource management and conservation planning.

To address these constraints, key personnel will be trained in information integration and planning techniques. Training will focus on developing the capabilities of key staff in existing Conservation Data Centers and other institutions within the target countries, and strengthening the Regional Information Support Group proposed under the Conservation Information component (see Section II.D.2). A regional training course will be carried out in geographic information systems (GIS) and its application to strategic environmental planning. As an example, staff of the Costa Rica National Biodiversity Institute and the La Amistad Biosphere Reserve recently completed a Conservation International-sponsored GIS training course in Costa Rica in March 1990.

Information gathered through the survey of regional information sources under the Conservation Information component will be used to produce thematic maps and documents for strategic environmental planning at the national level. A model of this type of planning document was produced in 1988 for Costa Rica by the Fundacion Neotropica and Conservation International -- Costa Rica: Assessment of the Conservation of Biological Resources. Production of these planning documents will be executed at the national level with technical assistance from the Regional Information Support Group. Additional project personnel will be contracted at the national level and attached to the NGO or data center responsible for completing the activity. In this manner, local NGOs will upgrade their understanding and capacities in the process of strategic environmental planning.

Satellite imagery and field surveys will be used to monitor land use changes and wildland conversion. The results from these activities will be used to continually update strategic planning information at the national level (a feedback process). An example of this type of activity is the recently completed national-level land cover and deforestation analysis for Guatemala.

The regional capability at CATIE in image processing should be the institutional focus for the processing and dissemination of regional monitoring activities, with coordination and oversight from the Regional Information Support Group. Utilizing regional capacity to produce such assessments will improve the quality of results due to better field verification, as opposed to depending on extra-regional international consulting firms.

Schedule: Years 1 through 5.

Expected outputs will include:

- * Establishment of the Regional Information Support Group (in collaboration with the Conservation Information component);

- * Personnel trained at national and regional levels in the techniques of information integration, planning, and strategic document production;

- * National-level thematic maps and planning documents that address environmental and natural resource policies and management issues from the strategic planning perspective;

- * The consolidation of existing data and production of new data to document and analyze trends in deforestation, coastal zone degradation, and land use in wildland areas;

- * Establishment of a regionally-based monitoring program that can produce updated information on land use and deforestation from satellite imagery, coordinated by the Regional Information Support Group;

- * Dissemination of data needed to support reforms in government policies, regulations, and institutions through media campaigns and scientific reports.

3. Decision-maker workshops

National workshops will be held to increase decision-maker awareness of key environmental and natural resource management problems, and to develop appropriate strategies for their resolution. Information produced in the strategy papers (Activity #1), and analysis of monitoring data on deforestation and environmental degradation (Activity #2), will be presented at two national-level workshops in each participating country to provide the basis for producing a "Strategy for Sustainable Natural Resource Management." Additional information for these strategies will be introduced from work performed through the Conservation Information component.

The national workshops will bring together business leaders, government officials, planners, economists, lawyers, political and social scientists, engineers, architects, conservation and development NGOs, and legislators to discuss and revise the commissioned national strategy papers and refine them into a coherent strategic plan. Activities will focus on analyzing major policy issues and on creating awareness among key groups who influence policy debate and reforms needed to improve natural resource management in each country.

The workshops will specifically address the role of women in the use and conservation of natural resources. Emphasis will be placed on identifying new sources of employment for women in natural resource-based industries and the sustainable use of renewable natural resources.

The commissioned NGO(s) will be responsible for incorporating the comments and recommendations from the initial workshops into final versions of the strategy papers. At this point, the revised strategy papers will be integrated by the commissioned NGO(s) into a single, national-level Strategy for Sustainable Natural Resource Management. These draft strategies will detail current conditions within each country, and present recommendations for policy, legislative, and institutional reforms for improve management of wildlands, wildlife, and critical coastal zones. A second round of decision-maker workshops in each country will review and critique the draft strategies, continuing the process of information dissemination and refinement of the proposed recommendations.

The final version of the national strategy document will be widely disseminated within the public and private sectors of each country through a variety of outreach activities. Newspapers, monthly magazines, television, and radio will be used to increase public awareness of environmental problems and to stimulate policy and institutional reforms.

Schedule: Year 3.

Expected outputs will include:

- * A National Strategy for Sustainable Natural Resource Management in each participating country.

- * Broad-based, public debate that leads to increased knowledge and awareness on important policy issues affecting natural resource use and environmental degradation.

4. Regional environmental action plan

The new environmental monitoring information and policy analyses and recommendations contained in the national strategies will be presented at the first of two regional strategic planning workshops intended to facilitate the development of a "Regional Environmental Action Plan for Central America."

The workshop will be organized by regional NGOs (CCAD and REDES), and will be attended by representatives from each of the participating countries. The presentation of the national strategies at a regional level will produce a cross-fertilization of ideas and examples of successes, promote regional cooperation on the sustainable management of natural resources, and promote new international agreements that will attack regional environmental problems on a regional scale.

During the workshop, the national organizations will coordinate their respective strategies to examine the potential for producing a Regional Environmental Action Plan for Central America. This Regional Environmental Action Plan would complement and update data and analysis from the Regional Environmental Profile, called "Natural Resources and Economic Development in Central America." Rather than repeat the information provided in this 1987 report, a Regional Environmental Action Plan will carry that information forward in a logical progression of needed activities.

Returning to their respective countries, national representatives will distribute the draft Regional Environmental Action Plan among key decision-makers, government institutions, and other NGOs for discussion and refinement. Finally, after refining the draft of the Regional Environmental Action Plan, country representatives will hold a second regional strategic planning workshop to produce the final version of the Regional Environmental Action Plan.

This regional action plan will be published in English and Spanish, and will be widely disseminated to promote environmental awareness and to promote changes in policies, laws, and institutions at the regional level. The action plan will include maps with information on protected areas, forest cover, deforestation, rates of degradation of natural resources, as well as a directory of protected areas in Central America. Press releases, media articles, and information packages based on the Regional Action Plan will increase awareness of key decision-makers and the general public.

Schedule: Years 4 and 5.

Expected outputs will include:

- * A Regional Environmental Action Plan for Central America;

- * Increased national and regional awareness of natural resource management issues through media campaigns;

- * Improved use of environmental monitoring data and information for legislative, policy, and institutional reforms;

- * Strengthening of regional capacity in environment and natural resource management;

- * Coordination and collaboration among Central American entities involved in environment and natural resource issues;

- * New international treaties and agreements to improve bi-national and regional environmental problems.

Combined outputs and expected impacts

By building upon the activities carried out under Wildlands Management, Environmental Education, and Conservation Information, and integrating them at the strategic planning and policy level, the Strategic Planning component will help create the conditions necessary for the conservation and sustainable use of Central America's natural resources. This comprehensive approach will produce:

- * Improved national and regional awareness of natural resource policy issues;

- * New legislation that will improve the conservation of natural resources and protected areas within the target nations and within the region as a whole;

- * Improved capacity of NGOs and government agencies to implement and finance policies to improve the management of natural resources;

- * Improved understanding of incentives and disincentives for sound natural resource management;

- * Improved management of protected areas and critical watersheds;

- * Improved monitoring and information on conservation and development projects and programs;

- * Strengthened national and regional capacity to continue monitoring, analyzing, and refining the planning and management of natural resource use and environmental problems;

* Improved inter-agency and international cooperation in the management of Central America's protected areas and natural resources.

F. Monitoring and Evaluation

The Consortium will ensure that effective monitoring and evaluation systems are established that contribute to achieving the project's goals and objectives by:

* Defining valid indicators for measuring progress toward achieving desired outputs and impacts for each of the four project components;

* Ensuring the participation of local NGO and other partner organizations in the process of defining objectives and measuring performance;

* Supporting and reinforcing the integrative nature of this project;

* Facilitating a "learning process" approach to project management.

The regional surveys and assessments that will be carried out under each project component will serve to establish a baseline for future project monitoring and evaluation activities. The Regional Coordinator and the National Coordinators will continuously monitor the progress of the project. The National Coordinators will report on a quarterly basis to the Regional Coordinator, who will compile the reports for submission to the Consortium.

A mid-term evaluation will be held at the start of the third year of the project to provide a thorough review of project results to date, and to identify needed changes in project management and implementation. The evaluation will be carried out by outside evaluators in collaboration with project staff and local NGO partners. A final evaluation will be held toward the end of year five of the project to assess the project's overall impact.

The Consortium will coordinate project monitoring and evaluation activities with those of the specialized firm to be contracted by USAID/ROCAP to help develop key indicators and an overall monitoring and evaluation system for RENARM. CARE, TNC, and CI have extensive experience in monitoring and evaluation activities. Further, the Consortium will benefit from the experiences and lessons learned in CARE's ongoing Agroforestry Monitoring and Evaluation project.

III. MANAGEMENT PLAN

This section proposes an overall management structure for project planning, implementation, monitoring, and evaluation. Other management needs specific to each of the four project components will be defined during the project design phase. The management plan has a number of key elements:

- * Project management will be decentralized, with the primary locus of decision-making at the country level in order to maximize the role of local institutions and responsiveness to local conditions;

- * The primary role of CARE, TNC, and CI will be to coordinate, guide, and support decisions of local partner organizations;

- * Qualified Central Americans will be given first priority in project staffing at all levels, with particular emphasis placed on the recruitment of women;

- * Strong emphasis will be placed on communication, coordination, and collaboration with other RENARM project participants, ROCAP and USAID bilateral missions, and with other organizations involved in environmental and natural resource management activities in the region.

A. Organizational Structure, Functions, and Responsibilities

Project management will be organized at four levels -- U.S., regional, national, and community (an organizational chart is presented at the end of this section).

1. Management Consortium

The project will be administered by a U.S.-based Management Consortium consisting of CARE, TNC, and CI. The Management Consortium will provide project guidance and oversight. CARE, as the lead agency, will chair an Executive Committee consisting of one representative (and a designated alternate) from each of the Consortium members. CARE, TNC, and CI have signed a Memorandum of Agreement outlining the terms of collaboration within the Consortium (see Appendix C). The functions and responsibilities of the Management Consortium will be to:

- * Provide guidance and oversight on project policies, strategies, implementation, and monitoring and evaluation;

- * Coordinate the project activities and technical assistance and other inputs of each Consortium member;

- * Approve annual workplans and budgets;

- * Liaise with USAID/W;

- * Liaise with, and coordinate the involvement of, U.S.-based organizations with ongoing environmental and natural resource management activities in the region;

- * Coordinate joint fundraising activities and ensure that matching fund requirements are met;

- * Oversee the hiring of regional and national-level project management staff.

2. Regional Coordination

At the regional level, a Regional Coordinator and an Assistant Regional Coordinator will be based in the office of the CARE Regional Technical Advisory Team (RTAT) located in the CARE-Costa Rica mission. By basing the Regional Coordinators at this location, they will be able to maintain close contact with the CARE RTAT, ROCAP, CATIE, IUCN, and other regional organizations and donor agencies with offices in Costa Rica. The Regional Coordinators will report to the Management Consortium Executive Committee. The functions and responsibilities of the Regional Coordinator and Assistant Coordinator will be to:

- * Provide overall coordination of RENARM project activities and information-sharing among RENARM project participants;

- * Coordinate with the CARE Regional Technical Advisory Team;

- * Coordinate with ROCAP and bilateral USAID missions;

- * Facilitate/coordinate bilateral USAID mission buy-ins;

- * Coordinate with CATIE, Pan-American Agricultural School, CCAD, IUCN, and other regional organizations;

- * Oversee compliance with project reporting requirements;

- * Provide technical assistance to backstop the national programs;

- * Coordinate regional-level activities such as training workshops, mobile seminars, and information-sharing;

- * Facilitate coordination of activities in multi-country protected areas.

- * Coordinate monitoring and evaluation activities;

3. Country-level management

Country Working Groups

Country Working Groups (CWGs) will be established in each participating country. The CWGs will be composed of local NGOs, relevant government agencies, and other interested entities involved in environmental and natural resources management activities. The CWGs will serve primarily as a coordinating mechanism for the national programs, and as a means for sharing information and experiences. The CWGs will also provide a means for improving linkages between NGOs and government agencies. A National Coordinator will be responsible for operation of the CWGs, including convening and leading meetings, and writing-up and distributing meeting minutes.

National Coordinators

In each participating country, a National Coordinator will be selected by the Executive Committee and the Regional Coordinator in consultation with local NGO partners. The National Coordinator will have both managerial and technical responsibilities, and will be located within the CARE country mission (or perhaps a lead national NGO). The National Coordinator will receive administrative and financial management support from each respective CARE mission. The functions and responsibilities of the National Coordinators will be to:

- * Carry out administrative and financial management tasks with the support of the CARE country mission (disbursement of funds, accounting, financial reporting, procurement, etc.);
- * Coordinate and support the project activities of local NGO partners;
- * Coordinate the Country Working Group;
- * Coordinate national surveys and needs assessments during the project planning and design phase, and the development of strategies and management plans;
- * Liaise with local NGOs, government agencies, the local USAID mission, the Regional Coordinator, and other relevant entities;
- * Assist in project design for bilateral USAID mission buy-ins;
- * Support monitoring and evaluation activities.

Lead NGOs and NGO Project Managers

In each participating country, lead local NGOs (or other appropriate organizations if necessary) will be selected through a consultative process to manage planning and implementation of each of the project technical components (in some cases, an NGO may be the lead agency for more than one component). A Memorandum of Agreement will be developed with each lead NGO. The MOAs will outline operational arrangements under the project, and will provide for sub-contracts to cover activities to be performed by the NGO. Each MOA will be approved by the Management Consortium Executive Committee. An NGO project manager will be selected (from existing staff where possible) for each lead NGO. The NGO project manager will be responsible for overseeing day-to-day project activities within the NGO and will provide technical assistance. The functions and responsibilities of the NGO project managers will be to:

- * With technical support, develop annual implementation plans;
- * Supervise the use of project resources;
- * Hire and supervise community extensionists;
- * In collaboration with communities, select the community promoters;
- * Manage the community development funds;
- * Oversee the implementation of community-based activities in the pilot protected areas and buffer zones;
- * Provide technical assistance to park personnel and community leaders;
- * Organize/execute training events to support in-country activities;
- * Carry out monitoring and evaluation activities.

4. Local communities

Active community participation will be an intrinsic part of project management.

NGO extensionists

To help facilitate community participation, an extension arm will be set-up within the NGO(s) responsible for the Wildlands Management and Environmental Education components. Although the extensionists will be paid employees of the NGO(s), they may be

recruited from qualified local residents in the vicinity of the pilot protected areas and buffer zones. The functions and responsibilities of the extensionists will be to:

- * Provide technical assistance to community promoters and farmer participants;

- * Identify a local community-based organization to manage the community development funds, and oversee their use;

- * Train community promoters, farmer leaders, and teachers in regenerative agriculture, sustainable forestry, protected area management, pesticide safety and alternative pest management strategies, and environmental education;

- * Help community promoters organize group activities;

- * Facilitate the sharing of experiences between communities;

- * Assist in monitoring and evaluation at the community level;

Community promoters

Two "community promoters" will be selected from each participating community, one of which will be a woman. With the support of the extensionists, the community promoters will provide a vital link between the project and the communities. The functions and responsibilities of the community promoters will be to:

- * Articulate community needs and interests;

- * Organize communities to participate in training events and other project activities;

- * Help supervise the use of community development funds;

- * Facilitate the sharing of experiences within the community;

- * Assist extensionists in monitoring and evaluation activities;

Communities

The functions and responsibilities of the communities will be to:

- * Help select candidates for community promoters;

- * Identify community needs, interests, and opportunities;

* Participate in the development of management plans for the pilot protected areas and buffer zones;

* Participate in monitoring and evaluation activities.

B. Administrative Arrangements

Administrative arrangements will be established at the Consortium, regional, and national levels.

1. Consortium

CARE, as the lead agency, will provide administrative support on behalf of the Consortium. CARE-USA headquarters will be accountable for managing USAID/ROCAP funds and CARE's contributions towards the matching requirement.

In addition, the headquarters of each Consortium member will provide the necessary administrative support in financial accounting, personnel, communications, etc. in accordance with their lead responsibilities for each project component.

2. Regional

CARE-Costa Rica, through the RTAT office, will provide administrative support for the Regional Coordinator, Assistant Coordinator, and Training and Communications Specialist.

Expenditures to support regional activities will be handled by CARE-Costa Rica for CARE-managed funds, by TNC headquarters for TNC-managed funds, and by CI headquarters for CI-managed funds as per contractual arrangements.

3. National

Each respective national CARE office will provide administrative support to the National Coordinator as detailed in the Functions and Responsibilities section above.

The lead local NGO for each project component will provide the necessary administrative support for the NGO project manager and other project staff, such as the community extensionists.

C. Logistical Support

Vehicles will be purchased to support field operations. Estimated vehicle expenditures are based upon personnel and field activities. These may change, depending upon staffing levels and other requirements.

Depending upon needs and circumstances, community promoters may receive either bicycles or horses/mules to help support activities in isolated areas. These items would also serve as an incentive for their participation.

D. Technical Supervision and Support

CARE, TNC, and CI will have overall responsibility for the technical quality of project activities. Each organization has existing in-house capacity to provide needed technical assistance to support activities within the project components. This assistance can be called upon as needed to strengthen project operations.

Operational arrangements with U.S.-based NGOs and other relevant organizations will be established at two levels: through sub-contracts with the Consortium to provide services at the regional and field level; and by seeking to inform and involve other U.S.-based NGOs through meetings and other means. The Consortium will seek to establish agreements with participating USG agencies (such as the Peace Corps and the National Park Service) and universities to provide technical and research support.

At the regional level, the project will provide the country programs with technical assistance through the Regional Coordinator and Assistant Coordinator, the Training and Communications Specialist, the Regional Information Support Group, and the CARE RTAT. The project will seek technical assistance support from the ROCAP technical assistance team. The Consortium will also seek to establish an agreement with CATIE and the Pan American Agricultural School (Zamorano) to identify technical services, training, and research support to the project.

In-country sources of technical assistance will include the National Coordinators, the NGO project managers, and the extensionists. The National Coordinators and NGO project managers will seek to establish linkages with Government technical agencies and with other organizations involved in environmental and natural resources management activities.

E. Procurement Arrangements

Expenditures made with ROCAP funds will comply to U.S. Government procurement regulations as stipulated in the Cooperative Agreement. Purchases made with matching funds will follow donor provisions.

U.S.-based procurement:

The Procurement Department of CARE-NY will assist missions in purchasing vehicles and/or materials that are either not available locally or are less expensive to obtain in the US.

Regional and local procurement:

The Procurement Department in each of the CARE country missions will assist the project staff and local NGOs in purchasing materials, equipment, and vehicles as needed. Each CARE mission has a Basic Agreement with the respective government which provides for the procurement of goods duty-free.

F. Personnel Management

Each Consortium member has its own set of established policies regarding personnel management (see Attachment C to the Financial Proposal).

Areas of responsibility and lines of authority are detailed in Section III.A above.

IV. PERSONNEL

Key personnel inputs are outlined at the Management Consortium, regional, and national levels. Descriptions of each of these positions, including functions, responsibilities, and administrative arrangements, are presented in Sections III.A and III.B. Biodata and statements of availability for Management Consortium personnel inputs, and for the Regional Coordinator and Assistant Coordinator positions, are included in Appendix E.

A. Management Consortium

The Management Consortium Executive Committee will consist of one representative from CARE, TNC, and CI. To secure a significant contribution of these persons, 15% of their salaries will be budgeted under this proposal. Peter Hazlewood, Deputy Director for Agriculture and Natural Resources at CARE, Brian Houseal, Director of Stewardship within the Latin America Division of the Nature Conservancy, and Jim Nations, Vice-President for Latin America at CI, will serve in this capacity.

Each Consortium member will provide up to 15 months of technical assistance to the project in wildlands management, environmental education, conservation information, and strategic planning. This assistance will address both technical and organizational development needs as identified by the local communities, NGO partners, National Coordinators, the Regional Coordinating office, and the Consortium.

B. Regional Staff

1. Regional Coordinator and Assistant Coordinator

The Regional Coordinator will report to the Management Consortium Executive Committee. The primary function and responsibility of the Regional Coordinator will be to provide overall administrative and programmatic coordination of project activities. Other functions and responsibilities are outlined in Section III.A. The Consortium is pleased to present Juan Carlos Godoy and Paul Dulin as candidates for the Regional Coordinator position. Both candidates have indicated their interest in and availability for the Regional Coordinator position. Their biodata and letters of availability are included in Appendix E.

The Assistant Regional Coordinator will report directly to the Regional Coordinator. The Assistant Coordinator will be responsible for project administrative support, and will provide technical backstopping to the national programs. The Consortium is pleased to present Sylvana Castillo as a candidate for the Assistant Coordinator position. Ms. Castillo has gained extensive CARE project management and administrative experience after 5 years in the CARE-Guatemala program.

2. Regional Training and Communications Specialist

The Regional Training and Communications Specialist will provide technical support for regional and national-level training and communication activities, and will be recruited by CARE from within the region.

3. Regional Information Support Group

The Regional Information Support Group will include four staff positions, and will provide technical support to the national programs in conservation information and strategic planning. The Nature Conservancy and Conservation International will fill these positions from within the region.

C. National Staff

1. National Coordinators

In each participating country, a National Coordinator will be locally recruited. The National Coordinator will have both managerial and technical responsibilities, and will be located within the CARE country mission (or perhaps a lead national NGO). The National Coordinator will report to the Management Consortium Executive Committee.

2. NGO Project Managers

An NGO project manager will be selected (from existing staff where possible) for each lead NGO partner in the project. The NGO project manager will be responsible for overseeing day-to-day project activities within the NGO and will provide technical assistance.

3. NGO Extensionists

Extensionists will be recruited to provide an extension arm within the lead NGO(s) responsible for the Wildlands Management and Environmental Education components in each participating country. Although the extensionists will be paid employees of the NGO(s), they may be recruited from qualified local residents in the vicinity of the pilot protected areas and buffer zones.

D. Technical consultants

The project will call upon individual consultants where necessary to supplement assistance from the Consortium members and sub-contracted service providers. Central American nationals, or resident expatriates, will be employed wherever possible to minimize costs.

V. CONSORTIUM QUALIFICATIONS

Summaries of CARE, TNC, and CI qualifications to carry out this project are provided in Apendix B.