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ASSESSMENT OF CONDITIONS FOR BIODIVERSITY AND FRAGILE ECOSYSTEMS CONSERVATION AND MANAGEMENT IN PERU

PREPARED FOR USAID/PERU

504 –

STRATEGIC OBJECTIVE 4 Improved Environmental Management in Targeted Sectors

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LIST OF ACRONYMS AND ABBREVIATIONS

AD	USAID/Peru's Alternative Development Project
ANP	Protected Natural Area
APECO	Peruvian Association for the Conservation of Nature
BIOCOM	Biodiversity Component of SENREM Project
BSNP	Bahuaja-Sonene National Park
BSP	Biodiversity Support Program
CANP	Cerros de Amotape National Park
CARE	Committee for Assistance and Relief Everywhere
CBD	Convention on Biological Diversity
CI	Conservation International
CITES	Convention on International Trade in Endangered Species of Wild Flora and Fauna
CNF	National Forestry Chamber
CONAM	National Environmental Council
CTAR	Transitional Committee(s) for Regional Administration
CTM	Multisectoral Technical Commission
CTMR	Regional Multisectoral Technical Committee(s)
DGANPFS	General Protected Areas and Wildlife Bureau
DGF	General Forestry Bureau
EEZ	ecological economic zoning
ENRE	environmental and natural resource economics
FADEMAD	Madre de Dios Departmental Agrarian Federation
FAO	United Nations Food and Agriculture Organization
FCCC	Framework Convention on Climate Change
FENAMAD	Native Federation of the Madre de Dios River and Tributaries
GoP	Government of Peru
GTZ	[German] Technical Cooperation Agency
HBS	Huascarán National Park and Biosphere Reserve
IIAP	Peruvian Amazon Research Institute
INADE	National Institute for Development
INRENA	National Institute of Natural Resources
IR	intermediate result
ITTA	International Tropical Timber Agreement
KfW	[German] Development Credit Bank
LTNR	Lake Titicaca National Reserve
MAG	Ministry of Agriculture
MBS	Manu National Park and Biosphere Reserve
MEF	Ministry of Economy and Finance
MEM	Ministry of Energy and Mines
MINPE	Ministry of Fisheries
MITINCI	Ministry of Industry and Tourism

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MoE	Ministry of Education
MoH	Ministry of Health
MTNS	Manglares de Tumbes National Sanctuary
NWBR	Northwest Biosphere Reserve
OENR	USAID/Peru's Office of the Environment and Natural Resources
PCM	Presidency of the Council of Ministers
PNR	Paracas National Reserve
ProNaturaleza	Peruvian Foundation for the Conservation of Nature
PSNR	Pacaya-Samiria National Reserve
Ramsar	Convention on Wetlands (signed 1971, Ramsar, Iran)
RANP	Río Abiseo National Park
SENREM	USAID/Peru's Sustainable Environment and Natural Resource Management Project
SINANPE	National System of Natural Areas Protected by the State
SO4	USAID/Peru's environmental strategic objective
TCRZ	Tambopata-Candamo Reserved Zone
TMI	The Mountain Institute
TNC	The Nature Conservancy
TNP	Tingo María National Park
UNALM	National Agrarian University, La Molina
UNAP	National University of the Peruvian Amazon Basin, Iquitos
UNAS	National Agrarian University of the Jungle, Tingo María
UNDP	United Nations Development Program
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UNSAAC	San Antonio Abad National University of Cusco
USAID	United States Agency for International Development
USG	United States Government
WCI	Wildlife Conservation International
WWF	Worldwide Fund for Nature

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1 EXECUTIVE SUMMARY

Peru is one of the world's richest countries in biological diversity and forest resources It is also a country where climate change mitigation efforts involving forest management can still be undertaken with significant medium-term results at a relatively lower cost than in countries where resource degradation is more advanced Measures to maintain forest cover will combat the loss of biological diversity and slow the emission of carbon dioxide from the burning of forests for agricultural and livestock production

The threats to reduced biological diversity are grouped in two categories policy threats and site specific threats to diverse biologically-rich ecosystems Divided environmental authority, misconception of the value of conserving biodiversity and forests, inadequate legal norms, lack of participation of the local population in the management of protected areas, unsustainable land and resource use, uncontrolled mining and hydrocarbon exploration in protected areas, lack of biosafety measures, uncontrolled tourism expansion, and deforestation all contribute to loss of biological diversity The most appropriate response to these threats is one that addresses improvements in the management of biological diversity and forests, combined with efforts to generate economic alternatives for local communities living in and around threatened ecosystems

The goal of the Biodiversity and Fragile Ecosystems Conservation and Management Activity is to protect biological diversity and forests and to mitigate climate change The Activity's purpose is to improve the management of Peru's biodiversity and carbon stocks

No new IRs are needed to support achievement of Mission SOs However, there is justification and a strong recommendation to create a new indicator, one focused specifically on the amelioration of global climate change, at the strategic-objective level

Proposed policy assistance interventions are grouped under four areas support the development of a common awareness for Peru's biodiveristy strategy and natural resource use planning, support opportunities to strengthen SINANPE, promote natural forest policies that help Peru meet ITTA standards and support complementary biodiversity and forest management policy changes

Specific policy interventions will include Developing economic valuation criteria for biodiversity including a methodology to incorporate environmental and social costs and benefits in biodiversity and forest resource valuation including carbon sequestration, promoting strong incentives for biodiversity conservation and sustainable use including clearer definitions of access to genetic resources and development of a biotechnology plan, assisting in the planning for ecological-economic zoning, proposing and developing regulation for the Law for the Sustainable Use of Biodiversity, supporting the protection and consolidation of key biodiversity rich areas and promoting communal reserves as a strategy to reinforce local stakeholders participation in natural resource use, contributing to the development of a re-organized natural forest management system for sustainable production, identifying disincentives and institutional

impediments to sustainable forestry, and supporting the establishment of forest certification standards and monitoring mechanisms

Site-based interventions are also broadly grouped in four areas Support sustainable land use planning and conflict resolution in key geographic areas, strengthen regional and local capacity to conserve and sustainably manage biodiversity and forest resources, facilitate the preparation of efficient forest management plan, and support complementary local institutions for biodiversity and forest conservation and management

Specific site-based interventions include strengthening local institutions including regional environmental committees, CTMRs and other participatory mechanisms involved in resource planning and biodiversity conservation, assisting in the definition of local resource use rights, supporting an integrated resource cadaster including agriculture, forestry, mining, and tourism, supporting local initiatives for sustainable alternatives to deforestation and exploitation of threatened ecosystems, and monitoring key indicators to determine effectiveness of resource management, supporting the establishment of effective protected area local management committees, as mandated by the Protected Area Law, and facilitating participatory elaboration and implementation of PA-specific resource use plans, promoting the intensified and efficient use of secondary forests, and supporting forest certification awareness and training

The policy assistance and site-based interventions, grouped under specific Intermediate Results are intentionally designed to reinforce each other Policy reform and institutional strengthening interventions proposed at the national level will be tested at the regional and local levels through local government, local management committees, base organizations, NGOs and CBOs working in tropical forests, protected areas, and biodiversity-rich ecosystems Likewise, best practices and lessons learned from the preparation and implementation of pilot resource management plans and testing of appropriate technologies will support refinement of policies and possible suggest new ones

These proposed interventions will support on-going biodiversity conservation initiatives that are compatible with strategies of GOP institutions such as CONAM, INRENA, IIAP and the Congressional Committee on the Amazon and Environment The interventions will also provide opportunities to strengthen CBOs, NGOs, local management committees, producer associations, mothers clubs, and native communities through targeted short courses and training to improve their capacity for strategic planning, natural resource use planning and administrative and financial management Pilot demonstrations, resource valuation studies, and the preparation of specific resource management plans will target specific threatened ecosystems where results can be replicated

Potential regional and local partners, grant recipients, and collaborators have been identified through personal interviews and six participatory workshops held during the preparation of the design The suggested partners will form part of the customer service plan that will be carefully reviewed and refined during Activity startup Specific collaborative relationships, whether by

memorandum of understanding, subcontract, or grant, will be clearly defined during the preparation of the first annual work plan

The expected results from this five year Activity include (a) development and improved implementation of selected policies to strengthen the conservation of Peru's biological diversity and protect carbon stocks, (b) three or four threatened ecosystems with improved management as measured by a modified version of the protected area matrix, and (c) improved management of Peru's forests, especially in the Amazon Basin This Activity has been designed in close collaboration with G/ENV and LAC/RSD in such a manner as to be consistent with and adaptable to any regional approach to the conservation of biodiversity and the maintenance of carbon stocks

2 THE PROBLEM FOREST AND BIODIVERSITY CONSERVATION IN PERU

By any standard, Peru's endowment of environmental wealth is impressive *World Resources 1998-99*[1] reports that only four developing nations have more extensive natural forests than does Peru (67 million hectares) These are Brazil (546 million hectares), the Democratic Republic of the Congo (113 million hectares), Indonesia (104 million hectares), and China (100 million hectares)

The country's forests, most of which are in the Amazon Basin, harbor an astonishingly diverse array of flora and fauna There are 1,538 known bird species in Peru, the only nation with a larger number is Colombia, with 1,595 Plant life is comparably varied, more than 17,000 flowering species having been identified in the country

Deforestation appears to average 0 3 percent per annum since 1980 (INRENA documents) Accelerated forest loss is all but certain if there is a resumption of road construction in eastern Peru, which in previous years allowed agricultural colonists and other agents of deforestation to migrate east of the Andes Continued economic recovery would, of course, provide the financial wherewithal for new infrastructure development Also, any road building that accompanies petroleum and mining development in the Peruvian Amazon is sure to result in more settlement and habitat destruction Cattle ranching, promoted by the Banco Agrario in the 1960s-1980s, is another source of deforestation in lowland eastern Peru Large-scale timber extraction could also have deleterious environmental impacts Plans for this sort of activity have been advancing for years, currently focus on several tracts, including one of nearly 700,000 hectares in Biabo-Cordillera Azul National Forest in the Departments of Loreto and Ucayali

As currently practiced, farming, ranching, and logging amount, in large measure, to ecosystem mining, in the sense that renewable resource depletion results from those same activities Habitat destruction and related forms of resource depletion contribute to accelerated global warming, because carbon formerly sequestered in living plants is released as carbon dioxide, a greenhouse gas, into the atmosphere

Ecosystem mining also leads to biodiversity loss Although tropical deforestation has not reached an advanced cumulative stage in Peru, species extinction is already a danger In terms of threatened bird species, for example, Peru (64) ranks fifth, along with Colombia, on the global list, behind Indonesia (104), Brazil (103), China (90), and the Philippines (86) Within South America, only Brazil (463) has more threatened flowering plants than Peru (377) does

Habitat loss and species extinction will foreclose the opportunities that Peru is currently counting on to harness biodiversity for the sake of socioeconomic progress, through the harvesting of non-timber forest products, biotechnology development, and ecotourism Climate change, including El Nino events that are more frequent and intense, have had an impact on flora, fauna, and other renewable resources For example, the Casa de Guias in Huaraz, a non-governmental

environmental organization, has reported that the snow level, which normally reaches down to 4,800 meters above sea level, has retreated above 5,500 m, thereby exposing large areas to erosion Impacts such as these need to be addressed by a long-term biodiversity strategy

The Development Challenge Addressing the Threats to Biodiversity

The threats to biodiversity are grouped in two categories, policy threats and site specific threats to protected areas, that are analyzed and summarized in Attachment A Divided environmental authority, misconception of the value of conserving biodiversity and forests, inadequate legal norms, lack of participation of the local population in the management of protected areas, unsustainable land and resource use, uncontrolled mining and hydrocarbon exploration in protected areas, lack of biosafety measures, uncontrolled tourism expansion, and deforestation all contribute to biodiversity loss The most appropriate response to these threats is one that addresses improvements in the management of biological diversity and forests, combined with efforts to generate economic alternatives for local communities living in and around protected area This Activity will promote both policy reforms and site-based interventions that are outlined in the strategic approach

3 ACTIVITY RATIONALE

This Activity, Biodiversity and Fragile Ecosystems Conservation and Management in Peru, involves

- The development and improved implementation of selected government policies to strengthen the conservation and improved management of Peru's biological diversity and to protect carbon stocks,
- Improved management of three to five protected areas, as measured by a modified version (Attachment H) of the protected area matrix prepared under the Biodiversity Component (BIOCOM) of USAID's Sustainable Environment and Natural Resource Management (SENREM) Project, and
- Improved management of Peru's forests, especially in the Amazon Basin

This Activity incorporates a gender approach as an integrated component of both the both the policy assistance and site-based interventions by promoting the strengthening of institutional capacity as well as support the participatory planning of key stakeholders Furthermore, incorporating gender will enhance equity within the development process This approach, inspired by the program on Ecosystems and Resource Management with a Gender Emphasis (MERGE) promotes community participation, gender perspective and training in order to achieve sustainable results in resource management (Attachment D)

This Activity also supports Agency Goal 4 (environment managed for long-term sustainability) as well as three Agency Objectives

(1) Biological diversity conserved,
(2) Global climate change threat reduced, and
(3) Sustainable natural resource management

Mission Environmental Strategy

The strategy for USAID/Peru assistance in environmental and natural resource management focuses on the environment in the context of present rapidly changing political and economic realities in both Peru and the United States[2] The constraints to improved environmental and natural resource management have been used as the basis for determining priority investments in the medium term The strategic approaches are

- The major emphasis is on policy reform,
- The Mission has a comparative advantage in pollution prevention, and
- Biological diversity and fragile ecosystems remain high priorities

The short term Mission involvement endorses ongoing action programs in hillside agriculture and biologically diverse tropical protected areas management and the need for an agenda focused on economic growth and population issues A portfolio of short term investments in policy dialogue, technical assistance, technology transfer, and targeted pilot projects is being implemented as the Mission transitions to a medium-term, balanced brown-green agenda

By the year 2000, a significant shift in USAID/Peru environmental programs will have occurred The ultimate objective is sustainable growth that enhances the capacity of the whole Peruvian society to improve its quality of life without compromising the rights of future generations

The interventions proposed under the Biodiversity and Fragile Ecosystems Conservation and Management Activity will support two of the three strategic approaches of the Mission's environmental strategy Furthermore, this Activity will collaborate with the Sustainable Environmental and Natural Resources Management (SENREM) in areas of common interest such as establishing an adequate legal, regulatory, and policy framework , expanding public awareness and strengthening private sector advocacy groups, and promoting pilot projects in green areas
Within the Mission's Strategic Framework, the Activity supports Strategic Objective 4 (improved environmental management in targeted sectors), particularly those related to biological diversity and climate change and all five Intermediate Results (IRs)

(1) Institutional capacity of the GoP and private sector strengthened,
(2) Public support for environmental improvements mobilized,

(3) Innovative technologies tested through pilot projects,
(4) Cost-effective sustainable practices adopted, and
(5) Sound policies established and effective legislation enacted

Moreover, the Activity is compatible with the strategic objective that the National Environmental Council (CONAM) has set for its Green Front (Frente Verde), which is sustainable use of natural resources In particular, it will support three specific CONAM goals, which are

- Ecological-economic zoning,
- Participatory management in protected natural areas, of wildlife, and of ecotourism, and
- Conservation, registration, and exploitation of native germ plasm

4 ACTIVITY GOAL AND PURPOSE

The **goal** of the proposed Activity is to protect biological diversity and forests and to mitigate climate change The Activity's **purpose** is to improve the management of Peru's biodiversity and carbon stocks

No new IRs are needed to support achievement of the Mission's SO4 However, there would be advantages to creating a new indicator, one focused specifically on the amelioration of global climate change, at the strategic-objective level Those advantages are discussed in Attachment F, which contains a recommendation including a proposed indicator

5 POLICY AND INSTITUTIONAL SETTING

Natural resource depletion in the Peruvian Amazon and other parts of the country has much to do with inappropriate policies and weak institutions The near-absence of cohesive natural resource use planning is a clear manifestation of this problem

There are three ways in which planning facilitates natural resource development that is economically efficient, environmentally stable, and socially broad-based and sound The first is assessment of resource capabilities and uses The second is identification of claims on resources made by government, private firms and individuals, and communities Third, planning facilitates the resolution of environmental conflicts

The importance of these three functions has been obscured in Peru because of recent experience with command-and-control regulations and other market-distorting interventions This approach to public administration was applied when the country's public institutions were corporatist and when economic development strategies predicated on import-substituting industrialization were being pursued Policy-induced distortions have had disastrous impacts, and any sort of planning, it seems, has come to be regarded with suspicion and therefore something to be neglected or even suppressed Certainly, institutions responsible for natural resource use planning occupy a weak position in the public sector

The Natural Resources Institute (INRENA), of which the General Forestry Bureau (DGF) and the General Protected Areas and Wildlife Bureau (DGANPFS) are units, was created in 1990

as a part of the Ministry of Agriculture (MAG) But in January 1998, INRENA was transferred to the Office of the Presidency of the Council of Ministers (PCM), along with the National Environmental Council (CONAM) and a number of unrelated independent agencies Presumably this change was intended to give environmental concerns a cross-sectoral focus, since the PCM serves to coordinate among different sectors and ministries But just six months later, in June 1998, INRENA was placed back in MAG None of this periodic organizational shuffling, which confuses all concerned, has enhanced INRENA's ability to engage in effective natural resource use planning

Aside from organizational arrangements that impede the systematic evaluation of natural resources and the efficient resolution of environmental conflicts, planning is hindered because governmental institutions are highly centralized and divided sharply along sectoral lines

Acute centralization has long been a primary feature of the public sector in Peru In response to calls for some measure of regional devolution, delegates to sub-national legislative assemblies, which were not to impinge on the national government's prerogatives, were chosen during the 1990 general election However, even this modest initiative did not survive for long, the regional assemblies were disbanded when the constitution was suspended in April 1992 Governmental decision-making is now as concentrated in Lima as it has ever been

Examples of sectoral cleavage abound For example, protected area management is made difficult by poor coordination among the different MAG divisions that define agricultural policy and adjudicate land claims and INRENA bureaus themselves Further fragmentation is found in the DGANPFS, the INRENA unit that manages protected areas, the Ministry of Energy and Mines (MEM), which awards concessions for mining and hydrocarbon exploration and development, and the Ministry of Fisheries (MINPE), the Ministry of Industry and Tourism (MITINCI), and the Ministry of Economy and Finance (MEF), which determines the country's economic policies Also, environmental impact assessment is, by and large, a ministerial responsibility This means that environmental concerns, especially those having to do with cross-sectoral spillovers, end up being dominated by sectoral development priorities, which often conflict with one another

Steps have been taken to alleviate sectoral divisions and also to decentralize public institutions In particular, CONAM is attempting to coordinate the actions of governmental agencies with sectoral responsibilities Its national-level Multisectoral Technical Commission (CTM), in which the private sector and non-governmental environmental organizations (NGO), as well as ministries are represented, was established for the express purpose of sharing criteria for assessing cross-sectoral environmental impacts Furthermore, fifteen Regional Multisectoral Technical Committees (CTMR), some for individual departments and others corresponding to two departments (e g , Tumbes and Piura), are being put in place in various parts of the country The latter committees are intended to provide all major groups that have a stake in natural resource development, including indigenous and peasant grass roots organizations and other segments of civil society, with a voice in natural resource planning

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To date, the impacts of establishing CONAM and its constituent entities have been limited One reason for this is the general indifference toward planning mentioned above A related cause of limited effectiveness is that, different from what one finds in other countries (e g , Chile), the heads of key ministries, like MAG, MEM, MINPE, and MITINCI, do not actually serve on CONAM's governing council

It is difficult to say when and how the political and institutional impediments to effective natural resource use planning will be removed in Peru But certainly, anything that can be done to improve the economic content of existing planning initiatives is sure to be looked on favorably Indeed, making use of economic criteria is probably the best way to convince doubters of the utility of planning since the current government, like any that may replace it, places considerable emphasis on the economic assessment of policy trade-offs

In practical terms, the contribution that economics can make to natural resource use planning is expressed well by a description of environmental and natural resource economics (ENRE) offered by David Pearce, of University College London Professor Pearce stresses that ENRE involves both the demonstration of environmental values, specifically including those to which no market transactions correspond, and the examination of public policies and other mechanisms for capturing non-market values [2]

Both parts of ENRE analysis -- value demonstration as well as value capture -- clarify the challenge of conserving and sustainably developing biodiversity and forests in Peru

5 1 Biodiversity Values and Their Capture

As is indicated above, Peru's biological resources are unusually heterogeneous Translating biological diversity into financial income, however, turns out to be a considerable challenge The problem is that the cost of controlling access to genetic resources is very high, at least relative to the commercial value of those resources As a result, well-defined natural resource property and access rights, which are the key institutional prerequisite for market exchange, are notably absent Without market exchange, nations like Peru fail to capture much value if genetic resources are kept intact Moreover, natural resource use value, outside the market, is seldom taken into account in policy decisions

In cooperation with other countries rich in flora and fauna, Peru is attempting to create the sort of international institutional regime needed to internalize genetic resource values For example, uniform rules governing bioprospectors' access to natural ecosystems are being worked out by the five members of the Andean Pact Bolivia, Colombia, Ecuador, Peru, and Venezuela Ongoing international negotiations, in which both the GoP and USG are participating, address the problem of "biopiracy," as some disparagingly label the unregulated collection of samples in natural ecosystems Likewise, enhanced biosafety is a major feature of the Law of Conservation and Sustainable Exploitation of Biological Diversity, which was passed in 1997 So is legal recognition of indigenous communities' traditional environmental knowledge

The new law mandates the development and adoption of a National Biodiversity Strategy Among other things, the strategy calls for Peru to derive more value-added from its diverse genetic resources, by increasing domestic production of goods and services made entirely or in part from indigenous flora and fauna In a broad sense, promoting ecotourism in Amazonian forests, which provides visitors from around the world with an opportunity to observe tropical plants and animals in a natural setting, is consistent with this policy In addition, CONAM is keen to promote biotechnology in Peru, its initiatives in this area are strongly supported by academic and research institutions and environmental organizations

Like regulating access to diverse genetic resources, the challenge of biotechnology development in a place like Peru is daunting The roster of qualified scientists who are active in the country is very small, outside of a few laboratories in the private sector, research and development facilities are modest, especially in universities Another impediment to biotechnological innovation is that intellectual property is not protected nearly as well in Peru as it is in the United States and other places where basic and applied researchers, including many who hail from the developing world, normally choose to work

Careful analysis of all relevant investment options is needed to determine how much Peru should spend on biotechnology initiatives Since Peru would be starting, in effect, from scratch, the net benefits of developing highly specialized research and development facilities and human capital should be compared and contrasted with the net benefits of other measures for strengthening science, technology, and general well-being Likewise, elaborating and applying a more restrictive regime for the protection of intellectual property needs close examination Doing so might turn out to be of dubious value in a country where the government's capacity to win public respect for park boundaries, traffic laws, and many other laws and regulations is so obviously strained Moreover, it could encourage offshore patenting to Peru's disadvantage

5 2 Forestry Values and Their Capture

The difficulty of quantifying and internalizing biodiversity values helps to explain why individual economic agents are often not very interested in conserving forests and other habitats rich in flora and fauna

Non-Market Carbon Sequestration Benefits Other environmental services obtained from tree-covered land are under-valued in the marketplace, as well This is certainly the case with carbon sequestration Depending on the state of the forest prior to its destruction and also on the replacement land use, 100 to 200 metric tons of carbon are released for each tropical hectare that is deforested Available research suggests that sea-level rise and other global warming damages amount to $5 to $10 per ton This implies that the costs of global climatic change induced by deforestation range from $500 to $2,000 per hectare [3] If agents of deforestation were to internalize these costs (or if they internalized the benefits of carbon sequestration), their behavior would almost certainly be greatly altered

Discriminatory Public Policy However, deforestation also occurs in the Peruvian Amazon because existing public policies prevent households and firms from capturing the sorts of forest values to which market transactions ought to correspond This is the essence of perverse incentives that, regrettably, are an essential feature of the current policy regime influencing the use and management of timber and non-timber forest resources in Peru

Peru's current Forestry and Wildlife Law (Decree Law 21147), approved in 1975, has a strong focus on appropriate land use based upon soil quality climatic features Considered ground-breaking and sophisticated at the time it was adopted, it is clearly inadequate 23 years later in a world of complex globalizing markets a very different policical environment The Environmental Code (Legislative Decree 613), approved in 1990, called for a new forestry law adapted to the Environmental Code framework, however, numerous attempts at proposed new forestry legislation have been frustrated since that time There is evident need for forestry legislation and policies that adequately address human needs in a market context, as well as appropriate land use

A prime example of discriminatory public policy is the prohibition on new timber harvesting contracts, effected by the promulgation of Supreme Decree 51-AG-92 on 24 December 1992 which suspended new contracts while allowing existing ones to be extended indefinitely in practice Granted, contracts issued prior to the decree were far from perfect However, the prohibition has caused logging to be characterized by legal informality, outright law-breaking, and corruption, all to the detriment of the environment For example, terminal dates of contracts signed before the end of 1992 have been extended, maximum volumes to be harvested have been increased, or both, quite often as a result of favoritism or even bribery Obviously, changes of this sort do nothing to strengthen conservation incentives, which have been vitiated by Supreme Decree 51

Another consequence of the prohibition on new contracts has been to make the wood products industry much more dependent on raw material extracted along expanding agricultural frontiers MAG continues to issue Agricultural Use Permits to small farmers and ranchers settling in the Amazon Basin Many, if not most, of these people now harvest and sell timber during the course of land clearing

The balance of timber demand is met, for the most part, from small timber concessions Firms and individuals holding these parcels, which can and are being renewed by the DGF, are under no obligation to apply management plans In addition, there is reason to believe that much of the timber approved for harvesting from the small concessions is actually extracted from other people's land, and even from parks and other officially protected areas

Because of laws like Supreme Decree 51 and the GoP's failure to date to approve a new Forestry Law, a policy vacuum currently exists in Peru's forestry sector That vacuum is compounded by other legal and regulatory arrangements One such arrangement is the ban on any form of logging in selected watersheds, which is regularly violated with impunity Also,

the rule against dimensioning planks with chainsaws, which is standard operating procedure in remote logging sites, is nearly impossible to enforce and serves no useful purpose In particular, the waste of wood, which that rule is intended to curb, continues unabated since mills are still buying large numbers of planks that have been cut and shaped with chainsaws Those planks are then resawn with bandsaws, which results in the loss of even more wood

Largely because forestry institutions are as weak as they are, initiatives to change public policy have been sporadic, and in some respects misguided Four proposals to update the 1975 Forestry Law have been introduced in the Peruvian Congress during the past year or so At present, a single consolidated bill, having to do with forestry and wildlife, is being considered It is, however, a defective piece of legislation For example, only concessions that take in more than 40,000 hectares are addressed by the bill What, one must ask, is to become of the firms and households with small or medium concessions, of which there are thousands in the Peruvian Amazon?

Under-Utilization of Secondary Forests Aside from how timber concessions are structured and distributed, two aspects of forestry development that have been neglected in the past now need to be given close attention One of these is the utilization of secondary forests The other area is the strengthening of local community organizations in order to enhance their involvement in sustainable forestry initiatives

Antonio Brack-Egg, one of Peru's leading environmental and natural resource specialists, highlights the importance of intensified utilization of secondary forests He points out that, out of 9 million hectares that have been colonized or otherwise deforested in the Peruvian Amazon, only 2 million hectares are actually being used for crop or livestock production An equal amount of land is dedicated to production forestry More than half of all deforested land east of the Andes -- 5 million hectares -- is abandoned and in a degraded state [4]

Intensified management and harvesting of secondary timber could take the form of production of softwood species that grow rapidly, with output being used in domestic construction concrete molds, doors, windows, etc With time, international markets could even be tapped, as impediments to wood exports, like deficient transportation infrastructure, are removed

The National Forestry Chamber (CNF), in which Peru's larger private logging and wood products companies are represented, is highly supportive of intensified development of secondary forests CNF is participating in a five-year project funded by the Dutch government to manage forest regeneration in colonized areas near the highway leading to Pucallpa and to market timber produced in those areas Another benefit of secondary forest management is that carbon is sequestered in trees and other natural vegetation, thereby slowing the accumulation of carbon dioxide and other greenhouse gases in the atmosphere

Lack of Local Participation in Forestry Management One of the stated objectives of the Dutch-CNF project is to benefit local populations Widespread land abandonment (see above) is an

unequivocal sign that, for them, agricultural colonization in the Peruvian Amazon has not been profitable Low real estate values comprise another piece of evidence of meager net returns The price at which any particular parcel is bought or sold reflects the discounted value of future earnings, in colonized areas, the value of untitled land, which is especially cheap, is not much more than 125 soles (approximately $45) per hectare The judgement made in the marketplace is that agricultural land clearing does not pay

Even if timber growth is not particularly high and if stumpage values are modest, secondary forest management ought to be a financially attractive land use option for colonist households Suppose, for example, that average annual growth is 5 cubic meters and that stumpage can be sold for $5, which is probably below the prices that would emerge in fully competitive markets Net annual returns, then, would be $25 Assuming a real discount rate of 12 5 percent, the market price of tree-covered land that is fully titled would be $200 ($25 divided by 12 5 percent), which compares very favorably to agricultural land values

The net returns to forestry, though, are more potential than real as far as most colonists are concerned For them to benefit from the development of secondary forests is to strengthen their long-term access rights, so that that trees growing under their care are not so easily extracted or burned by interlopers Something else that is needed is the strengthening of local community organizations, so that they can enter into mutually advantageous joint ventures with private firms that have technical expertise and marketing capacity To put it simply, sustainable development of secondary timber resources requires that environmental wealth, which is plentiful in the Peruvian Amazon, be complemented by social capital, which is exceedingly scarce in the region

6 ACTIVITY STRATEGY

The Activity interventions are based on a strategic approach developed by the EPIQ Assessment Team in close coordination with mission's SO4 Team as well as extensive interviews with potential partners during four specific site visits (e g Madre de Dios, Huaraz, Rio Abiseo, and Iquitos) In addition to direct contact and field visits with GoP officials, NGOs, CBOs, and native communities, six participatory workshops (Diálogos) were conducted to receive local input and ideas on biodiversity conservation and maintenance of carbon stocks The elements of the strategic approach were distributed and shared with GoP, NGOs, private sector, and universities at a workshop held at the mission on June 19, 1998

USAID can contribute most effectively to improved environmental management, particularly in sectors related to biodiversity and climate change by undertaking an integrated series of interventions involving both policy assistance at the national level and institutional strengthening and technical assistance in selected key geographic areas Both policy assistance and site-based interventions will contribute to

- Improved natural resource use planning and conflict resolution,
- Conservation and sustainable utilization of diverse biological resources, and

- Sustainable development of forest resources

A fourth category, support complementary biodiversity and forest policy changes, has been added to the strategic approach to ensure flexibility and to take advantage of unpredictable future opportunities in biodiversity conservation and maintenance of carbon stocks The strategic approach that follows is compared to the topics and interventions suggested in the Concept Paper (Table 1) and supports the five Intermediate Results of SO4 illustrated graphically in Figure 1

Table 1 Relationship of Topics and Interventions Proposed in the Concept Paper Compared to the Activity Assessment Document

Concept Paper	Activity Assessment
POLICY ASSISTANCE	
Support to Peru s National Biodiversity Strategy Development and implementation of ecological economic zoning (EEZ) Development of methodology to incorporate environmental and social costs/benefits in forest and biodiversity valuation Develop legislation and regulations on the access to and security of genetic resources Support to Peru s Biotechnology Plan	1 Support the development of a common awareness for Peru s biodiversity strategy and natural resource use planning by a Developing economic valuation criteria for biodiversity including methodology to incorporate environmental and social costs and benefits in biodiversity and forest resource valuation including carbon sequestration b Promoting strong incentives for biodiversity conservation and sustainable use including clearer definitions of access to genetic resources and development of a biotechnology plan c Assisting in the planning for ecological economic zoning and d Proposing and developing regulation for the Law for the Sustainable Use of Biodiversity
Consolidation of key environmental regions as leaders of participatory planning Support for implementing Peru s Master Plan for NPAs once it is approved	2 Support opportunities to strengthen SINANPE by a Proposing and developing regulations for the implementation of the and the Protected Areas Law b Supporting the protection and consolidation of key biodiversity rich areas (e g border parks corridors such as Gueppi Divisor Bahuaja Sonene Madidi etc) and promoting communal reserves as a strategy to reinforce local stakeholders participation in natural resource use
Development of Peru s new Forestry Superintendency	3 Promote natural forest policies that help Peru meet ITTA standards by a Contributing to the development of a re-organized natural forest management system for sustainable production b Identifying disincentives and institutional impediments to sustainable forestry and c Supporting the establishment of forest certification standards and monitoring mechanisms
	4 Support complementary biodiversity and forest management policy changes

Concept Paper	Activity Assessment
Site-Based Interventions	
Monitor key indicator species to determine the health of the ecosystem Follow on interventions to address threats to key species Improved territorial management in areas of rich biological diversity and fragile ecosystems including more appropriate and effective land use classifications for protection and forest management Strengthening local public and private institutions to ensure their long term capability to plan and act strategically in local level biodiversity conservation and forest management programs Extension work with local communities to encourage more sustainable use of biodiversity and forest resources Support to local community initiatives for income generating activities that provide sustainable alternatives to deforestation and exploitation of threatened species	5 Support sustainable land use planning and conflict resolution in key geographic areas by a Strengthening local public and private institutions including regional environmental committees CTMRs and other participatory mechanisms involved in resource planning and biodiversity conservation b Assisting in the definition of local resource use rights including land titling at critical points c Supporting integrated resource cadaster in one pilot site including agriculture forestry mining tourism and other uses Use as model to be replicated in other areas d Supporting local initiatives including targeted extension work for sustainable alternatives to deforestation and exploitation of threatened ecosystems and e Monitoring key indicators to determine effectiveness of resource management support follow on activities to address threats
Participatory elaboration of master plans for protected areas Assistance with organization and consolidation of the protected area management committees called for in the new Protected Areas Law	6 Strengthen regional and local capacity to conserve and sustainably manage biodiversity and forest resources by a Supporting the establishment of effective protected area local management committees as mandated by the Protected Area Law and b Facilitating participatory elaboration and implementation of PA specific resource use plans
	7 Facilitate the preparation of efficient forest management plan in one area by a Promoting the intensified and efficient use of secondary forests and b Support forest certification awareness and training
	8 Support complementary local institutions for biodiversity and forest conservation and management

7.0 Activity Interventions

The strategic approach has been transformed into a menu of specific policy assistance and site-based interventions with proposed indicators that will measure results in direct support of the Intermediate Results While the exercise requires further refinement, the proposed interventions will support on-going biodiversity conservation initiatives that are compatible with strategies of GoP institutions such as CONAM, INRENA, IIAP and the Congressional Committee on the Amazon and Environment The interventions will also provide opportunities to strengthen CBOs, NGOs, local management committees, producer associations, mothers clubs, and native communities through targeted short courses and training to improve their capacity for strategic planning, natural resource use planning and administrative and financial management Pilot demonstrations, resource valuation studies, and the preparation of specific resource management plans will target specific threatened ecosystems where results can be replicated

Another focus is to strengthen local capacity and facilitate the participatory planning process to improve resource management, resolve conflicts and identify economic alternatives to deforestation The interventions will support a national biodiversity strategy and selected policies that strengthen Peru's biological diversity and protect carbon stocks

The policy assistance and site-based interventions, grouped under specific Intermediate Results are intentionally designed to reinforce each other Policy reform and institutional strengthening interventions proposed at the national level will be tested at the regional and local levels through local government, local management committees, base organizations, NGOs and CBOs working in tropical forests, protected areas, and biodiversity-rich ecosystems Likewise, best practices and lessons learned from the preparation and implementation of pilot resource management plans and testing of appropriate technologies will support refinement of policies and possible suggest new ones

The proposed national level policy assistance and site-based interventions support the strategic approach with suggested geographic areas and potential partners is summarized in Table 2

Table 2 Proposed Activity Interventions, Partners, and Estimated Costs Linked to each Strategic Approach

Strategic Approach	Geographic Area	Intervention	Potential Partner	Estimated Cost
		POLICY ASSISTANCE		
1a	National	Develop economic valuation short courses including methodology to incorporate environmental and social costs/benefits in forest valuation and carbon sequestration	Consorio Economico and UNALM	$100K
1b		Facilitate the organization of an international forum on biotechnology	CONAM	$50K
1c		Assist CONAM develop a coherent strategy for EEZ in priority zones (MDD)	CONAM/IIAP	$50K
1d		Assist in developing regulations for the implementation of the Law for the Sustainable Use of Biodiversity	CONAM	$50K
2a	National	Assist in developing regulations for the implementation of the Protected Areas Law	INRENA	$50K
2b		Support the protection and consolidation of key biodiversity rich areas and promote communal reserves	INRENA	$100K
3a	National	Contribute to the development of a re organized natural forest management system	INRENA	$150
3b		Provide technical assistance to identify disincentives to sustainable forestry	INRENA	$50K
3c		Support the establishment of forest certification standards	WWF/Peru	$150
4	National	Provide technical assistance to support complementary biodiversity and policy changes	INRENA CONAM IIAP Congress	$50K

Strategic Approach	Geographic Area	Intervention	Potential Partners	Estimated Five Year Costs
		Site-Based Interventions		
5a	Madre de Dios	Strengthen CTMR and establish local management committee for Bahuaja Sonene NP and TCRZ	IIAP CONAM	$40K
	Madre de Dios	Assist the ecotourism committee to determine tourism carrying capacity and based on those results assist in the development of management plan for tourism	Conservation International	$50K
	Madre de Dios	Provide intensive training in strategic planning and financial management to FENEMAD FADEMAD producers associations mothers clubs etc	PACT	$80K
5b	Parts of the Department of Puno and Madre de Dios	Facilitate territorial and natural resource planning along proposed road San Gaban Puente Inambari including land titling definition of resource user rights and addressing the gold mining situation	CONAM/IIAP	$250K
5c	Tingo Maria	Help demarcate the Tingo Maria NP	INRENA	$200K
5d	Madre de Dios	Assist local peasant outside the demarcated NP to obtain land title and develop a resource use management plan	CONAM/IIAP	$75K
5e	Tingo Maria	Facilitate the preparation of an integrated resource cadaster including forestry agriculture mining tourism and other uses	PEAH	$100K
	Paracas and Pta San Juan de Marcona Reserved Zone	Develop and promote economic alternatives to coca production in buffer zone providing targeted extension as appropriate	IMARPE	$100K
	Paracas	Monitor threatened marine flora and fauna (birds penguins sea mammals whales dolphins kelp)	IMARPE INRENA APECO	$50K
	Pacaya Samiria	Facilitate the preparation of a coastal zone resource management plan	IIAP	$50K
	Pacaya Samiria	Assist in monitoring river turtle and caimans	PRONATURALEZA	$75
	Callejon de Huaylas	Assist local communities develop fish management plan building upon the experience of UPC CECODES model	INRENA	$75K
		Support glacier monitoring to existing INRENA proposal		
6a	Madre de Dios	Strengthen CTMR and establish local management committee for Bahuaja Sonene NP and TCRZ	IIAP CONAM	($40K)
6b	Callejon de Huaylas	Establish a valley wide development and resource plan in Valle de los Conchucos in collaboration with local communities and local govt.	TMI	$25K
	Rio Abiseo	Facilitate the preparation of a buffer zone management for the Rio Abiseo NP and Mariscal Caceres NF including ecological zoning	INRENA/APECO	$50K

7a	Mariscal Caceres NF	Facilitate the preparation of a forest management plan for secondary forests	INRENA	$75K
7b		Support forest certification training and awareness	WWF/Peru	($150)
8	National	Provide technical assistance to support complementary biodiversity and policy changes	INRENA CONAM IIAP	$400K

7 1 Policy Assistance

To support the development of a common awareness for the national biodiversity strategy and natural resource use planning, four kinds of policy assistance will be provided

- Developing economic valuation criteria for biodiversity, including methodology to incorporate environmental and social costs and benefits in biodiversity, and forest resource valuation, including carbon sequestration,
- Promoting stronger incentives for biodiversity conservation and sustainable use, including clearer definitions of access to genetic resources and development of Peru's biotechnology plan, and
- Assisting in the development of policies for ecological-economic zoning

To strengthen the National System of Natural Areas Protected by the State (SINANPE), two policy interventions will be supported

- Regulations for the implementation of the Law for the Sustainable Use of Biodiversity and the Protected Areas Law will be proposed and developed, and
- Key biodiversity-rich areas (e g , border parks and corridors such as Gueppi, Divisor, and Bahuaja Sonene-Madidi) will be protected and consolidated and communal reserves will be promoted as a strategy to reenforce local stakeholders' participation in resource use

Natural forest policies consistent with the International Tropical Timber Agreement (ITTA) will be promoted by

- Assisting in the development of a reorganized natural forest management system for sustainable production,
- Identifying disincentives and institutional impediments to sustainable forestry, and
- Supporting the establishment of forest certification standards and monitoring mechanisms

Developing Economic Valuation Criteria In discussions with representatives of CONAM and other governmental agencies, environmental organizations, and the private sector, the need to strengthen economic analysis of natural resource development options was repeatedly stressed Although there are quite a few well-trained economists in the country, ENRE continues to be something of a novelty Very little research has been conducted, as a result, it is extremely difficult to utilize methodologies that have been developed in other parts of the world for

demonstrating environmental values

A critical first step toward the conceptually sound application of existing valuation methodologies is to support empirical research by Peruvian economic researchers In particular, funding and limited external technical assistance should be provided for three quantitative studies, all of direct relevance to the locations where other site-based interventions will be occurring, to be undertaken concurrently for approximately six months Value estimation should be a central feature of each study, although mechanisms for value capture need to be examined as well (see below)

Two high priorities for funded research are the valuation of household consumption of non-timber products in and around a specific national park and the estimation of the carbon storage and soil conservation benefits of forest protection in a particular watershed Studies requiring more than six months to complete should only supported if the expected empirical results are relatively novel and widely applicable, and if there is no other way to obtain those results Under no circumstances should inquiries of an exclusively theoretical or conceptual nature be funded

Researchers involved in the three projects, who should be selected through the sort of small grants competition that has been used in AID's Biodiversity Support Program (BSP), would be expected to exchange ideas, findings, and so forth in workshops held at the beginning, half-way through, and the end of the funding period A senior ENRE specialist, presumably brought in from outside Peru, would serve as a facilitator at these workshops Research findings and the empirical techniques applied would be reported in a monograph published within three months of the end of the funding period, and presented at a major conference in Lima

Techniques employed and findings obtained in the three empirical studies should also be used as core curricular material, along with general conceptual readings, in two-week short ENRE courses, organized in the national capital for representatives of agencies like CONAM and INRENA, professionals employed by or associated with environmental organizations, as well as professors from Lima's leading universities A major purpose of these training sessions, which would be very similar to short courses held in other parts of the country (see below), would be to acquaint non-specialists with the contributions that economics can make to natural resource assessment, the resolution of environmental conflicts, choices among policy instruments (i e , capture mechanisms), and other aspects of natural resource use planning In particular, short course participants and the institutions they represent would learn how to frame questions to be addressed by ENRE analysis, would get acquainted in a general way how that analysis is conducted, and come to understand how to interpret and utilize the results of ENRE studies

After the three research projects have been completed and presented in the monograph, conference, and short courses in ENRE should be provided for up to a dozen young Peruvian women and men

Promoting Strategic Incentives for Biodiversity Conservation and Sustainable Use It needs to be emphasized that ENRE does not consist just of demonstrating that environmental values exist If the ultimate purpose is to have a constructive impact on the behavior of resource users, then policy instruments and other mechanisms for capturing those values, are frequently neglected in the marketplace where women's economic activities are also important and need to be given close attention

Enhancing biosafety, as the GoP is currently attempting to do, amounts to an attempt to improve the capture of non-market environmental values, biodiversity values to be specific The debate over biosafety in places like Peru can be politically heated, with charges of biopiracy occasionally being levelled against major pharmaceutical corporations, many of which are based in the United States, that use large numbers of biological samples collected in natural environments Furthermore, the position taken by the United States Government (USG) in international negotiations over conditions of access to genetic resources is sometimes at odds with that of the Peruvian government

USAID, then, is not in an ideal position to launch a major initiative to shape Peruvian laws and regulations governing access to the country's genetic resources Instead, the Agency's role in this area should be supportive, providing limited assistance to provide technical advice to Peruvian institutions, both inside and outside the government, as they sort through policy options A small workshop, at which key stakeholders are brought together to discuss the relative merits of those same policy options, should also be supported

Developing Policies for Ecological and Economic Zoning Capture mechanisms also need to be examined as economic and ecological zoning is undertaken in eastern Peru, as called for in CONAM's strategic plan Once maps have been produced, under CONAM's direction, that indicate what sorts of natural resource uses are to be permitted or discouraged in various places, different policy instruments for alleviating discrepancies between recommended and actual pattern of resource development need to be examined In this sort of inquiry, alternative policy interventions are evaluated in terms of ease of enforcement, the degree to which investments consistent with sustainable resource development are encouraged, and related criteria summarized in the public policy literature

Although the word zoning brings to mind a command-and-control mode of government, the Peruvian government does not appear to be wedded to the idea of regulating land use in its Amazonian territories, which would certainly be an ambitious undertaking Indeed, its general predilection for limited state institutions, that focus on normative functions and the organization of investment in public goods (e g , education, public health, and infrastructure), suggests that an alternative approach ought to be much better received

One such approach would be to restructure natural resource access rights, strengthening individuals' and communities' formal tenure in ways that reward environmentally sustainable development of forests and other resources For example, small-scale, long-term timber

concessions, which would be renewed automatically if environmental criteria were satisfied, could be awarded to families that have settled in the Peruvian Amazon, instead of the formalized agricultural use rights that MAG has assigned in the past

To help the GoP make informed choices among policy instruments for effecting resource use recommendations, outside technical assistance should be brought in to clarify policy issues and to share other countries' experiences with similar policy initiatives Ideally, this technical assistance would be provided at least a year after the initiation of the new USAID Activity, in order to draw on the findings of empirical ENRE research (see above) as well as lessons learned in site-based interventions having to do with the strengthening and registration of resource users' rights (see below) In any event, the need for technical assistance for policies relating to economic and ecological zoning is not particularly pressing since CONAM's activities in this area are barely under way

The GoP has been an active participant in international negotiations leading to the Framework Convention on Climate Change (FCCC) However, the country has yet to take full advantage of existing mechanisms for attracting international funding for carbon storage projects and other joint implementation initiatives Neither has the government made much progress toward establishing the sort of national institutional framework, including planning mechanisms, that the FCCC will require Consequently, initiatives that currently being pursued by environmental organizations and private companies are often of an ad hoc nature and poorly coordinated

Technical assistance should be provided during the first year of the new Mission Activity to establish a coordinating office To be specific, an expert familiar with successful programs in Costa Rica and/or other countries should be brought in to advise on how an office should be set up in Peru This should be followed by development of a specific proposal for whatever policy changes might be needed, as well as a dialogue process leading to a successful coordinating office

<u>Supporting the Development of the National Biotechnology Plan</u> Just as foreign advice on sensible rules of access to the country's genetic resources is apt to be regarded with suspicion in some quarters, so too might a realistic assessment funded by the U S government of biotechnology development prospects be received poorly This would certainly be true if those prospects, for reasons stated above, are not especially bright

Accordingly, USAID initiatives in this area should be supportive, for the most part One intervention that would be useful is to organize a small workshop, complemented by limited technical assistance, at which biotechnology development options are scrutinized Among the topics to be addressed would be intellectual property rights Also, at least one Peruvian scientist working outside the country in the biotechnology area should be invited to participate, so that his or her views can be shared with national decision-makers and university representatives

7 2 Site-Based Interventions

Strengthening Local Institutions Involved in Resource Planning and Biodiversity Conservation
USAID's main contribution to stronger sub-national institutions involved in natural resource use planning would be similar to what will be done at the national level That is, the capacity of CTMRs and other institutions to frame issues for economic analysis and to interpret and to utilize the results of that analysis would be enhanced Like national training sessions, which are described above, regional short courses should feature general conceptual readings as well as the monograph containing accounts of the three empirical studies to be undertaken in Peru

8 PLAN OF ACTION

Potential regional and local partners, grant recipients, and collaborators have been identified through personal interviews and participatory workshops (Dialogos) held during site visits by the EPIQ Assessment Team Further details on the universities, GoP institutions, CBOs, NGOs, local government, women's organizations and native communities can be found in the attachments The suggested partners will form part of the customer service plan and is an illustrative list which should be carefully reviewed and refined during Activity startup Specific collaborative relationships, whether by memorandum of understanding, subcontract, or grant, should be clearly defined during the preparation of the first annual work plan

Specific arrangements for the implementation and financing mechanisms for the proposed Activity is not included the Team's scope of work The options discussed in the concept paper can readily offer helpful insights to successful implementation based on EPIQ's previous experience in similar natural resource management projects in Indonesia and Tanzania

8 1 Linkage to Related Biodiversity Conservation and Climate Change Activities

This activity will directly support CONAM priorities in the policy arena and goals The initiative will also take advantage of the experience gained in SENREM where the capacity of public and private institutions is being improved to resolve environment and natural resource problems and build on the lessons learned from previous USAID-funded projects such as the G/ENV's Biodiversity Support Program and LAC's Parks in Peril program Recent USAID funding under SO4 includes Rio Abiseo, Pacaya-Samiria, Paracas

The Activity will include a site-based intervention in Tingo Maria which is also linked directly to SO5, the Alternative Development SO where deforestation due to coca cultivation and the use of chemicals to transform the coca contaminate local rivers and drinking water and also harmful to endemic species of flora and fauna The proposed Callejon de Huaylas site in the Valle de los Conchucos is also an area of collaboration with the USAID-funded Mountain Institute

Other donors such as the World Bank-GEF, GTZ, the Dutch, FAO, the European Community, the IDB and private foundations such as the MacArthur Foundation, the Arnold Foundation, the

Doer Foundation as well as international conservation NGOs such as WWF, Conservation International, The Nature Conservancy, and the Wildlife Conservation Society all include biodiversity conservation in their strategy and Peruvian programs Sources of international technical cooperation for biodiversity in Peru are summarized in Attachment B

Both Shell and Mobil and their associated subcontractors involved in exploration and pipeline construction are working in forests noted for their unique biodiversity and traditional indigenous populations These companies have already demonstrated their willingness to work with conservation NGOs such as ProNaturaleza and Conservation International (CI) Continual dialogue and contact is encouraged through this Activity in order to capture their political and financial interest and using their influence with key GoP decision-making agencies to further biodiversity conservation and GCC initiatives

NOTES

1 World Resources Institute 1998 *World Resources 1998-99* New York Oxford University Press

2 USAID/Peru - Hanrahan et al , 1995 Environmental and Natural Resource Management in Peru A Strategy for USAID/Peru Assistance

3 Pearce, David 1996 "Global Environmental Value and the Tropical Forests Demonstration and Capture" in W Adamowicz, P Boxall, M Luckert, W Phillips, and W White (eds), *Forestry, Economics, and the Environment* Wallingford CAB International

4 *Ibid*

5 Brack-Egg, Antonio 1997 "Pobreza y Manejo Adecuado de los Recursos en la Amazonia Peruana" *Revista Andina*, 15 1, pp 15-34

ANALYSIS OF KEY THREATS TO BIODIVERSITY AND FRAGILE ECOSYSTEMS AND OPPORTUNITIES FOR INTERVENTION

The conservation and sustainable use of biological diversity in at three levels -- ecosystems, species, and genes -- and forests are threatened by policies, including the role of both national and private interests, and by inappropriate use on the local level Both of these kinds of threats must be considered in this activity design and will be analyzed separately in order to identify opportunities for intervention with regard to each

The Protected Areas Focus

The tendency to believe that biological diversity in a country having such megadiversity as Peru is guaranteed by the National System for Public Natural Protected Areas (SINANPE) is not shared by the design team First, because SINANPE does not cover all forms of biological diversity, as several recent analyses (Rodríguez 1996, CDC 1991) have shown Second, because even if it did provide adecuate coverage, it could not guarantee more than 50 percent of its conservations, according to island theory (Shaffer 1990)

Some of the elements of an integrated strategy for sustainable use and conservation of biological diversity are appropriate management of the natural resources without exceeding their capacity for recovery and regeneration, and the establishment and comp'liance with norms that minimize habitat fractioning and deterioration

Nevertheless, a protected areas system is the most efficient manner of guaranteeing long-term conservation of biological diversity The Peruvian Constitution and laws on biodiversity and protected areas recognize this Moreover, Peru is a party to the Convention on Biological Diversity (CBD), which determines the need to establish priorities for the conservation of biological diversity and its sustainable use

En 1994, duante el proceso de elaboracion del Plan Director, se identificaron 38 Zonas Prioritarias para la Conservacion de la Diversidad Biologica del Peru (See Map 1), en un esfuerzo de sintesis de las diversas propuestas existentes (Rodriguez, 1996) En el presente analisis, estas zonas se consideran como sitios potenciales para las intervenciones, ya que por lo menos en ellas, el uso de los recursos debe provocar la menor perdida posible de biodiversidad, aunque lo ideal seria que cada una de estas zonas prioritarias este representada en el SINANPE

A AMENAZAS DE POLITICA

Las principales amenazas a la biodiversidad tienen que ver con el uso desordenando de la tierra

y el uso desmedido de los recursos Ambas, tienen causas subyacentes (ultimate causes) en la politica del nivel nacional A continuacion un analisis de los aspectos principales

Divided Environmental Authority

Es la amenaza donde resulta mas dificil predecir o promover el cambio La sectorializacion de las responsabilidades sobre el mantenimiento de la calidad ambiental (en MITINCI, MEM) asi como en el uso de los recursos de la biodiversidad (Pesqueria, Agricultura), y la baja prioridad politica a estos temas, son una constante amenaza dificil de controlar La solucion a esta amenaza esta en manos del CONAM, a quien se podra dar el apoyo tecnico y facilitar las coordinaciones necesarias para agilizar su gestion

Misconceptions about the Value of Conserving Biodiversity and Forests

La biodiversidad se interpreta no como un recurso aun no valorizado, sino como todo aquello silvestre sin ningun uso o valor economico En 1994, el entonces ministro de agricultura publico las Reformas del Estado y Politica Agraria (Vasquez, 1994) Alli, se hace referencia a las areas protegidas en el capitulo referido a la Agenda Pendiente, bajo el titulo Ecoturismo y Turismo de Aventura, como su unica potencialidad de uso Ademas se habla de la futura ley forestal, donde se espera aumentar el valor de las exportaciones, sobretodo en valor agregado, reconociendo que se otorgaran derechos reales sobre el aprovechamiento de los recursos naturales Pero aparte del valor forestal, no se mencionan otras posibilidades de uso, tal vez mas sostenibles Los servicios ambientales, los productos del bosque diferentes a la madera, la fauna silvestre, la pesca, el valor en la alimentacion y muchos otros beneficios directos e indirectos a la poblacion, no se consideran valiosos por carecer de valor monetario Calculos en este sentido, ensayos, capacitaciones y demostraciones practicas seran necesarias para promover la internalizacion de este valor en las cuentas nacionales y en la conciencia colectiva nacional

Inappropriate Legal and Regulatory Framework

A la luz de los nuevos convenios suscritos por el Peru, como el CCC y el CDB, la legislacion vigente tiene vacios o en todo caso necesita ser reactualizada Estas nuevas leyes, significaran tambien cambios en la estrutura y administracion de recursos La parte mas dificil, es la compatibilizacion intersectorial en el manejo, como se menciono mas arriba

Sin embargo, existe el marco suficiente en la constitucion del Estado vigente, en sus articulos 66 y 68 Ademas, hay dos nuevas leyes que dan el marco sufuciente, si la voluntad politica lo permite, para facilitar la implementacion de los nuevos compromisos Por un lado, la aprobacion de la Ley sobre Conservacion y Aprovechamiento Sostenible de la Diversidad Biologica, Ley 26839 (16 Julio 1997) ha puesto el marco para la elabopracion de una estrategia nacional sobre conservacion y uso sostenible de la diversidad biologica (ENDB), que actualmente se viene elaborando por un proyecto financiado por PNUD
Entre otros temas, la ley reconoce el valor de los conocimientos tradicionales, declara de

prioridad la investigacion sobre conservacion y manejo sostenible de recursos, bosques, tierras fragiles, aridas semiaridas y humedales Tambien menciona que el Estado adoptara medidas de incentivo economico para la conservacion y uso sostenible de diversidad biologica, y que actualizara periodicamente los inventarios y valorizaciones de los componentes de la diversidad biologica Al mismo tiempo que reconoce el valor de las ANP como instrumento de conservacion in situ, y la necesidad de fijar prioridades para la conservacion y el uso sostenbile de la biodiversidad, en sus tres niveles

La otra ley es la de Areas Naturales Protegidas, Ley 26834 (4 Julio 1997) que establece nuevas categorias de manejo y un marco mas amplio para la participacion en el manejo de las ANP Esta ley necesita de una reglamentacion detallada para su implementacion si significara una reorganizacion en el manejo de las ANP, a nivel local y nacional La formacion de un Consejo de Coordinacion para el SINANPE y de un Comite de Gestion para cada ANP, son algunas intervenciones con posibilidades de exito, donde se reforzaria la participacion de la sociedad en el manejo de las ANP

Lack of Local Community Participation in Protected Areas Management

La participacion de las poblaciones locales en las decisiones que se toman localmente para el manejo de las ANP, es un instrumento fundamental en la resolucion de conflictos y una estrategia recomendable para fortalecer las ANP Aunque el reglamento vigente de la ley 21147, contempla la creacion de comites de gestion, muy pocos se implementaron pero ninguno de ellos ha participado en la toma de decisiones del manejo de las areas naturales protegidas Esto refleja el espiritu aun vertical de la autoridad en el manejo de las ANP
y la adopcion de instrumentos economicos como incentivos para la conservacion y uso sostenilbe de la diversidad biologica, entre otro

Disorderly Land Use

Este es uno de los problemas estructurales, consecuencia de una falta de planificacion para el uso de la tierra y de los recursos en general, generada por la sectorializacion en el manejo

El uso de la tierra solo esta regido dentro de cada sector Por ejemplo, en agricultura se usa como base el Mapa de Clasificacion de Uso Mayor de la Tierra (ONERN, 1982), el cual tiene como proposito definir las tierras aptas para agricultura Sin embargo, existen problemas de titulacion o de concesiones de tierras, para uso agricola en zonas de vocacion forestal, o cencesiones forestales en zonas de proteccion

Yendo a otros sectores, mineria establece sus concesiones en fomra muy independiente de la propiedad privada de la tierra o de la existencia de comunidades campesinas o nativas Ademas, cuenta con un catastro que utiliza unidades (UTM) diferentes a las coordenadas geograficas, haciendo dificil la comparacion con los registrados en las oficinas agrarias, con mucho menor sofisticacion

CONAM ha incluido, como parte de su estrategia, el desarrollo de una zonificacion ecologica economica, que solucionaria parte de los problemas del uso de la tierra Actividades demostrativas en sitios especificos, podria ser una de las intervenciones que reforzarian la estrategia del CONAM

El sector pesqueria estima que su manejo de los ecosistemas marino-costeros y de las aguas continentales es suficientemente adecuado y no necesitan establecerse areas protegidas en esos ambitos, las areas protegidas las crea y maneja agricultura Asi, a pesar de los acuerdos internacionales especificos, como la Comision del Pacifico Sur, no existe voluntad de crear areas protegidas marino-costeras y el informe nacional cuenta como areas marino-costeras las siguientes Pantanos de Mejia, Paracas, Lomas de Lachay, Pantanos de Villa, Manglares de Tumbes

Disorderly Natural Resource Use

En cuanto al uso de los recursos, los problemas mas graves de coordinacion intersectorial se dan entre agricultura y pesqueria Uno de los ejemplos mas claros, es el manejo de aguas continentales, como lagos y rios, donde la politica pesquera auspicia la conservacion de especies introducidas como la trucha y la tilapia, en desmedro de las especies nativas, o cuando pesqueria pretende manejar o normar las actividades sobre tortugas, que en principio son dominio de agricultura (todas las especies que se reproducen en tierra) Esta situacion es especialmente critica en las areas protegidas, donde ambos sectores pueden tener competencia y no existen acuerdos para las intervenciones

Al interior de cada sector, no existen programas de manejo de los recursos y, generalmente, el aprovechamiento de los recursos de especies silvestres, son alentados sin contar con el apoyo tecnico o los estudios previos necesarios estudios de viabilidad y sostenibilidad tanto biologica, como economica Esto es valido tanto para los recursos hidrobiologicos de aguas continentales y marinas, forestales, de fauna silvestre, de recursos del bosque diferentes a la madera, etc

Como intervenciones lo mejor sera desarrollar planes de manejo efectivos de los recursos, para que puedan ser incorporadas a la nueva normatividad que se esta preparando Especificamente, la promocion de nuevos productos, incluyendo el estudio de mercados, la investigacion de posibles asociaciones entre diversos sectores privados (empresa - poblaciones locales) no solamente para el turismo sino otro tipo de actividades productivas, etc

Mining and Hydrocarbons in Protected Areas

La actual legislacion nacional permite el uso minero indiscriminadamente, en todo el territorio nacional Sin embargo, los EIA sobre actividades dentro del ambito de las ANP necesitan del visto bueno de la autoridad competente, en este caso el INRENA Pero existen debilidades en el sistema para poder controlar la superposicion de limites de las concesiones ya que no hay un catastro comun que reuna el minero y el registro publico de tierras

Las coordinaciones multi e intersectoriales, son ahora muy dificiles por lo que la mejor oportunidad seria a traves de una actividad piloto (ver propuesta para Huascaran) Este sera el trabajo de CONAM a nivel nacional, pero una intervencion piloto en un ANP podria ser el estudio de caso necesario para demostrar la factibilidad de una solucion

Lack of Biosafety Measures

Estas son medidas nuevas que deben implementarse poco a poco a traves de CONAM, como parte de la implementacion del CDB A mas tardar en febrero del proximo año se adoptara el protocolo, en el marco del convenio, y se viene preparando una propuesta nacional para su aplicacion Apoyar la difusion del tema de bioseguridad, su importancia dentro de la conservacion de la diversidad biologica y la necesidad de una implementacion adecuada a nivel nacional podria ser una intervencion para fortalecer CONAM

Disorderly Expansion of Tourism

La industria sin chimeneas ha creado un mito en los paises en vias de desarrollo, como una alternativa de alta rentabilidad con relativamente poca inversion ni tecnologia En 1997, el Peru fijo como meta recibir 600 mil turistas, sin haber previsto los necesarios servicios, rutas, infraestructura, etc El ecoturismo, turismo rural y otras variaciones, son posibilidades muy alentadas en el pais, sobretodo como el uso de las areas naturales protegidas que debe intensificarse (Vasquez, 1994) Medir la capacidad de carga de las areas protegidas, calcular el mercado, servicios requeridos y el impacto tanto en la diversidad biologica como en las poblaciones locales, de las actividades turisticas, deberian ser consideraciones previas a la promocion de esta actividad Una intervencion piloto en un sitio seria lo mas apropiado para contribuir a cambiar la politica

Deforestation

La deforestacion en el Peru tiene una tasa anual de 0,3% (715 ha/dia), y ha alcanzado al 10-12% de los bosques Aunque esta tasa de conversion de uso de tierras forestales a agricolas (muchas de las cuales son despues abandonadas y se convierten en purmas o en bosques secundarios) no es muy alta, no existe una clara politica forestal o de manejo de bosques y los beneficios economicos de este recurso (en madera u otros usos) son bastante marginales para la economia nacional

Desde el punto de vista de diversidad biologica, el empobrecimiento de los bosques es tan preocupante como la deforestacion, ya que la extraccion selectiva provoca sin duda perdida de diversidad por lo menos al nivel genetico, biologica El ordenamiento y adecuado manejo de los bosques, como una intervencion demostrativa en un sitio, podria influir en sentar nuevas bases para un manejo adecuado de la diversidad de productos del bosque

La necesidad de alcanzar las metas del convenio sobre maderas tropicales para el año 2000,

obliga tambien a cambios de politica que necesitan de la capacitacion para implementar los planes de manejo exigidos La actualizacion de profesionales y tecnicos forestales en las nuevas tecnologias adecuadas al manejo diversificado del bosque, podria ser una intervencion En este marco, lo mas importante seria contribuir al diseño de planes de ordenamiento y manejo de concesiones forestales, introduciendo la diversificacion de usos

B AMENAZAS ESPECIFICAS A LAS AREAS PROTEGIDAS

A continuacion se hace una revision de los problemas de algunas de las 46 areas protegidas que conforman el Sistema Nacional de Areas Naturales Protegidas Ver el MAPA 2 para su ubicacion y Anexos 1 y 2

Zona Reservada Tambopata Candamo/Parque Nacional Bahuaja-Sonene

La Zona Reservada y el PNBS cubren extensos bosques tropicales de alta diversida biologica, comparable a la zona del Manu Desde su creacion en 1990, han habido procesos participativos para la delimitacion, zonificacion, etc Sin embargo, en 1995, la concesion de un lote petrolero desde la frontera boliviana hasta el borde del PN del Manu, pasando por encima de la ZRTC, retardo el proceso de planificacion, la categorizacion y el establecimiento de la categoria definitiva, demostrando las prioridades y la potencialidad de los cambios de politica sobre las ANP (MAPA 3)

Tambien en esta zona se presentan los problemas mineros mas importantes que han convertido 50 mil ha de bsoques en un desierto desprovisto de suelos, donde probablemente no crecera nada en varios siglos La zona de Huaypetue es una zona casi sin autoridades ni posibilidades reales de accion para esta actividad

Ademas de los problemas mineros existen problemas por una desmedida promocion del turismo sin orden ni prevision, aqui si se podria actuar Igualmente, el uso de recursos por los indigenas con derechos ancestrales de uso, es un reclamo constante que necesita atencion y solucion La resolucion de conflictos y el ordenamiento de las actividades en un plan disenado participativamente, que incluya un catastro integral, podria ser una intervencion

- Reserva de Biosfera/ Parque Nacional Huascaran (RBH)

El PN y RB Huascaran comprende la Cordillera Blanca, cordillera tropical mas alta en el mundo Tambien ostenta el reconocimiento de Patromonio Natural de la Humanidad

Un fenomeno alarmante es la deglaciacion de los glaciares de la Cordillera Blanca, un ejemplo claro de ello es Pastoruri Ante esta amenaza sera interesante apoyar los estudios sobre este fenomeno por parte de la oficina de INRENA encargada de glaciares, con sede en Huaraz Igualmente, sera importante monitorear los avances y retrocesos de la vegetacion natural, como

resultado de los cambios en los glaciares, algo que sin duda explicaria posibles efectos del cambio climatico a escala global Huascaran cuenta con un plan maestro que fue hecho participativamente y que necesita ser actualizado

El PN Huascaran tambien cuenta con un plan de uso turistico, elaborado en colaboracion con el TMI y cuyo objetivo principal es distribuir la presion de uso a varios sitios, la implementacion esta pendiente Actualmente, la laguna Llanganuco recibe mas de 50 mil visitantes al ano

La administracion del area ha identificado cuatro zonas criticas para el manejo Quebrada Honda, Pachacoto, Catac y Chiquian Estas zonas son donde existe problemas mineros, donde la administracion no ha podido aun lograr el dialogo para establecer acuerdos sobre usos incompatibles con la existencia del parque o donde las actividades fuera del area protegida tienen un fuerte impacto en la integridad del ANP Estas son zonas de altura en su mayoria, el trabajo organizado en por lo menos una de estas areas, podria convertirse en un logro importante de la actividad

Una de las mayores amenazas al Parque es la creciente actividad minera en la zona Consultas por nuevos denuncios mineros en el limite o en superposicion parcial al parque, muestran este interes El ordenamiento de esta actividad, como un ejemplo practico de posible solucion, con normas ambientales claras para los mineros de diversas escalas, regulaciones para la restauracion efectiva de los sitios abandonados, un catastro ordenado y accesible, son algunas de las soluciones que podrian incluirse en una intervencion en esta zona

El jefe del parque, Sr Rene Valencia, el mismo desde la creacion del parque en 1975, es el mas antiguo en todo el sistema Cabe mencionar que la falta de estabilidad en la administracion es una debilidad del sistema, el apoyo al trabajo del jefe seria una forma de demostrar, una vez mas, las ventajas de mantener continuidad en estos cargos

Como financiamiento de la cooperacion tecnica internacional, existe un proyecto en curso, financiado por el gobierno holandes a traves del TMI y estan por venir fondos de KFW, a traves de la administracion del Parque (para equipamiento, infraestructura)

- Reserva Nacional de Paracas (RNP)

Sitio Ramsar de la Convencion de Humedales y unica ANP peruana que comprende el dominio maritimo Pacifico y que representa la Corriente Peruana o de Humboldt Zona de alto valor biologico es a la vez la principal fuente de mariscos para el mercado limeño, donde habita la tercera parte de la poblacion peruana

Es tambien un centro de recreacion y esparcimiento (25 a 30 mil visitantes por año concentrados en Semana Santa y otras festividades del verano) Esta afluencia concentrada y desordenada de visitantes evidencia la falta de ordenamiento y de zonificacion adecuada de sitios para las diversas actividades de la reserva, que no perjudiquen los valores de la misma Un impacto no

calculado por ejemplo, es el de las numerosas huellas para acceder algunas playas, sobre los sitios arqueologicos de la reserva

El reciente Plan Maestro de la reserva (INRENA, 1996), tiene una propuesta muy pobre de zonificacion que no resuelve los problemas actuales ni preve el incremento en el uso recreativo o las posibilidades de manejo de los numerosos recursos de la reserva en el futuro
Oportunidades Paracas es una de las pocas areas que cuenta con un comite local de apoyo y donde los usuarios de la concha de abanico, el principal recurso de la reserva, estan organizados en comites y han internalizado las necesidades de organizacion y capacitacion para el buen manejo y la continuidad del recurso del cual dependen Existen dos apoyos importantes en este momento WWF esta empezando actividades de monitoreo en la zona y espera recopilar suficiente informacion que podria ser usado en procesos de planificacion para organizar el uso de los recursos KFW (gobierno de Alemania)

- Parque Nacional del Rio Abiseo

Patrimonio Natural y Cultural de la Humanidad, es una zona de gran diversidad ubicada en la ladera oriental de los Andes Representa varios pisos ecologicos de bosques montanos, entre el limite superior de los bosques tropicales (rain tropical forests) y la linea divisoria of the eastern slopes of the Andes Uno de los ecosistemas mas amenazados del Neotropico (Dinerstein et al, 1995) con un alto numero de especies endemicas, especialmente cierto en la zona del PNRA

Tiene dos frentes o vias de acceso que le valen una subdivision para la administracion por el lado de La Libertad se accede a la parte andina, sede del jefe del area en Pias, y es la via comun de acceso al parque para las ruinas del Gran Pajaten Actualmente, esta zona esta cerrada al turismo, debido a la fragilidad de las ruinas La habilitacion de alguna de ellas podria ayudar a implementar el turismo en la zona

La otra via de acceso es por Juanjui, la parte baja y colindante con el Bosque Nacional Mariscal Caceres La zona Oriental del Parque es la mas amenazada por la deforestacion, la zona del BN esta en produccion pero no existe un plan de manejo integral Una causa principal de la deforestacion en la zona fue los cultivos de coca, lo cual ha provocado perdida de diversidad de especies vegetales de distribucion restringida (Young, 1996) El establecimiento de un plan de manejo de los bosques primarios y secundarios de la zona, con demostracion efectiva de resultados economicos y sostenibles, podria ser una intervencion de impacto en la politica forestal nacional

- Parque Nacional Tingo Maria

Ademas de estar situado en los bosques montanos de la vertiente oriental de los Andes y de mantener poblaciones de algunas especies amenazadas, este parque tiene un significado historico en el SINANPE, fue el segundo en crearse y por iniciativa del congreso (en el Peru las ANP

las crea el poder ejecutivo mediante decreto supremo)

Es el unico parque nacional que no tiene limites definidos en su norma de creacion, lo cual hace dificil su saneamiento legal Sin embargo, un estudio de Dourojeanni y Tovar, determino limites potenciales y un area de 18 mil ha Norte, margen derecha del rio Monzon, Este margen izquierda del Huallaga, Oeste Quebrada Bella y cumbres, Sur quebrada 3 de Mayo De estas, falta delimitar el lado de quebradas Bella y 3 de Mayo Una intervencion posible seria el completar el saneamiento fisico-legal del Parque y su inscripcion en los registros publicos

Reserva de Biosfera del Noroeste/Parque Nacional Cerros de Amotape

Representa uno de los ecosistemas mas fragiles y deteriorados del Neotropico, con un alto numero de endemismos (Dinerstein, 1995) Compuesta por el Coto de Caza el Angolo, el Parque Nacional Cerros de Amotape y la Zona Reservada de Tumbes, es una ecosistema fragil por su baja capacidad de regeneracion La mayor amenaza es la extraccion de madera para fabricacion de parquet , leña y carbon, aunque el volumen de extraccion no es conocido Alternativas para uso energetico o la elecrtificacion de las poblaciones cercanas al Parque podrian contribuir a disminuir la presion

En esta reserva de biosfera han habido procesos participativos y de educacion ambiental conducidos por la propia administracion en colaboracion con Pronaturaleza, por lo cual existe sensisbilidad de la pobalcion local respecto al area El Parque Nacional es un area sin plan maestro, que necesita ordenamiento territorial

El Coto de Caza el Angolo podria ser un ejemplo piloto para desarrrollar la caza deportiva en el Peru, una actividad completamente olvidada que podria ser rentable Existe informacion sobre censos de poblaciones de venado y otras especies, pero esta informacion no ha sido difundida

La Zona Reservada de Tumbes, antes Bosque Nacional contiene partes de bosques tropicales humedos del Pacifico (El Caucho y Campo Verde) que podrian ser anexadas al Parque Nacional y garantizar su proteccion En el limite con el Ecuador, esta zona esta soportando ganaderia y agricultura que podria ser ordenada

Reserva Nacional Pacaya-Samiria

Este Sitio Ramsar de 2 millones de ha, es la ANP de mayor extension en el pais Los extensos aguajales, cochas y canales de ambas cuencas, mantienen una elevada diversidad de peces, tanto en numero de especies como en biomasa, como se comprueba facilmente al navegar en cualquier quebrada con poca agua Los bosques albergan ademas poblaciones de especies de fauna silvestre, incluyendo algunas especies de monos como el guapo negro (Pithecia), no protegidos en otras ANP

Los recursos mas importante de esta reserva son hidrobiologicos, el paiche, araguana y cerca

de 200 otras especies de peces comestibles y ornamentales, ademas de las tortugas acuaticas como charapa (Podocnemis expansa) y taricaya (P unifilis), tienen una amplia aceptacion y mercado en la zona Sin embargo, Iquitos, el mercado mas grande de la region, se encuentra alejado de la reserva (un dia en lancha, el transporte regular en la zona) haciendo dificil la comercializacion

La fauna terrestre en cambio presenta signos de agotamiento, ya que no existe ningun programa de manejo local de estas especies, solamente las restricciones a su uso comercial

El proyecto financiado por USAID ha diseñado y puesto en marcha actividades piloto de proteccion, manejo y produccion, con pobladores de la reserva, pero cuyo impacto es muy restrigido, tanto para la conservacion del ANP como parala ecnomia local El monitoreo de las poblaciones de peces y otras especies que viene siendo manejadas (tortugas acuaticas) tanto por el ANP como por proyectos, podria ser una intervencion pequeña que complementaria un programa mas significativo para el manejo de la pesca

Otras areas consideradas

Santuario Nacional Manglares de Tumbes

Es la unica muestra de manglares en el SINANPE y es sitio Ramsar Esta zona pequeña soporta una fuerte presion por extraccion de mariscos y la constante destruccion del habitat Necesita un mejor manejo de los recursos y un plan de recuperacion de los manglares Aqui podrai haber un efecto de cambio climatico (expansion natural) por lo que se podria extender el ANP

Parque Nacional y Reserva de Biosfera del Manu

Comprende el Parque Nacional y la Zona Reservada del Manu Es el area mejor diseñada de todo el SINANPE porque cubre toda la cuenca del rio Manu y ademas incluye una gradiente altitudinal desde las cumbres de la vertiente oriental de los Andes hasta los bosques tropicales, incluyendo una amplia superficie y diversidad de bosques Con informacion abundante sobre su rica biodiversidad en la parte baja, esta es menos conocida en los pajonales y bosques montanos, donde existe un elevado numero de endemismos y de especies aun por descubrir Estos ecosistemas son fragiles y de hecho son los mas presionados por el uso para agricultura y pastoreo En la zona de amortiguamiento andina habitan unas 8 mil personas (en un ambito menor a 300 mil ha) mientras en las partes bajas la poblacion alcanza 5 mil habitantes (en mas de 1 millon de ha)

La situacion geografica del Manu, en la base de los Andes y todavia en un clima donde la estacionalidad de las lluvias no provoca un decrecimiento en diversidad, se complementa con la dinamica fluvial que gobierna los movimientos del rio Manu Todos estos factores provocan, en la parte baja de Manu, un mosaico sucesional de vegetacion, con suelos ricos en la llanura de inundacion, que favorece una alta diversidad Ademas, la diversidad de pisos altitudinales, desde

la cumbre hasta el llano, ademas de su extension de mas de 18 mil kilometros cuadrados, hacen de Manu una de las areas protegidas mas ricas en diversidad biologica, internacionalmente hablando Tiene los registros mas altos en numero de aves, anfibios, y comparables en peces y mariposas a los mas conocidos records de Tambopata

La zona noroccidental del Parque es muy cercana al Camisea, donde la compañia Shell realiza actualmente trabajos de perforacion para la explotacion de los mas grandes yacimientos de gas natural en el Peru, los que se estima tienen reservas para aproximadamente 30 años Un trabajo de sensibilizacion y de awareness de la situacion y de integracion de esta zona, como parte de la zona de amortiguamiento del parque (o zona cultural de la reserva de biosfera) podria contribuir con la proteccion de las culturas tradicionales existentes en la zona, las cuales han tenido muy poco contacto con la cultura mayoritaria del pais, ademas que ayudaria al reforzamiento de los limites del parque en esa zona La inclusion de la zona reservada como zona de uso turistico del Parque, que es como actualmente se maneja, es una sugerencia para regularizar la situacion de la ZR del Manu

Reserva Nacional de Calipuy y Santuario Nacional de Calipuy

Ambas ANP fueron creadas para recuperar y proteger poblaciones de especies en vias de extincion guanaca y Puya raimondi, sin embargo el manejo de estas areas no es efectivo Un plan de manejo, incluyendo la recuperacion y el monitoreo de estas poblaciones seria pertinente Ademas, seria recomendable establecer otras potencialidades de uso de la Reserva Nacional, para involucrar mejor la poblacion aledaña Son areas sin manejo efectivo

Zona Reservada Pantanos de Villa

Un area natural protegida demasiado pequeña y comprometida por el area urbana en que se encuentra (Chorrillos, Lima) Punto de parada de aves migratorias, se halla amenazada por las industrias (Lucchetti) y diversos proyectos propios de una ciudad Puede servir como ejemplo piloto de resolucion de conflictos en cuanto a superposicion de autoridades y de competencias Por su ubicacion, puede ser un excelente instrumento de creacion de conciencia para la tercera parte de la poblacion peruana (que habita en Lima) de que significa un ANP, las leyes que le competen y la responsabilidad sobre ellas Ademas necesita de la asignacion de una categoria de manejo permanente, se ha recomendado como Refugio Silvestre, en el marco de la nueva legislacion (Rodriguez, 1996) Ademas del INRENA, la administracion cuenta con el apoyo de la Municipalidad de Lima y las Fuerzas armadas, los vecinos de Villa, Terra Nuova y la union Europea ademas de ONGs locales, contribuyen con varias actividades

Reserva Nacional del Titicaca

Designada recientemente como sitio Ramsar, es la unica ANP del lago Titicaca, el cual se considera como una provincia biogeografica (Udvardy, 1975) per se, compartida con Bolivia La superficie del lago varia segun las lluvias y por sus caracteristicas topograficas, extension

(8,000 square Km) y poblacion humana que de el depende directamente, es uno de los ecosistemas mas sensibles a los cambios climaticos, en el Peru Tiene problemas de contaminacion y, como en casi todas las reservas nacionales, el uso de sus recursos naturales es desordenado No cuenta con un plan de manejo, aunque hubieron experiencias participativas de planificacion para un plan operativo a fines de los años 80 Ademas, existen prospecciones petroleras en la zona Recientemente se ha aprobado un proyecto binacional GEF, para un plan de desarrollo sostenible

C ALGUNAS OPORTUNIDADES PARA LAS INTERVENCIONES

Consolidacion del SINANPE

De las 38 areas prioritarias para la conservacion de la diversidad biologica (FANPE, 1996), 16 no tienen ni siquiera una cobertura parcial por el SINANPE El aumento de ellas depende en gran parte de las oportunidades de establecimiento de nuevas ANP La promocion de ANP, como una estrategia para fortalecer zonas de fronteras y marcar presencia del Estado, parece haber logrado cierta aceptacion en los niveles de decision del gobierno actual, como lo demuestra la creacion de la Zona Reservada del Gueppi y la actual discusion sobre la inclusion de la Cordillera del Condor y otras zonas en frontera

Nueve de las dieciseis zonas prioritarias para conservacion de la diversidad biologica se hallan en zona de frontera

Zona Prioritaria	Departamento	Nombre de Propuesta
Cordillera del Condor	Amazonas	Cordillera del Condor (CI)
Pastaza	Loreto	No
Tigre	Loreto	Pucacuro
Putumayo	Loreto	ZR Guepi,Yaguas (PEDIC)
Yavari-Mirim	Loreto	No
Alto Yavari-Tapiche	Loreto	No
Sierra del Divisor	Ucayali	No
Alto Purus	Ucayali	No
Moquegua-Mazo Cruz-Maure	Moquegua	No

Las Zonas Ambientalmente Criticas

En 1986 cuando el Peru preparo el Perfil Ambiental (ONERN, 1986) identifico 13 zonas criticas Algunas de ellas coinciden con las zonas prioritarias para conservar diversidad biologica Pero en 1997, durante el Ecodialogo, CONAM priorizo 5 de las Zonas

Ambientalmente Criticas Ilo, Huallaga, Mantaro, Madre de Dios y Chimbote

The CTMR

Las Comisiones tecnicas multisectoriales regionales (o departamentales) son entes de coordinacion ambiental promovidos por CONAM La composicion es similar al directorio del CONAM (sectores publicos y privados) La implementacion de estos comites regionales de concertacion sobre temas ambientales se lleva a cabo actualmente bajo el proyecto Capacidad 21, financiado con fondos de PNUD, para los cuales se ha priorizado las zonas criticas Ya se establecio la de Cusco y pronto se creara la de Madre de Dios Adicionalmente, a iniciativa propia del gobierno regional de Loreto, se han hecho ya varias gestiones para formalizar una CTM en Loreto, esta sin embargo no esta entre las tres que CONAM espera establecer este ano

National Forests and Permanent Production Forests

Frente a las exigencias ITTO para la exportacion de maderas tropicales y aun en espera de la nueva ley forestal, INRENA esta adoptando una nueva politica para l manejo de los bosques amazonicos Las unidades de produccion permanente y los bosques nacionales estan siendo delimitados, entrados en un catastro para su licitacion bajo diferenets formas, que son decididas por una comision, para cada caso Estos son

Biabo*	2 100 000
Von Humboldt*	400 000
Cuenca del rio Tamaya	900 000
Pebas	1 400 000
Yurimaguas	500 000
Contamana	500 000
Cuenca del rio Yavari*	1 000 000
San Martin	300 000
Tambopata	500 000
Puerto Inca	400 000

(*) coinciden con zonas prioritarias para la conservacion de diversidad biologica

En estas areas, sobretodo las que coinciden con zonas prioritarias para la conservacion de diversidad biologica, al igual que en los bosques nacionales como

- San Matias San Carlos, cercano al PN Yanachaga Chemillen
- Morona-Santiago-Pastaza,
- Mariscal Caceres, cercano al PN Rio Abiseo,

se recomiendan como sitios potenciales de intervenciones relacionadas al manejo de bosques

Es posible tambien, que algunas de estas areas ya esten intervenidas o se hayan convertido en bosques secundarios Se presenta aqui una oportunidad para intervenciones en busqueda de productos alternativos o nuevos del bosque y de actividades economicamente rentables y sostenibles, tendientes al manejo sostenible y diverso

Biological Corredors

El diseno ideal del SINANPE determina algunas caracteristicas deseables para que sea lo mas eficiente posible en conservar diversidad biologica Sin embargo, las oportunidades politicas y la distribucion de tierras en propiedad privada de comunidades nativas o comunales, hace que se creen areas protegidas de tamano inferior al necesario o demasiado alejadas unas de otras

La conectividad entre areas es un factor importante para asegurar el mantenimiento de pobalciones viables, sobretodo en especies con baja capacidad de dispersion Una solucion practica actualmente usada es el establecimiento de corredores biologicos, es decir una combinacion de areas que de alguna manera pueden conectarse, inclusive a traves de propiedades privadas La nueva Ley de Areas Naturales Protegidas contempla por ejemplo la posibilidad de establecer areas de propiedad privada, lo cual podria contribuir a la creacion de corredores biologicos en el Peru

Hay dos posibilidades de corredores actualmente Uno en el Sur-Este, incluyendo la ZRTC-PNBS, la RC Amarakaeri, la RB Manu, la ZR Apurimac El otro podria pasar a traves de las Yungas Peruanas, un ecosistema muy importante regionalmente, pero a la vez muy amenazado (Dinerstein, et al 1995) Este podria incluir Cordillera del Condor, SN Tabaconas Namballe, RC Cordillera de Colan, BP Alto Mayo, PN Rio Abiseo, PN Yananchaga -Chemillen En esta propuesta habria que buscar mas zonas que realmente lleguen a completar y conectar las areas ya existentes

(Ver Mapa 4, de araes establecidas a nivel regional y de propuestas de nuevas ANP recogidas en el proceso del Plan Director)

In situ Conservation of Genetic Resources

Esta es una potencialidad que no ha sido estudiada en las areas protegidas y que les puede dar un avlor agregado, por las pobalciones silvestres de especies de gran uso comercial Un ejemplo calor es el tomate El inventario de estos recursos en las ANP asi como su valoracion, al igual que los cultivos mantenidos por las pobalciones locales que viven dentro o alrededor de las areas protegidas, podrian ser un instrumento para determinar beneficios y participacion de pobalciones locales en la gestion de las ANP

D CRITERIOS PARA SELECCIONAR LAS AREAS DE INTERVENCION

Criterios de oportunidad de exito de las intervenciones

- Appropriate partners
- Viable policies
- Threats that can be managed or minimized both politically and in local use
- Existence of financial support
- Information available

Criterios conceptuales/biologicos

- Biological representivity
- ANP size
- Ecosystem fragility
- Potential for mitigating climate change by capturing carbon in forests

Estos criterios son evaluados en el ATTACHMENT H, al mismo tiempo que se hace la revision de la matriz y los criterios de seleccion propuestos por Pedro Vasquez

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ANEXO 1 THREATS ANALISIS FOR BIODIVERSITY AND FRAGILE ECOSYSTEMS

ANP	Threats	Potential Interventions	Results/ Indicators	Potential Partners
ZRTC / PNBS	- Promocion incontrolada del Turismo - Fragmentacion de autoridad ambiental - Rehabilitacion de carreteras presion de colonizacion sobre tramo San Gaban-Puente Inambari por exploracion petrolera - Uso de bosques y de suelos de aptitud forestal en agricultura y pastos (deforestacion, actividades de subsistencia no rentables) - Falta de reconocimiento de derechos de acceso a recursos naturales	- Plan piloto de ordenamiento territorial y posibilidades de uso forestal, agricola, minero, turisico y urbano, en zonas adyacentes a las carreteras (Puno) -Validacion de zonificacion ecologica economica - Plan de uso turistico de Madre de Dios, elaborado con CTM -Desarrollo de alternativas economicas en zona de amortiguamiento - Acuerdo para coordinaciones en el manejo PNBS-Madidi - Ampliacion de area del PNBS/sueltas del lote 78 de Mobil - Capacitacion en gestion y elaboracion participativa de proyectos - Saneamiento de derechos de acceso a recursos naturales en puntos criticos	Calculo de la capacidad de carga turistica de ZRTC/PNBS, RBM? Mapa de conflictos de uso de la tierra, 50% de conflictos resueltos 3 proyectos productivos implementados y sostenibles - Mapas de los recursos naturales preparados por CCNN - Comite Local de Gestion funcionando	INRENA/ PNBS CTMR MITINCI-MD Comite de Ecoturismo CTAR-MD MAG-MD PREVIT IIAP Centro Eori CI FADEMAD UNSAAC

RBH	-Mineria a gran (fuera) y pequeña (dentro) escala en la RBH - Acreditacion de minas abandonadas -Alta presion de turismo convencional por concentracion en sitios turisticos - Caza furtiva - Extraccion de leña/de plantas medicinales -Sobrepastoreo en el PN - Desglaciacion de los Glaciares de la Cordillera Blanca	-Plan piloto de ordenamiento minero en toda la RBH - Restaurar zona degradada dentro del PN - Fortalecer la oficina de INRENA para estudios de glaciares - Implementar 2 nuevos sitios turisticos - Plan de manejo para 1 zona critica - Monitoreo de especies clave y amenazadas (Puya, vicuña, etc) - Estudio para determinar el valor de conservacion in situ de la RB/PN para cultivos andinos, plantas medicinales - Estudio de mejoramiento de pastos/reintroduccion de arboles nativos en el ambito de la RBH - Establecer CLG	Plan piloto de manejo minero con tecnologias limpias, es un modelo Una zona rehabilitada dentro del parque Indicadores biologicos de calidad ambiental, metodologia de monitoreo por el PN establecida Reduccion de volumenes totales de contaminantes del agua Carga turistica anual distribuida en 3 o 4 sitios CLG establecido Plantas medicinales son comercializadas	INRENA-PN Univ NAM Comites de usuarios de pastos, arrieros, boteros, etc CARE TMI VIDA
RNP	-Contaminacion marina -Uso desordenado de recursos marinos concha de abanico, pulpos, peces, caballito de mar, algas -Desconocimiento del impacto de actividades humanas (salinera, harineras, extraccion de mariscos, turismo, expansion urbana) en los procesos, recursos y especies clave del ecosistema que representa	-Seguimiento a implementacion de PAMAs a traves de indicadores -Monitoreo de especies amenazadas y recursos clave - Apoyar el diseño participactivo de un plan de manejo de recursos hidrobiologicos con los usuarios de la RNP, incluyendo estudio de mercado - Estudio del efecto de canales de salinera - Establecimiento de Comite de Gestion	Recuperacion de calidad ambiental de la bahia CLG establecido	INRENA RNP Univ Ica Com Apoyo IMARPE WWF ProNaturalez a APECO Comite de pescadores

PNRA	- Deforestacion en la zona de amortiguamiento y en el BN Mcal Caceres - Presion por extraccion de madera sobre quebradas y cursos de agua en las partes bajas (servicio ambiental) - Poblaciones de peces muestran signos de sobre-explotacion (tamano reducido) - Fluctuaciones en el mercado agricola impactan sobre tipo de agricultura (cafe)	- Plan piloto de manejo forestal del Bosque Nacional Caceres, incluyendo productos diferentes a la madera - Saneamiento fisico-legal y catastro integral - Valoracion economica de los servicios ambientales del parque y del Bosque Nacional - Planificacion participativa, con estudio de mercado, de pequeñas actividades pesqueras agroindustriales - Proyecto piloto de uso sostenible de bosques secundarios aledaños al PNRA	Plan de manejo de BN Caceres con respaldo de sector publico y privado Incremento de productos de pesca en mercados de la zona de Juanjui Produccion de bosques secundarios en los mercados y rentable	INRENA-PNRA Municipios Clubes de Madres INADE APECO ProNaturalez a
PN TM	- Problemas de definicion del area, demarcacion de limites, invasiones al Parque -Deforestacion para agricultura, quema	- Saneamiento fisico-legal del Parque - Disminucion de quemas, alternativas economicas - Restauracion de cobertura forestal - Elaboracion participativa de un Plan Maestro del PNTM		PEAH/ INADE PAD UNAS INRENA-PNTM COPANATI MA
RNPS	- Uso desordenado de recursos abundantes como los peces - Signos de disminucion de poblaciones de fauna silvestre (primates sobretodo)	- Monitoreo de posibles indicadores biologicos de recuperacion de poblaciones de especies clave/en uso/amenazadas - Implementar plan de manejo pesquero y de otros recursos - Fortalecimiento a CECODES		Gob regional, TNC/Pro Naturaleza, CARE, IIAP WWF

RBNO	- Deforestacion parqueteras y produccion de carbon de leña - Pastos/ganaderia (conversionde uso de la tierra) - Caza furtiva y comercio de aves y otras especies silvestres	- Implementar/ actualizar plan maestro, enfasis en manejo de fauna y alternativas al uso forestal, de carbon de leña y ganaderia - Promover modelo de manejo de caza deportiva -Plan Maestro del PN Cerros de Amotape -Anexar zona El Caucho de la ZR de Tumbes al PNCA - Apoyar establecimiento de CLG RBNO	Determinacion de demanda local de lena y carbon Reduccion de ganaderia, detencion de tala p pastos Caza deportiva rentable para el manejo del area CLG establecido	ProNaturaleza

ANP= Area Natural Protegida, RBH Reserva de Biosfera de Huascaran, ZRTC/PNBS= Zona Reservada Tambopata-Candamo/Parque nacional Bahuaja-Sonene, RNP= Reserva Nacional de Paracas, PNRA= Parque Nacional del Rio abiseo, PNTM= Parque nacional Tingo Maria, RNPS= Reserva Nacional Pacaya-Samiria, RBNO= Reserva de Biosfera del Noroeste

Nota - El ambito de aplicacion de intervenciones, asi como de amenazas sobrepasa los limites de las ANP Por eso, en este cuadro, se hace referencia mas que todo a las zonas de amortiguamiento y no se restringen actividades al interior de las areas protegidas Por eso tambien se hace mencion de las reservas de biosfera, para implicar un ambito mayor de aplicacion de intervenciones, aun cuando esa categoria es un reconocimiento internacional de Naciones Unidas, pero no una categoria nacional

Anexo 2 CHARACTERISTICS OF PROTECTED AREAS CONSIDERED FOR THE THREATS ANALYSIS

Name	date of creation	size (in ha)	representativity
ZRTambopata Candamo- PNBahuaja Sonene	1990 1996	1 478 900 537 053	BHST ZP
RN Paracas	1975	335 000 + 217 594	Desierto PST Dom Per-chil,ZP
PN Rio Abiseo	1983	274 520	YungaT, PunaT, ZP
PNTingo Maria	1965	18 000	Yunga T
RBNO PN Cerros de Amotape ZR Tumbes CC El Angolo	1975 1975	91 300 75 102 65 000	Bosque seco ecuatorial, ZP Tumbes
RN Pacaya Samiria	1972	2 080 000	Amazonica Tropical, ZPPacaya-Samiria
SN Manglares de Tumbes	1988	2 972	Bosque Seco Ecuatorial, ZP Tumbes
RBM PN Manu ZR Manu	1973 1980	1 532 806 257 000	Puna SubT, Yunga SubT, Amazonica SubT, ZP Manu
RNCalipuy- SN Calipuy	1981 1981	64 000 4 500	Andes Meridionales Tropicales, Puna Tropical
ZR Pantanos de Villa	1989	396	Desierto Pacifico SubT
RN Titicaca	1978	36 180	Lago Titicaca, ZP Titicaca
PN Huascaran	1975	340 000	PunaT, ZP Huascaran - Cordillera Negra

Representativity according to biogeographical provinces (CDC, 1991) and Priority Areas (Rodriguez, 1996)

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LIST OF ACRONYMS

ANP	Area Natural Protegida
CCC	Convenio de Cambio Climatico
CDB	Convenio de Diversidad Biologica
EIA	Estudio de Impacto Ambiental
MEM	Ministerio de Energia y Minas
MITINCI	Ministerio de Industria Turismo, Integracion y Comercio Internacional
CONAM	Consejo Nacional del Ambiente
INRENA	Instituto Nacional de Recursos Naturales
PNUD	Programa de las Naciones Unidas para el Desarrollo

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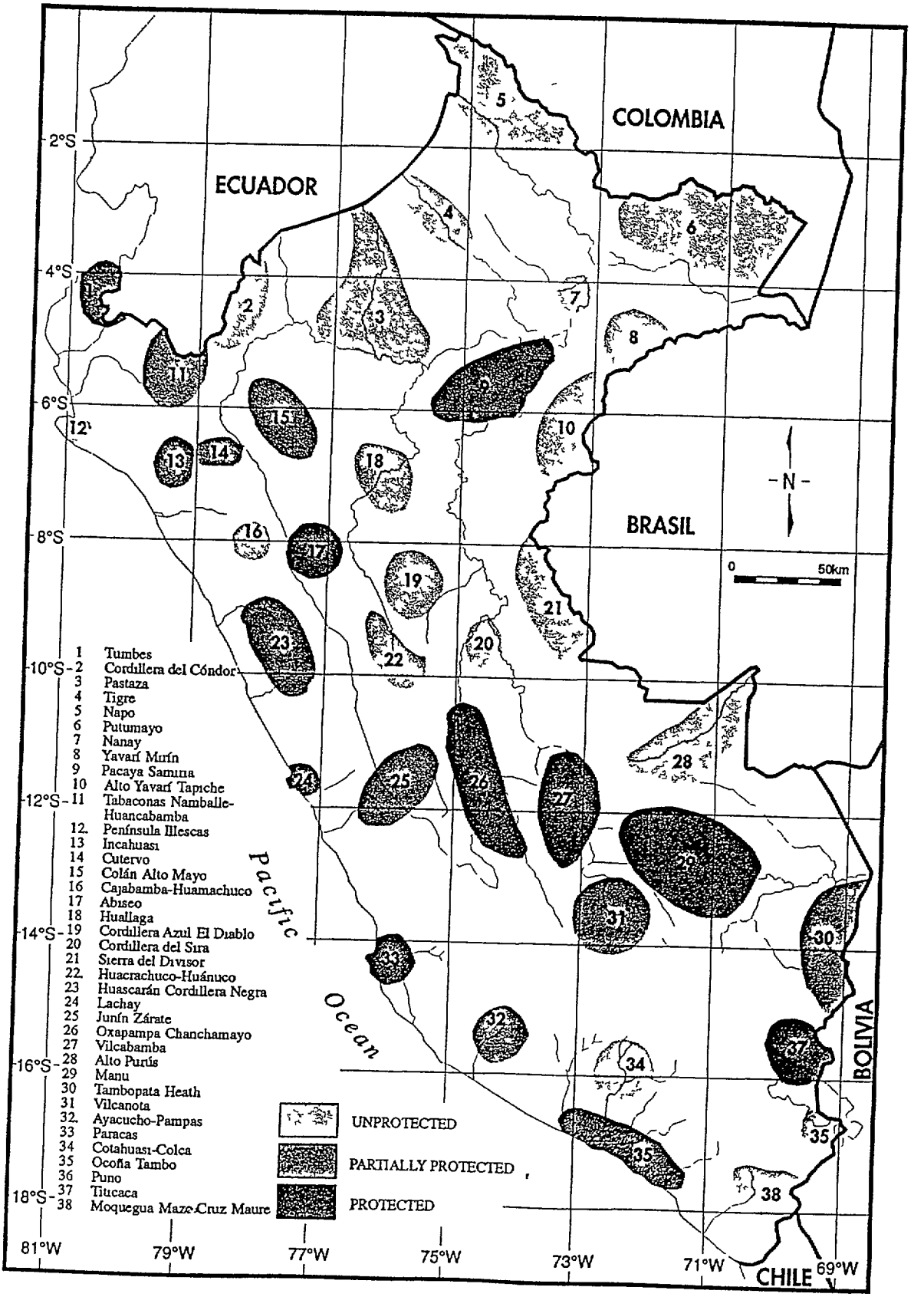
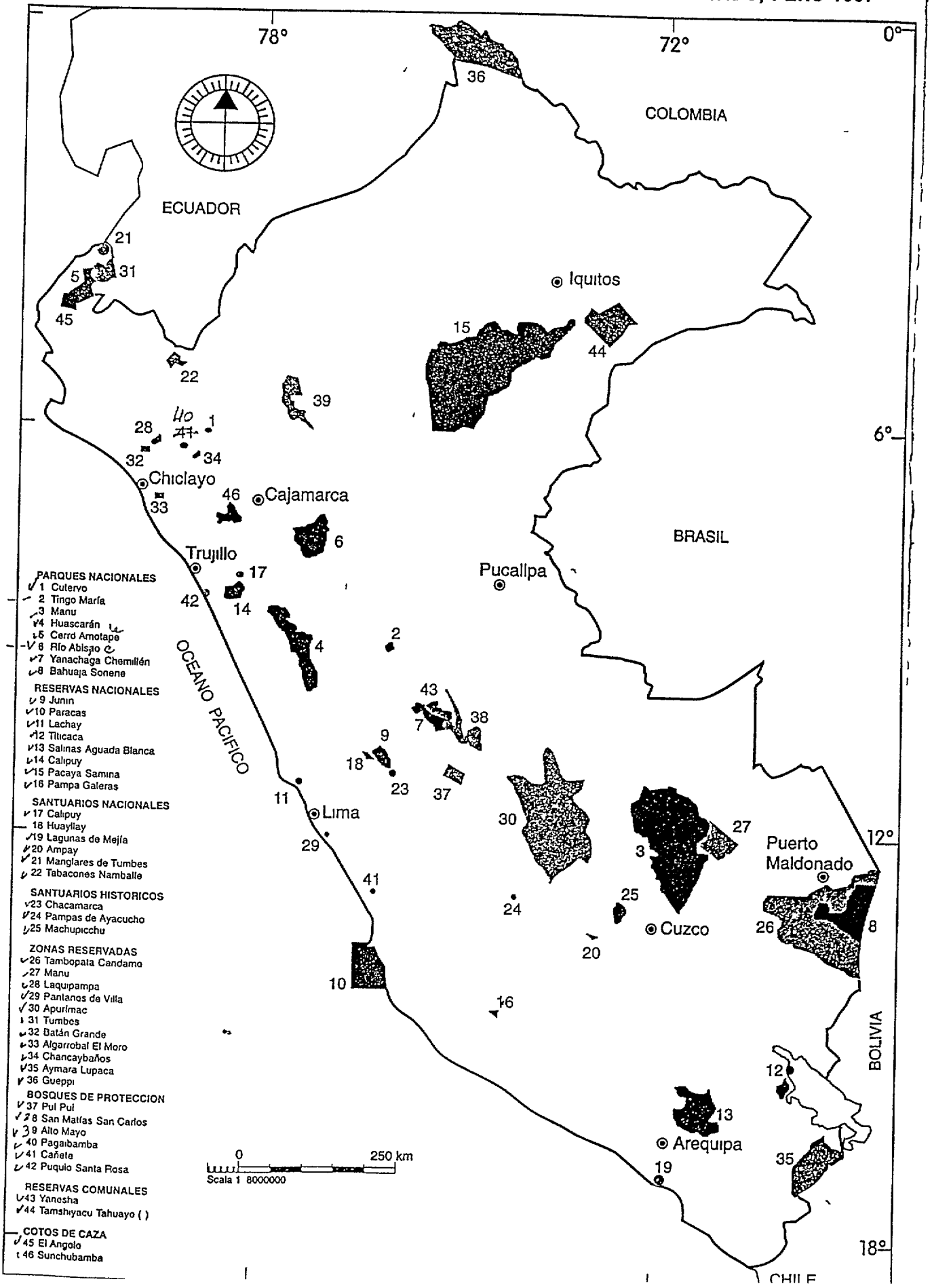
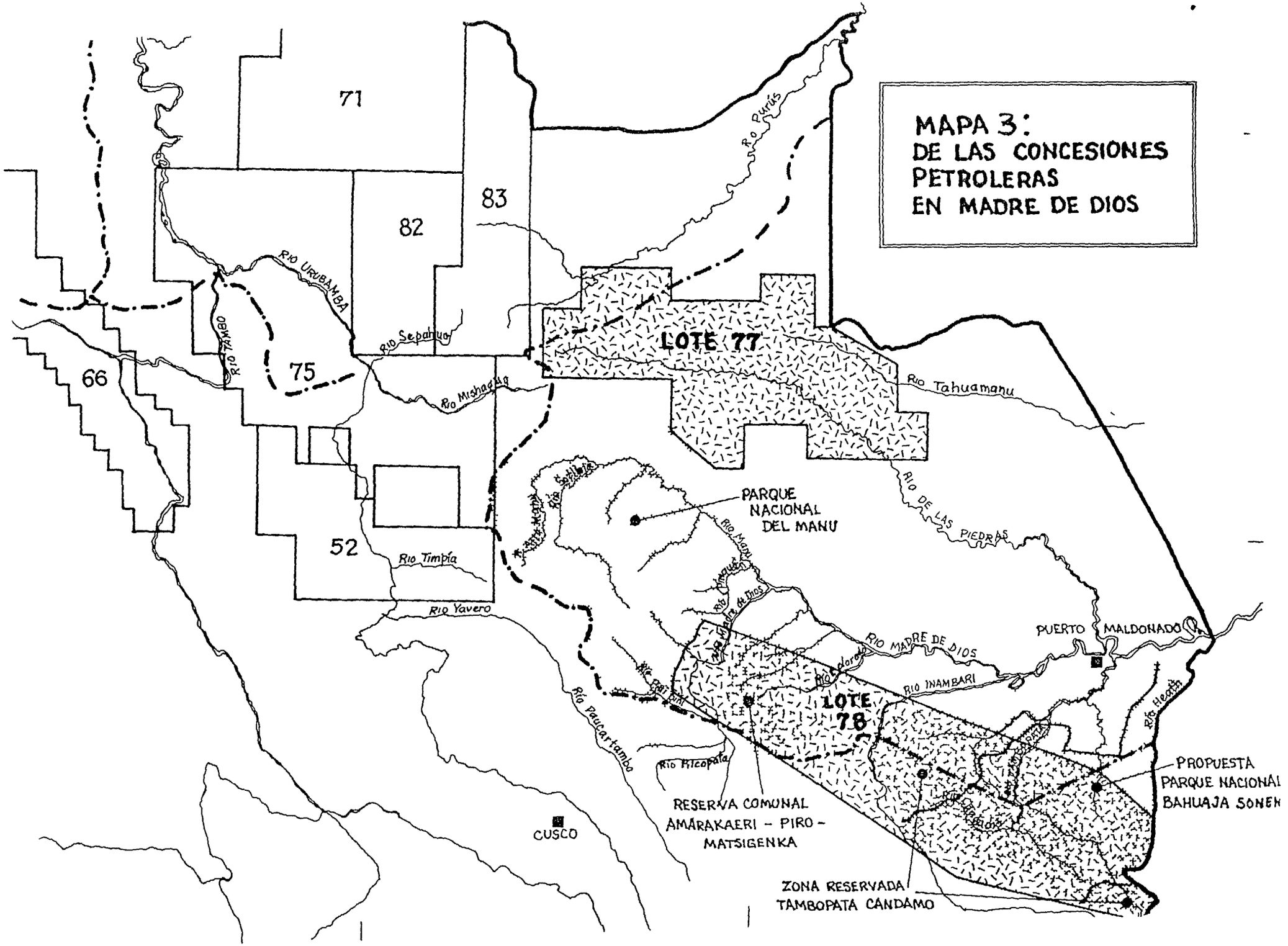
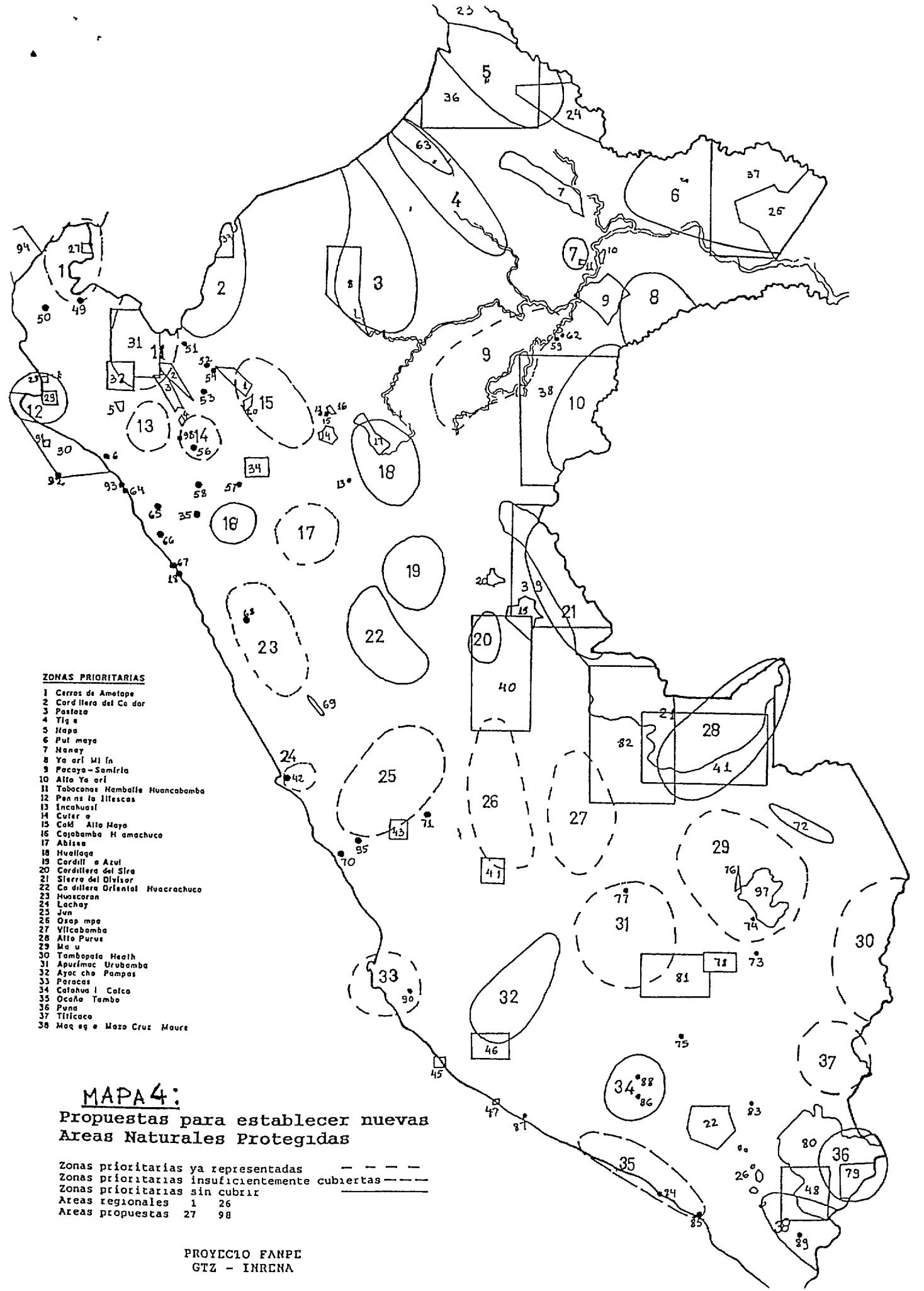


Mapa 1 Zonas Prioritarias para la Conservacion de la Diversidad Biologica

Mapa 2 SISTEMA NACIONAL DE AREAS PROTEGIDAS POR EL ESTADO, PERU 1997




MAPA 3:
DE LAS CONCESIONES
PETROLERAS
EN MADRE DE DIOS
71
82
83
66
75
52
LOTE 77
LOTE 78
Río Purús
Río URUBAMBA
Río TAMBO
Río Sepahua
Río Mishagua
Río Tahuamanu
Río DE LAS PIEDRAS
Río Timpía
Río Yavero
Río Manu
Río Madre de Dios
Río Inambari
Río Heath
Río Paucartambo
Río Picopata
PARQUE
NACIONAL
DEL MANU
PUERTO MALDONADO
CUSCO
RESERVA COMUNAL
AMARAKAERI - PIRO -
MATSIGENKA
ZONA RESERVADA
TAMBOPATA CANDAMO
PROPUESTA
PARQUE NACIONAL
BAHUAJA SONEN



MAPA 4:

Propuestas para establecer nuevas Areas Naturales Protegidas

Zonas prioritarias ya representadas — — — —
Zonas prioritarias insuficientemente cubiertas — — —
Zonas prioritarias sin cubrir ———
Areas regionales 1 26
Areas propuestas 27 98

PROYECTO FANPE
GTZ - INRENA

LEYENDA PARA LAS PROPUESTAS PARA NUEVAS AREAS.- Las primeras 26 áreas son aquellas establecidas por las regiones o gobiernos municipales, dentro o fuera de sus atribuciones Las siguientes áreas, numeradas del 27 al 98, son aquellas que fueron de alguna manera dadas a conocer a través de las encuestas a investigadores, participantes a los talleres asi como comunicaciones varias y bibliografía llegada a las oficinas del Plan Director Esta lista corresponde a las numeradas en pequeño en la FIGURA Propuestas para establecer nuevas Areas Naturales Protegidas

AREAS ESTABLECIDAS A NIVEL REGIONAL

1 ZR AMOJAO, BAGUA-AMAZONAS
2 ZR SAN JOSE DEL ALTO, JAEN - CAJAMARCA
3 ZR LAGUNA PALAMBE-QUISMACHE, CAJAMARCA
4 BP MONTAÑAS DE MANTA
5 ZR RACALI, LAMBAYEQUE
6 ZR MONTES DE LA VIRGEN, LAMBAYEQUE
7 ZR DEL RIO MAZAN, MAYNAS - LORETO
8 ZR DEL RIO PASTAZA, ALTO AMAZONAS - LORETO
9 RC TAMSHIYACU - TAHUAYO, MAYNAS - LORETO
10 RESERVA EN ESTUDIO PADRE ISLA E ISLA DE IQUITOS, LORETO
11 RESERVA EN ESTUDIO MISHANA, RIO NANAY, LORETO
12 ZR MOORO CALZADA, MOYOBAMBA - SAN MARTIN
13 ZR EL SHAPUMBAL, BELLAVISTA - SAN MARTIN
14 ZR CUENCAS DEL GERA Y SISA, MOYOBAMBA - SAN MARTIN
15 ZR DE LOS BAÑOS SULFUROSOS, MOYOBAMBA - SAN MARTIN
16 ZR JUNINGUILLO-LA MINA, MOYOBAMBA - SAN MARTIN
17. BP CORDILLERA LA ESCALERA, LAMAS - SAN MARTIN
18. RESERVA EXTRACTIVA LOS BALSARES DE HUANCHACO
19. RC IMIRIA, CRNEL PORTILLO - UCAYALI
20 RC YARINACOCHA, CRNEL PORTILLO - UCAYALI
21 ZR CALLERIA-SHESHEA, ATALAYA - UCAYALI
22 ZR PAMPA CAÑAHUA, CAILLOMA - AREQUIPA
23. ZR GUEPI, LORETO
24 ZR ERE-CAMPUYA, LORETO
25 ZR YAGUAS, LORETO
26. ZR DE MOQUEGUA

PROPUESTAS RECOGIDAS EN EL PROCESO DE ELABORACION DE LA ESTRATEGIA PARA EL SINANPE

27 SECTOR EL CAUCHO - CAPO VERDE, TUMBES
28 MANGLARES DE SAN PEDRO, PIURA
29 ESTUARIO DE VIRRILA, PIURA
30 PENINSULA DE ILLESCAS
31 PARAMOS DE HUANCABAMBA Y QUIROZ
32 RINCONADA EL GARABO, QBDA JAGUAY Y MUGO MUGO
33 CORDILLERA DEL CONDOR, AMAZONAS
34 BALSAS, CALLA CALLA, AMAZONAS
35 CERRO CAMPANA
36 GUEPI, LORETO
37 PUTUMAYO-HIPONA-AMAZONAS
38 RIO BLANCO-RIO YAVARI, LORETO
39 CORDILLERA DE CONTAMANA
40 SERRANIA DEL SIRA
41 ALTO PURUS
42 ALBUFERAS DE PLAYA CHICA Y PARAISO
43 VALLE DEL MANTARO, SUB-CUENCA PARIAHUANCA
44 VALLE DEL MANTARO, MANTACRA-MAYOCC
45 SAN FERNANDO
46 HUAJUMA-TAMBO QUEMADO
47 LOMAS DE ATIQUIPA Y TAYMARA
48 MAZO CRUZ-MAURE
49 CUENCAS ALTAS DEL CHIRA-PIURA
50 LAS PALMAS-PIURA
51 EL CAHUPE Y SAN IGNACIO, CAJAMARCA
52 BOSQUES DE HUARANGO, CAJAMARCA
53 BOSQUES DE JAEN-COCHALAN
54 BOSQUES DE SANTA ROSA

55 SALLIQUE-SAN FELIPE-POMAHUACA
56 BOSQUE DE NINABAMBA
57 GRANJA PORCON
58 LA CADENA
59 SUPAY
60 CORDILLERA DE COLAN
61 ISLA MUYUY
62 CAPITE, JENARO HERRERA
63 PUCACURO
64 ALGARROBAL EL MORO
65 BOSQUE DE CUSNIPIQUE
66 ZAPOTALES VALLE DEL CHICAMA
67 RIOS CHICAMA Y MOCHE
68 HUARAYCO ALTO Y HUARAYCO BAJO
69 CORDILLERA DE HUAYLLASH
70 LOMAS DE PACTA
71 LAGUNA DE PACA
72 CUENCA DEL RIO DE LAS PIEDRAS
73 VALLE DEL CUZCO
74 QUINCE MIL
75 YANACOCHA, URUBAMBA
76 RIO BLANCO, MADRE DE DIOS
77 SEPAHUA
78 NEVADO AUZANGATE
79 LAGO TITICACA
80 LUPAKA-AYMARA
81 CORDILLERA DE VILCANOTA
82 RC ASHANINKA, YORA, YINE, SHIPIBO-CONIBO
83. LAMPA
84 LOMAS DE YUTA
85 LOMAS DE YERBA BUENA Y JESUS
86 CAÑON DEL COLCA
87 CHAPARRA
88 VALLE DE LOS VOLCANES
89. TOQUEPALA Y TARATA
90 LAGUNA DE HUACACHINA
91 ISLA LOBOS DE TIERRA
92 ISLA LOBOS DE AFUERA
93 PUNTA CHERREPE
94 RESERVA MARINA MANCORA
95 BOSQUE DE ZARATE
96 ILLESCAS - LOBOS
97 RC AMARAKAERI-HARAKMBUT-MACHIGUENGA
98 BOSQUES DE HUAMBOS

ATTACHMENT B Institutional Analysis

The Biodiversity Conservation and Fragile Ecosystems Management Activity will require extensive coordination with a wide range of partners in both the public and private sectors The definition of which partners will participate directly will have to be decided as implementation proceeds and a customer service plan is developed in the early stages of implementation This analysis identifies the principal institutional presences that must be considered in that process and provides some discussion of their capabilitaties and limitations

Public Sector Institutions

The potential public sector partners in this activity are presented in Chart 1 Among them, the proposed direct participants in the activity agreement are the National Environmental Council (CONAM) and the National Institute for Natural Resources (INRENA) For legislative changes, coordination with the Committee on the Environment, Ecology, and the Amazon Basin of the Peruvian Congress will be necessary

CONAM is a semi-autonomous public agency within the Office of the Presidency of the Council of Ministers (PCM) Under current law, environmental authority rests with each public sector, headed by a Ministry CONAM's purpose is to provide inter-sectoral coordination to this authority and to seek to standardize environmental regulations and procedures among the sectors in a coherent manner CONAM's Directorate includes representatives from the Ministries of Economy and Finance, as well as local governments,

INRENA is a decentralized organ of the Ministry of Agriculture (MAG) (See the basic text of this activity design for a discussion of recent modifications and counter-modifications of this structural relationship) Among its Bureaus, those most relevant to this activity are the General Protected Areas and Wildlife Bureau (DGANPFS) and the General Forestry Bureau (DGF) DGANPFS manages Peru's Public Protected Areas System (SINANPE) of national-level conservaton untis and regulates wildlife management, including the trade of endangered species in compliance with the Convention on the Trade of Endangered Species (CITES)

Another pertinent MAG agency is the Special Project for Land Titling (PETT), which currently has the responsibility for defining property rights to land for native communities, colonists, private enterprises and other actual or potential land holders PETT has assumed the principle ongoing functions of the defunct General Bureau for Agrarian Reform (DGRA)

The GoP has created an autonomous Fund for the Promotion of Public Protected Areas (PROFONANPE) to coordinate international cooperation in support of the SINANPE areas and plan a coordinated strategy for that cooperation PROFONANPE is comprised of It currently administers financial resources provided by the World Bank's Global Environmental

Facility (GEF), the German Technical Cooperation Agency (GTZ), the Netherlands Government, the Finnish Government and

The Ministry of Foreign Relations (MRE), formally the agent for all bilateral agreements between the USG and the GoP, includes in its stucture a Bureau of Specialized Affairs, under which the Department of the Environment and Sustainable Development provide the internal coordination that determines Peru's positions on environmental matters in international affairs

The National Commission on Biological Diversity (CONADIB) was created to provide inter-sectoral coordination for compliance with the terms of the Convention on Biological Diversity (CBD) to which Peru is a party CONADIB includes 19 GoP agencies, 8 NGOs, 4 universities, 3 international organizations and two individual Peruvian experts It is presided over by CONAM

Similarly, the National Commission on Climate Change (CONACC) was created to provide inter-sectoral coordination for compliance with the terms of the Framework Convention on Climate Change (FCCC) to which Peru is also a party CONACC includes It is also presided over by CONAM

In the Amazon Basin, the GoP agency that conducts scientific research and provides policy orientation and guidelines for that region is the Peruvian Institute for Amazonian Research (IIAP) IIAP, an officially autonomous public agency based in Iquitos, is CONAM's principal partner in the coordination of environmental criteria in the Amazon Basin, particularly in the organization of the Regional Multisectoral Technical Committees (CTMR) in the Amazon Basin departments or region and in the planning in those regions for the process of ecoligical economic zoning (EEZ) that the GoP has adopted as its framework for environmental planning in accordance with guidelines of the Amazon Cooperation Treaty (TCA) IIAP has regional offices and regional programs based in Pucallpa, Tarapoto, and Puerto Maldonado

The Peruvian Oceanic Institute (IMARPE) conducts scientific research and develops guildelines for the management and commercial exploitation of fish and other marine fauna and flora IMARPE will be an important partner in monitoring the health of indicator species in marine ecosystems such as Paracas It currently conducts research on fish, birds, and cetacean mammals along the Peruvian coast, including Paracas an dPunta San Juan de Marcona IMARPE may also provide important assistance in improving the definition of species protected under CITES

Peru's indigenous communities, including the "native communities" in the jungle and the "peasant communities" in the highlands and coastal region are the objects of policies coordinated by the Office of Indigenous Peoples (OPI) of the Ministry for the Promotion of Women and Human Development (PROMUDEH) created in 1996 OPI replaces the jursidiction of the former Peruvian Indigenous Institute (IIP) within the framework of the 1940 Patzcuaro

Convention on Indigenous Peoples to which Peru is a party This relationship is of importance to the activity, since many of Peru's protected areas are inhabited by indigenous peoples

Another autonomous agency that addresses the human rights concerns of indigenous peoples is the Ombudsman's or Public Defender's Office Within the Ombudsman's Office there is a Special Project for Indigenous Peoples

Other Donors

A number of multilateral donors are active in biodiversity and forest conservation in Peru today Among these, the World Bank supports PROFONANPE through a $5 million Global Environmental Facility (GEF) contribution in a program that began in 1990 The Inter-American Development Bank (IDB) provided institutional strengthening support to CONAM in a recently concluded $1 8 million program, its current areas of cooperation include agrotechnology and the environment, water resources, and indigenous communities, notably an $850,000 program for Mining Pollution Control in the Mantaro Valley of the central Peruvian highlands

The United Nations Development Program (UNDP) currently assists CONAM in the development of the CTM and CTMRs, among other focused interventions The Food and Agriculture Organization (FAO), long active in promoting forest management activities throughout Peru, is currently supporting local watershed management projects, principally with Dutch support, as well as programs addressing poverty, nutrition, and food security The International Tropical Timber Association (ITTO) is currently supporting nine forestry projects in Peru through INRENA and the National Program for Watershed Management (PRONAMACHCS) The Worldwide Fund for Nature (WWF), affiliated with the International Union for the Conservation of Nature (IUCN) is discussed in the section treating USPVOs below

The MacArthur Foundation has provided support to the Tambopata-Candamo Reserved Zone through a now inactive NGO called Ecology and Conservation (ECCO), CI and the Madre de Dios Agrarian Federation (FADEMAD)

The principle bilateral donors include the Germans (GTZ and KfW), Dutch, British (DfID), Canadians (CIDA), Danes, and Finns

The GTZ program Strengthening the National System for Public Protected Areas (FANPE) This program helped develop a Master Plan (*Plan Director*) for the SINANPE, not yet approved by INRENA Additional it has financed three pilot projects with local NGOs in the Manu Biosphere Reserve, Río Abiseo National Park, and Cerros de Amotape National Park Additional support is channeled through PROFONANPE to Future support at greater levels of effort may be provided by KfW

The Netherlands Cooperation program provides support through CI to the Tambopata-Candamo Reserved Zone and Bahuaja-Sonene National Park in Madre de Dios, preliminary support to the Paracas National Reserve This program also provides strong support a forest management efforts in the Department of Ucayali through the CNF Still pending is a proposal for forest management in native communites in Ucayali in coordination with the Forestry Network and the Inter-Ethnic Association for the Development of the Peruvian Jungle (AIDESEP)

DANIDA provides support through WWF to promote local community organization and planning in the Pacaya-Samiria National Reserve DANIDA also supports indigenous organizations in natural resource use planning and development in Amazonas and Madre de Dios Departments

The Finns are providing funding to support infrastructure and strategic planning at the Machu Picchu Historical Santuary

Private Sector Institutions

The principal USPVOs active in the conservation of biological diversity and forest management in Peru are the Worldwide Fund for Nature (WWF), The Nature Conservancy (TNC), Conservation International (CI), WildlifeConservation International (WCI), and CARE Others include Private Agencies Cooperating Together (PACT), Pathfinder, the Population Councial, and Winrock Institute, which are currently implementing components of other USAID-funded activities in Peru

WWF has haed a program office in Lima since 1993 and activies in the country for nearly thgree decades Although previously it only channeled its activities through Peruvian NGOs, it now also conducts direct conservation interventions in priority ecoregions Among its currently proposed activities is one of promoting voluntary forest management certification WWF is currently supporting biodiversity conservation activites in the Pacaya-Samiria National Reserve (PSNR), the Manu Biosphere Reserve (MBR), the Paracas National Reserve (PNR) and

TNC has been active in Peru since the early 1980s through its local partner, the Peruvian Foundation for the Conservation of Nature (ProNaturaleza) Its areas of activity in the conservation of biological diversity include the PSNR, the Bahuaja-Sonene National Park (BSNP) and the yanachaga-Chemillen National Park (YCNP), the latter two under the LAC Parks in Peril (PiP) program TNC has a proposal pending to include the PNR as a PiP site

CI has had a presence in Peru since 1991 when it began its program in the Tambopata-Candamo Reserved Zone (TCRZ) that led to the creation of the BSNP in 1996 Other areas where CI has been conducting research and proposals for the conservation of biological diversity are the

Apurímac Reseved Zone (ARZ) and the Cordillera del Cóndor area on the Ecuadorian border

WCI has been supporting conservation activities in the southern jungle, principally in the MBR and the BSNP/TCRZ It works mainly through local NGOs, including the Cusco-based Association for the Conservation of the Souther Jungles (ACSS) and others, as well as support for individual researchers

CARE is currently conducting its Selgva Project in the northern jungle department of Loreto and will soon begin implementation of a SENREM pilot project for fish management in and around the Tamshiyacu-Tahuaya Communal Reserve in the same area

Peru's NGO community involved in biodiversity conservation and forestry is numerous and diverse Among the most active Peruvian NGOs on a national level are the Peruvian Foundation for the Conservation of Nature (ProNaturaleza), the Peruvian Association for the Conservation of Nature (APECO), the Peruvian Environmental Law Society (SPDA), the Institute for Development and the Environment (IDMA), ProTerra, DESCO, and CEPES

Most of these and many local and regional NGOs are organized into networks (*redes*) such as the Environmental Network (RAP), Forestry Network (REDFOR), Ecological Agriculture Network (RAE), Network for Alternatives to Agricultural Pesticides (RAAA), among others These, in turn are associated in the Ecological Forum or *Foro Ecológico*, the leadership of which rotates twice annually Local and regional NGOs and CBOs will be treated by areas of potential interventions, along with data for PVOs and others for each of these areas

Bahuaja-Sonene National Park/Tambopata-Candamo Reserved Zone (BSNP/TCRZ)

On the local level one the principal public institutions active in these areas and their surroundings is the Madre de Dios Transitional Committee for Regional Administration (CTAR-MD), formerly the Madre de Dios Sub-Regional Management Organization (GESUREMAD) This institution channels public funding from the Central Government and directly manages the Manu National Park Its role in BSNP/TCRZ is limited to planning and logistical support Similarly, the Tambopata Municipal Council and the Tambopata and Inambari District Councils assume local government functions on the Madre de Dios side of this area Their counterparts in Puno are the CTAR-Puno, the Sandia Provincial Council and Carabaya Provincial Councils, and the corresponding District Councils (San Juan del Oro and Limbani in Sandia Province, Ayapata and Coasa in Carabaya Province)

INRENA has combined a local administration for these protected areas in MAG in Puerto Maldonado with four guard posts at strategic points in Madre de Dios and a fifth being implemented in Puno INRENA's Regional Forestry Office is also located in the Regional Office of MAG in Puerto Maldonado In Madre de Dios, CONAM works through IIAP, which has a regional office in Puerto Maldonado So far, there is no Local Management Committee

Other pertinent public sector agencies in Madre de Dios include the other MAG agencies such as PETT, and the local MEM, MINPE, and MITINCI agencies, as well as the Ministry of Education (MoE) and Ministry of Health (MoH) facilities

The San Antonio Abad Autonomous University (UNSAAC) in Cusco has a forestry program at a branch located in Puerto Maldonado This fledgling university program could provide some level of cooperation with this activity and might benefit from some of the proposed training programs

The principal USPVOs active in these areas are TNC, through ProNaturaleza, in BSNP and CI in TCRZ and the Puno side of BSNP CI's program, mostly funded by the Dutch, seeks to promote sustainable use of natural resources, such as Brazil nuts, and some agroforestry interventions, as well as coordinations with the area CBOS, principally the Madre de Dios Departmental Agrarian Federation (FADEMAD)

Most of the earlier work promoting the organization and strengthening of local CBOs was conducted by the Eori Center for Regional Research and Development (Eori), including the early planning phase for TCRZ and the creation of the BSNP Other NGOs actively locally are the Cusco-based Association for the Conservation of the Southern Jungle (ACSS), which developed the initial proposal for creating the TCRZ and currently promotes ecotourism, CESVI/INDA, which has community development projects in three Ese'eja Indian communities in an near these areas, CANDELA/Perú, which organizes the marketing of Brazil nuts, CIPDEL, which promotes small-scale agroindustry and tourism, the Ecological Agriculture Association, which promotes agroforestry, and Wanamey, a local association that promotes public awareness of environmental issues In Puno the principal locally active NGO near the BSNP is PREVIT, with headquarters in San Juan del Oro and interventions supporting coffee cooperatives and other producers' associations, as well as participatory planning A new NGO, the Association for Children and Environmental Conservation (ANICMA) proposed to conduct environmental education activities in gold mining areas

A London-based NGO, the Tambopata Reserve Society (TreeS) has been active in the area since the mid-1980s Its origins spring from former participants in the resident naturalists program at the Explorers' Inn Lodge on the Tambopata River In addition to publicity and promotion of the BSNP and TCRZ in Europe and the individual biological research of its members and students, it supports a traditional medicine program at Centro Ñape within the lands of the Infierno Native Community of Ese'eja Indians and a number of other small-scale community-level efforts

CBOs in Madre are strong The principal ones are FADEMAD, which groups 80+ local- level agricultural producers' associations in Madre de Dios and the Madre de Dios Native Federation (FENAMAD), which includes approximately 40 native communities in the Madre de Dios watershed Each has external funding, conducts its own development projects among affiliated

local communities and assumes their political representation at regional, national and international levels FADEMAD has no higher level affiliation, although it has communications with both the National Agrarian Confederation (CNA) and the National Peasants' Confederation (CCP) FENAMAD is affiliated with AIDESEP on a national level, which in turn is affiliated with the Indigenous Coordinating Body for the Amazon Basin (COICA) on an international level Other significant CBOs in the area include a forestry association, various miners' associations, and a recently formed Committee for EcoTourism, involving all of the tourist lodges active in the area

Religious organizations active in these areas and their surroundings include the Roman Catholic (Spanish Dominican) Vicarate of Puerto Maldonado, and several Protestant groups, including the 7th Day Adventists, Mormons, Pentacostals, Jehovah's Witnesses, among others

The for profit private sector is also diverse in the area, ranging from Mobil Exploration and Producing, Peru, Inc , which is currently exploring for oil and gas in a part of its Block 78 that was initially programmed for inclusion in the BSNP, to microenterprises Among the most active businesses in the area are tourist lodges, of which there are eight that market their services in Europe and the United States, as well as a series of newly organized hostals, sponsored by MITINCI that attend backpackers and other informal tourists

Gold mining in the immediate area, including parts of the TCRZ, is mainly conducted by small-scales artisanal miners, although there are several Lima-based companies active in the area Only one sawmill continues to legally extract timber from the TCRZ under a contract that expires in 2004

Manu National Park and Biosphere Reserve (MBR)

The same public institutions apply here as for BSNP/TCRZ, except for the municipalities The MBR includes a part of Cusco in Challabamba and Kosñipata Districts of Paucartambo Province, as well as Manu and Fitzcarrald Districts of Manu Province in Madre de Dios There is an agency of MAG at Salvación, the provincial capital for Manu, as well as the Park headquarters

The European Union has recently approved a 7 million ECU program to support the MRB, which has yet to begin its activities This program is likely to be fairly comprehensive addressing the principal threats to biodiversity and promoting community and regional development in the area

NGOs active in this area include ProNaturaleza, which has WWF funding for a long-term project there, APECO, which conducts environmental education, and ACSS, which promotes ecotourism on the Manu River and at Pillahuata, near the Park in Cusco On the eastern flank of the MBR, the Center for Amazonian Indigenous Development (CEDIA) works with Machiguenga native communities in the Urubamba Basin, CEDIA has also visited the Tayakome

and Yomibiato (Machiguenga) native communities within the MNP

FENAMAD and its member provincial-level association, the Harakmbut Council (COHAR) work closely with the native communities in this area Three indigenous organizations are active in the Urubamba Valley These are the Machiguenga Native Communities Central Organization (CECONAMA), the Urubamba River Machiguenga Council (COMARU) and the Yine Yami Native Communities Federation (FECONAYY) Timber extractors in the Qosñipata and Upper Madre de Dios basins have their association, which lobbies agains the prohibition of the use of chain saws for sawing wood in this area

Religious organization active in this area are the Dominican missions at Shintuya, on the upper Madre de Dios River, Kirigueti and Sepahua, on the Urubamba Rivers A 7th Day Adventist group is active at the colonist settlement of Palotoa on the MNP border Additionally, there is a presence of the New Universal Pact (Israelites) group

There are four tourist lodges in the MBR, of which two are currently inactive A new lodge is currently being organized within the Timpia (Machiguenga) Native Community on the Urubamba River

Logging is the main industry in neighboring areas, particularly in the Urubamba Basin Producers are small-scale operations

Shell Producing and Development, Peru is currently developing the Camisea gas fields near the western boundary of the Manu National Park Shell has contracted the Smithsonian Institution and the Environmental Network to assist them in conducting biodiversity monitoring in this area Additionally, Shell has conducted baseline studies in health and other socio-economic conditions

A Local Management Committee has been formed for the MBR and is likely to need organizational and strategic planning support

Paracas National Reserve

The PNR has an INRENA office near its entrance from the town of Paracas Other public sector agencies present in the area are IMARPE, which conducts monitoring and research on marine fauna and flora, the Port Authority (ENAPU) for the port of Pisco, which abuts the PNR on the Paracas peninsula Municipal governments in the area include the Pisco Provincial Council and the Paracas District Council

The San Luis Gonzaga National University at Ica works closely with INRENA It conducts research in the PNR and also provides logistical and staff support

The PNR has an active Local Management Committee USAID plans to provide some support to this Local Committee and conduct conflict resolution training in the area under the BIOCOM component of SENREM SENREM has also conducted a pilot project in pollution prevention with fish meal plants in the Paracas Bay, which are the principal sources of water contamination in the area Another SENREM pilot project will support a program for the cultivation and management of scallops at Laguna Grande, within the PNR

TNC and ProNaturaleza have proposed the PNR as a new PiP site, and a decision on that will be made soon Should the LAC Bureau approve Paracas as a new PiP site, it will provide up to $350,000 in support to the area through TNC and ProNaturaleza The Peru Mission could leverage this support by providing a counterpart contribution through other organizations as long as there is a unified work plan for the entire program

APECO is currently conducting species monitoring activities in association with IMARPE along the coast and also environmental education activities in this area

The GTZ has provided some support to INRENA for administrative infrastructure in the PNR

The principal industries in the area are the fishmeal industry, which includes eight plants that process anchovies and sardines, tourism, and the port of Pisco Química del Pacífico, a Canadian/Peruvian firm operates the salt mines that formerly belonged to the State-owned Salt Enterprise (EMSAL) at a location below sea level on the Paracas peninsula

The shellfish industry is comprised of small associations of scallops, mussels, and crab fishermen, who man small boats and supply Lima-based restaurant providers and exporters These shellfishers are active in many locations on the Paracas litoral

Tourism in the area is based in the Paracas Hotel and a number of smaller independent smaller facilities Prominent visits are to the Ballestas Islands near the PNR and a number of locations within it Tourism is currently coordinated according to a management plan

Tingo María National Park (TMNP)

The principal public sector presence in the area of TMNP is the Upper Huallaga Special Project (PEAH), a unit of the National Institute for Development (INADE) PEAH has been working closely with INRENA, which has little local presence of its own, although there is a Park Chief and the Ecological Police Other GoP agencies present include a MAG agency as well as local offices of MITINCI, the MoH, MoE, and the National Institute of Culture (INC)

The National Agrarian University of the Jungle (UNAS) in the town of Tingo María specializes in tropical agriculture and forestry and offers a potential for coordinating training and practical activities in the area

This area is in the Dámaso Beraún District of Leoncio Prado Province, Huanuco, and both District and Provincial Councils are involved There is an active local management committee called the Committee in Support of the Tingo María National Park (COPANATIMA), including the local communities along the right bank of the Monzón River and left bank of the Huallaga and the public sector institutions Nine other local communities in the Las Pavas Valley are organized in the Central Committee for the Development of the Las Pavas Valley (COCEDEMIPA)

Huascarán National Park and Biosphere Reserve (HBR)

Public institutions present in the HBRinclude the HNP Office of INRENA and other MAG, MEM, MINPRE, MITINCI, MoH, and MoE agencies The Santiago Antunez de Mayolo National University at Huaraz includes an Environmental Sciences Faculty

The territory includes several Provinces and Districts of the Department of Ancash Geographically, it is comprised by large valleys, the Callejón de Huaylas and the Callejón de Conchucos, divided by a major mountain range, the Cordillera Blanca

The West Virginia-based The Mountain Institute (TMI) is the major NGO active here TMI, with support from the USAID Global Bureau has been working with the INRENA team to develop a participatory planning for a revised Master Plan, ordered tourism, the generation of new economic alternatives for local communities and monitoring of key species of flora and fauna

Ten Peruvian NGOs are also present, including CEA, IDEA, PRODER, CADI, Kawey, Yrpichata and Asociación Vida, most of which have community development projects in rural communities in the Callejon de Huaylas Kawey is working with two mining companies in the area in an effort to reduce contamination from tailings and monitor water quality There is little NGO or other institutional presence in the Callejon de Conchucos These, together with TMI, have constituted the Chavín Consortium to coordinate their efforts Most of these programs focus on environmental issues and have a gender perspective Thus, the groundwork has been laid for participatory planning and the consolidation of a Local Management Committee in this area

Approximately 50 peasant communities occupy the lower reaches of the Cordillera Blanca Most of these are organized in the Ancash Departmental Agrarian Federation (FADA), which in turn is affiliated to the CCP These communities benefit from the technical support of the Coordinadora Rural, sponsored by the CCP The peasant communities in the Callejon de Conchucos are mostly affiliated to the CNA

Most of the numerous private tourism companies in the area are organized in the Peruvian Association of Mountain Guides They provide a Transportation Service, comprised of local

peasant community members, which seeks to promote traditional technique and improve guide services to the tourists

Biabo-Cordillera Azul National Forest (BCANF)

This area, administered by the DGF, is destined to be the first to experiment with managed production forest The GoP privitization agency PROMCEPRI is planning to auction off more than 20 concessions of production forest to private interests, including offshore interests Unfortunately, neither PROMCEPRI nor the DGF has involved either local or regional governments or local communities in the process Thus, it represents a challenge for effective forest management, never previously undertaken by the private sector in Peru in such a fashion

The Loreto sector of this area in in Padre Márquez District of Ucayali Province The sector of the area in the Department of Ucayali is in Padre Abad Province

Nine Shipibo Indian communities on the Pisqui River are organized in the Federation of Native Communities of the Lower Ucayali (FECONBU), affiliated with AIDESEP One native community in the headwaters of the Aguaytía River drainage is a base organization of the Cacataibo Communities Federation (FEDECOCA), also affiliated with AIDESEP and two Cocama and Yine Indian communities on the Cushabatay are not currently affiliated with any indigenous organization

Río Abiseo National Park (RANP)

The public sector presence includes the Park infrastructure in Pias on the western side and in Juanjui to the east of the Park MAG has agencies on both sides and the municipal governments take an active interest in this area

Both ProNaturaleza, with WWF support, and APECO are active here with programs to involve local communities on the western flank of the Park in environmental education and agroforestry activities in local communities APECO has also been active from the eastern side and, in coordination with U S researchers and the Natural History Museum of San Marcos National University (UNMSM), has done much of the scientific work documenting the presence and ecology of the yellow tailed howler monkey, threatened with extinction and only found here

In the area to the east of the Park in Mariscal Cáceres Province of San Martín, the Peruvian Export Association (ADEX), in a USAID/Peru activity, is promoting the export of coffee produced in this area, where previously coca was the main crop

The Selva Maestra Agrarian Federation (FASMA), once one of the most dynamic peasant organizations in Peru and accused by some GoP sources of sympathies with the Tupac Amaru

Revolutionary Movement (MRTA), is no longer active here The Shining Path group was active in the Upper Huallaga Valley southeastern San Martín Department That presence has abated in recent years and is not in close proximity to the RANP

Pacaya-Samiria National Reserve (PSNR)

A major USAID/Peru activity was conducted here with TNC and its local partner, ProNaturaleza This program, which sought to generate income for local communities in sustainable development activities, organized community extension centers called CECODES, local Centers for Development Coordination in key areas on the Marañon, Pacaya and Samiria Rivers and the Puinahua Canal Among the principal efforts here were management of reptiles, both crocodileans and turtles, with some success IIAP played a major role in turtle monitoring in this project

WWF, with Danish support, has a major program here, as well, devoted principally to the organization of the local communities and their involvement in planning This program works with the Cocamilla and other indigenous and mestizo communities through their organizations AIDECOS, AIDESAM and FEDECOCA

Attachment C Socio-Economic Analysis

Introduccion

Este informe presenta la información basica de poblaciones humanas y actividades económicas en las areas geograficas consideradas para el analisis de la naturaleza de sus interacciones con la diversidad biológica y los ecosistemas fragiles Se presentan los principales problemas socio-economicos y culturales implicados y su relevancia al diseño de la actividad Finalmente, se presentan las potenciales intervenciones por areas geograficas

En el cuadro 1 hemos sintetizado los principales problemas socio-económicos y las potenciales intervenciones por regiones geográficas examinadas

Tambopata Areas Colindantes a la Zona Reservada Tambopata-Candamo y el Parque Nacional Bahuaja-Sonene

La ZRTC establecida en 1990 sobre una superficie de 1'478,942 has comprende porciones de la provincia de Tambopata, Madre de Dios y provincias de Sandia y Carabaya, Puno Un censo conducido por Centro Eori en 1991 reportó un total de 3,200 personas que vivían y/o trabajaban en la ZRTC-Madre de Dios y 1,995 personas en areas colindantes En la ZRTC-Puno, estudio de Conservacion Internacional entre 1992-94 concluyeron estimando que alrededor de 3,700 personas vivían en la colonización de Putina Puncco y 3,000 personas en las áreas colindantes en el valle del Alto Inambari (Arce y Garcia 1995) La mayor parte de esta población es migrante de la sierra sur y altiplano respectivamente excepto las porciones bajas de la ZRTC donde habitan tres comunidades nativas ese eja y una comunidad Harakmbut

Las principales actividades económicas en la ZRTC-Madre de Dios son la agricultura de subsistencia y comercial, la extracción de castaña, minería aurífera y turismo En la ZRTC-Puno las principales actividades económicas son la agricultura de subsistencia y comercial y la minería aurífera en el valle del Alto Inambari

La mayor concentracion de derechos mineros, maquinaria pesada, personal e instalaciones comerciales alrededor de la extracción del oro se ubican en las microcuencas Kaichihue y Huepethue, al este de la ZRTC La minería aurífera sin control ambiental en areas al interior y colindantes de la ZRTC representa un tema sensible, cuyo tratamiento podría hacerse mediante un proceso dirigido a obtener en forma piloto, un plan de ordenamiento territorial, mediante la combinacion de una catastro integral de derechos agropecuarios, forestales y mineros, estudios ZEE Algunos estudios han sido realizados por Centro Eori y CI El IIAP se propone aplicar un ZEE en áreas intermedias entre la ZRTC y el Parque Nacional del Manu

El actual proyecto de perforación exploratoria de Mobil del Lote 78 en la ZRTC contempla el mejoramiento de la trocha carrozable entre San Gaban y Challhuamayo (MEPPI 1998) La prolongación de esta trocha hasta el Puente Inambari es de interés para las dependencias públicas de Puno y Madre de Dios Una actividad potencial es el apoyo al monitoreo ambiental en torno

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a la rehabilitación de trochas carrozables o construcción de carreteras, poco desarrollado actualmente

Las comunidades nativas ese eja han dejado de practicar la cosecha de recursos silvestres al interior de los actuales ZRTC y PNBS por que la normatividad de estas areas naturales protegidas ANP no contempla su comercialización (Arce y Garcia 1995), excepto hojas de crisneja (*Geonoma deversa*) Como resultado en las comunidades aumentan las presiones por el fomento de otras opciones económicas como la ganadería para compensar los ingresos perdidos

Una potencial intervención es el apoyo a la investigación participativa para facilitar la cosecha sostenible de algunos recursos silvestres utilizados intensivamente en forma comercial (aguaje, pama, chimicua) asi como para definir cuotas de cosecha de fauna Pronaturaleza ha llevado una experiencia piloto con una aldea ese eja relacionada a taricayas (*Podocnemis unifilis*), pero en la lista de especies de interés para los indígenas se encuentran también variedades de pescado y mamiferos

Otro recurso importante, la castaña (*Bertholletia excelsa*) genera empleo e ingresos con su transformacion artesanal asociada a crianza de animales menores y producción de dereivados Una propuesta intervención puede ejecutarse por comunidades locales en asociación directa con ONGs como CESVI o CANDELA PERU, esta ultima ONG con experiencia en comercialización extralocal de castaña

La agricultura no sostenible, por la escasez de suelos agrícolas, reducidos mercados para los productos y bajos precios, costos de comercialización elevados y colonizaciones en tierras no aptas para la agricultura, limitan drásticamente las oportunidades de mejoramiento de ingresos de las familias campesinas La potencial intervención corresponde a apoyar el desarrollo de sistemas agroforestales demostrativos en base a experiencias innovativas validadas, que, entre otros están siendo aplicados por la Federación Agraria Departamental de Madre de Dios (FADEMAD) y la Asociación de Agricultura Ecológica Con la cooperación de la Coordinadora Agroforestal Indigena y Campesina (COICAP), FADEMAD está ensayando otras metodologías de agroforesteria analoga

Los ensayos realizados por el proyecto Huerto Familiar Integral Comunal (HIFCO) en la zona de Ucayali que buscan evitar la quema de residuos vegetales son aplicables en pequeños espacios deben tomarse en cuenta En la realizacion de las actividades demostrativas propuestas, pueden tener lugar capacitación e intercambio de experiencias sobre metodos agroforestales entre las experiencias mencionadas y de otras instituciones como las Facultades de Ciencias Forestales, Medio Ambiente y Agronomía de la Universidades Nacionales La Molina, de la Selva de Tingo Maria, de la Amazonia Peruana de Iquitos

Como parte del fortalecimiento institucional de CBOs y ONGs locales para el desarrollo de otras intervenciones, una potencial actividad es el entrenamiento en la formulación participativa de proyectos que permita a las comunidades locales -o a grupos familiares o de confianza dentro de ellas- poner en práctica iniciativas económico-productivas FADEMAD, con el apoyo de CI,

ha logrado en algunas comunidades obtener que estas elaboren algunos proyectos productivos que han sido posteriormente financiados por FONCODES Una limitante es la exigente atención que dichos proyectos comunitarios demandan para su adecuada administración financiera y el monitoreo a dedicarse

Algunas iniciativas económico-productivas locales se dirigen actualmente a dar valor agregado a los recursos silvestres o a la producción agropecuaria, pero son solamente a nivel artesanal y para un mercado limitado local Una potencial intervención, relacionada a mejorar los ingresos de las familias campesinas, es la realización de estudios técnicos específicos sobre las posibilidades de extracción/cosecha de recursos que sean rentables para el grupo FADEMAD y CI están estudiando actualmente un caso para la elaboracion de parket a partir de pona

Cabe advertir que no siempre funcionan los proyectos comunales pero si pequeñas expresas a nivel familiar o entre grupos de confianza Las fuentes de financiamiento de los nuevas iniciativas económico-productivas elaboradas deben buscarse con el apoyo de las contrapartes seleccionadas

Actualmente una Comisión Multisectorial presidida por la Dirección Subregional Agricultura de Madre de Dios (DSRA-MDD) debe determinar las áreas de libre disponibilidad en Madre de Dios con potencial turístico-recreacional Una actividad propuesta es la elaboración y puesta en marcha de un plan de desarrollo turístico, como parte del cual se pueda mejorar la capacidad gerencial de varias casas-albergues de agricultores locales existentes en el río Tambopata

Manu la Reserva de Biosfera del Manu y sus Areas Colindantes en Kcosñipata, Alto Madre de Dios, cuencas del Manu y Urubamba, Madre de Dios y Cusco

La Reserva de Biósfera del Manu (Parque Nacional, Zona Reservada y Zona cultural) abarca la cuenca hidrográfica completa del río Manu y la mayor parte de la margen izquierda de la cuenca del río Alto Madre de Dios El Parque Nacional del Manu se estableció en 1973 comprendiendo una extension de 1'532,806 has La Zona Reservada se estableció en 1980 comprendiendo una extensión de 257,000 has La RBM comprende parte de los distritos de Challabamba y Kcosñipata, provincia de Paucartambo, departamento de Cusco y los distritos de Manu y Fitzcarrald, provincia de Manu, departamento de Madre de Dios

El área del PNM corresponde mayormente a territorio indígena tradicional Matsiguenka y de otros pueblos indígenas En la porción amazónica del PNM se ubican actualmente dos comunidades nativas Matsiguenka, Tayakome y Yomibato, varios asentamientos Matsiguenka con escasos vinculos con otras comunidades Matsiguenka,, un asentamiento indígena Yora con escasos vínculos con la sociedad regional y uno o más asentamientos indígenas Yine -y/o probablemente Yora tambien- en aislamiento voluntario En la porcion andina del PNM se ubican varios asentamientos campesinos originados o ligados a las comunidades campesinas en las zonas de Challabamba

En la Zona Reservada se ubica un asentamiento Yine, Isla de Los Valles y el caserío de colonos

de Boca Manu En la Zona Cultural, que no constituye una area natural protegida pero que forma parte de la Reserva de Biósfera del Manu se ubican 6 comunidades nativas Harakmbut, Yine y Matsiguenka, alrededor de 20 asentamientos de colonos, principalmente a lo largo de la carretera Paucartambo-Pilcopata-Shintuya

En el límite oeste del PNM, en la cuenca del río Urubamba, se ubica la Reserva del Estado Nahua-Kugapakori, establecida en beneficio de indígenas Yora y Matsiguenka que viven en aislamiento voluntario Esta area esta dentro de la influencia del la Conseción petrolera, Lote 75, otorgado a la empresa Shell para la explotación comercial de un yacimiento de gas y otras sustancias Asimismo, se ubica dentro del Lote 52, otorgado a la empresa Chevron, para la prospeccion de petróleo

La poblacion total del distrito de Kcosñipata es de ¼ habitantes En los distritos de Manu y Fitzcarrald, la población total es de ¼ habitantes, de los cuales aproximadamente ¼ corresponden a pueblos indígenas

La principal actividad en la zona cultural del PNM es la extracción de madera, exportada a mercados de Cusco, Arequipa y Puno por la carretera Cusco-Kosñipata-Shintuya El tráfico comercial hacia la zona minera del río Karene (Colorado) emplea esta vía La rentabilidad de la extracción de madera ha decaido al agotarse las maderas de mayor valor comercial La actividad agrícola es mayormente de subsistencia debido a los altos costos de transporte que no permiten la comercialización de productos agrícolas

En la Zona Cultural y Reservada se ubican 4 albergues turísticos que pertenecen a igual número de empresas, que trabajan de manera convencional El turismo de aventura es marginal

La búsqueda de nuevas opciones económicas con las comunidades locales, indígenas y de colonos, viene siendo un desafio para entidades públicas y ONGs que trabajan en la zona El Programa de Investigación Aplicada de Pronaturaleza ha venido trabajando con comunidades nativas y asentamientos de colonos de la Zona Cultural apoyando el mejoramiento de la producción agropecuaria de subsistencia, ensayando distintas opciones agroforestales según las caracteristicas físicas y socio-culturales

APECO, mediante su Programa de Educación Ambiental, ha venido trabajando, a partir de los conocimientos y capacidades de comunidades indígenas y colonos, ensayos innovativos en torno a artesanías, cultivo de piñas y turismo, este último buscando encontrar modalidades de aplicacion adecuadas a las capacidades de gestión locales

La Jefatura del PNM, con el apoyo de APECO, esta conduciendo actualmente la fase inicial de gestion de un albergue turístico, localizado cerca a Cocha Salvador, ZRM, conjuntamente con las comunidades Matsiguenka Tayakome y Yomibato, en un proceso de trabajo concebido a largo plazo

El programa del Proyecto Especial Parque Nacional del Manu, financiado por la CEE por 7

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millones de ECUs aún no ha iniciado su implementación y no se conocen las actividades especificas, siendo su principal area de acción la zona cultural de la RBM

En la zona oeste del PNM, en los últimos años, están apareciendo numerosas familias en áreas de comunidades nativas Matisguenkas ya tituladas, procedentes del interior de la Reserva Nahua-Kugapakori Dadas las características socio-culturales del área, las empresas Shell y Chevron están realizando consultas públicas de sus planes de acción, y desarrollando programas sociales con las comunidades nativas de la región de influencia de sus respectivos lotes, y no unicamente donde están sus instalaciones

Las potenciales intervenciones en este espacio geográfico podrían estar dirigidas a la porcion oeste del PNM, en torno a actividades de reconocimiento y titulación de comunidades matsiguenka y la puesta en marcha de iniciativas económico-productivas que las comunidades matsiguenka han venido demandando a las autoridades regionales

Parque Nacional Tingo María (PNTM) - Provincia Leoncio Prado

El PNTM fue creado en 1975 y se ubica en el distrito Mariano Damaso Beraun, Provincia Leoncio Prado, Departamento de Huanuco La norma que lo establecio, Ley 15574, no especificó sus límites Su superficie aproximada es mayor a las 18,000 ha (PEAH 1998)

Como consecuencia de estas impresiciones, hay confusión entre colonos que han ocupado las partes bajas del PNTM La extracción de madera es desordenada y las chacras de colonos están ubicadas en suelos no aptos para la producción agropecuaria

El Proyecto Especial Alto Huallaga (PEAH), en coordinación con la Jefatura del PNTM-INRENA y otras instituciones publicas de la provincia Leoncio Prado ha realizado distintos esfuerzos cooperando con los fines de protección de diversidad biológica del PNTM, identificación, empadronamiento y organización de colonos en sectores del PNTM en la margen izquierda del río Huallaga y margen derecha del rio Monzon (PEAH 1998) Trabajos pendientes de empadronamiento y delimitación no se han ejecutado por falta de financiamiento en la parte posterior del PNTM en la Microcuenca del río Santa y del río Bella, así como en la quebradas 3 de mayo

Una potencial intervención corresponde a apoyar las iniciativas promovidas por el PEAH como la ejecucion de un Diagnóstico del Estado Actual y del Potencial del PNTM y areas adyacentes, que podrían combinarse con completar la delimitación del PNTM, el apoyo para el diseño e implementación del Plan Maestro del PNTM, la implementación de un Catastro integral de derechos, estudios ZEE y de clasificación de tierras Asimismo, el diseño de un Programa de Desarrollo Integral que de acuerdo a la perspectiva del PEAH debe mejorar el estado de la produccion agropecuaria para el autoconsumo y el mercado local en su primera etapa En una segunda etapa estarían considerados estudios de mercado para la priorización de líneas de producción que permitan aspirar a acceder a mercados regionales

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Callejón de Huaylas - Parque Nacional Huascaran (PNH) - Reserva de Biósfera Huascarán (RBH)

El Parque Nacional Huascaran (PNH) se estableció en 1975 sobre una extensión de 340,000 has y comprende la casi totalidad de la Cordillera Blanca, entre el Callejon de Huaylas y el Callejón de Conchucos Políticamente se ubica en las provincias de Huaylas, Yungay, Carhuaz, Huaraz, Recuay, Bolognesi, Huari, Asunción, Mariscal Luzuriaga y Pomabamba del departamento de Ancash

La poblacion total correspondiente a dichas provincias, incluyendo la ciudad de Huaraz, capital departamental, alcanza a 150,773 habitantes Existen un total de 50 comunidades campesinas, 14 en el Callejon de Huaylas y 36 en el Callejón de Conchucos Los pastizales de mayoría de las comunidades se ubican al interior del PNH En algunos pocos casos existen tierras de secano de las comunidades al interior del PNH

El contraste entre las caracteristicas socio-economicas del callejón de Huaylas y el callejon de Conchucos se relaciona a la mayor urbanización del primero, concentracion de ciudades y de la actividad turística, situación inversa a la del callejón de Conchucos, con una concentración de comunidades campesinas y pequeños poblados y con actividades productivas alrededor de la agricultura y la pequeña ganadería (Castro y Torres 1992)

La gran minería corresponde a dos grandes concesiones, una frente a Huaraz, proyecto Pierina de la empresa Barrik, en la Cordillera Negra, a tajo abierto y que tiene gran impacto en la ciudad y economia local La otra en el Callejon de Conchucos, Cia Minera Antamina, que pretende usar como via para sacar minerales la carretera asfaltada que atraviesa el PNH de este a oeste, por Pastoruri, en medio de uno de los pocos rodales de *Puya raimondi* protegidos dentro del PNH

Despues de 1991 se han otorgado 75 concesiones mineras en la RBH Aproximadamente 40 concesiones mineras se ubican dentro PNH y 35 restantes en su zona de amortiguamiento De otro lado, existen 51 petitorios mineros en tramite, de los cuales alrededor de 11 han sido solicitados al interior del PNH y 40 restantes en su zona de amortiguamiento

La pequeña mineria tambien es una amenaza debido a la falta de regulaciones ambientales para este tipo de actividad que generalmente es a tajo abierto Como resultado existe un visible deterioro de la vegetacion y de la calidad ambiental, ademas de la contaminacion del agua

La integridad del parque se ve constantemente amenazado por nuevas concesiones, tanto en la zona adyacente como al interior del Parque Nacional Una posible intervencion para ordenar la actividad minera grande y pequeña con normas ambientales y seguimiento adecuado de los PAMAS (programas de adecuacion medio ambiental) ademas de un saneamiento legal de las concesiones mineras y un acuerdo con autoridades del sector de Energia y Minas para evitar nuevas concesiones mineras en el ambito del parque, podrian servir como modelo de solucion de una de las amenazas mas complejas y crecientes a las ANP Asimismo se podría ensayar un

programa de recuperación de las áreas deterioradas por antiguos relaves mineros, caso de Ticapampa

Existen alrededor de 35 mil cabezas de ganado en el ámbito de la reserva de biosfera de Huascaran (dentro y fuera del parque) Sobretodo la ganaderia es una de las actividades practicadas dentro de los limites del PN y donde ya ha habido algunos acuerdos entre la administracion y los ususarios En algunas zonas se encuentran organizados en comites de usuarios que responden a normas establecidas por el jefe del area

El sobrepastoreo por ganado vacuno dentro de pastizales al interior del PNH constituye un problema de interés común tanto de las comunidades campesinas como del sector público Una propuesta intervención conduciría a planes de manejo de pastizales asociado a reforestación con especies nativas, incluyendo acuerdos con las politicas de trabajo en reforestación de PRONAMACHS que trabajan con eucalipto

La escasez de tierras agrícolas en muchas comunidades esta conduciendo al minifundio y a la ampliación de nuevas zonas agrícolas en la puna, en algunos casos, dentro del PNH Una propuesta intervencion es incorporar dicha actividad como parte de la estrategias de conservación del PNH La agricultura tradicional que se practica, podria estar contribuyendo a la conservacion de variedades de plantas cultivadas, que podrian ser restringidas a este valle y significar un sitio de conservacion in-situ de estos cultivos La papa, oca, mashua y otros cultivos andinos que se practican por encima de 4000 metros podrian estar en esta categoria y aumentar valor en diversidad biologica al area protegida

La administración del Parque ha identificado 4 zonas críticas, sobre las cuales han existido y persisten las dificultades para llegar a algun acuerdo Estas zonas incluyen dos comunidades campesinas donde aun no ha habido trabajo de sensibilizacion y concertacion Ello no obstante que Huascaran es uno de los mejores ejemplos de negociacion con poblaciones locales en ANP del Peru, con procesos participativos (Plan maestro, Plan de Uso Turistico) y el unico que mantiene una administracion constante (el mismo jefe desde su creacion)

El principal problema del turismo es la afluencia masiva de turistas en epoca de verano Una propuesta intervención se dirige a apoyar la descongestión de áreas de actual uso turístico meidante la identificación e implementación de nuevos sitios turísticos En el proceso se debe incorporar la participación de las comunidades campesinas como de las Asociaciones de Guías de Turismo, empresas turísticas y sector público para obtener consenso y respaldo efectivo a las soluciones formuladas

Parque Nacional Río Abiseo (PNRA) - Provincia Mariscal Careces

El PNRA se estableció en 1983 sobre una superficie de 274,520 ha Localizado en el distrito de Huicungo, provincia Mariscal Cáceres, departamento San Martín Cuenta con una subsede administrativa en la ciudad de Juanjuí y un puesto de vigilancia en El Churo, sobre el río Abiseo El PNRA contiene los restos arqueológicos de Pajatén, que se acceden por la vertiente

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oriental de la cordillera, desde la sierra por el distrito de Piaz, provincia de ¼ En Piaz se encuentra la Jefatura del PNRA

Antes de su creación existía el Bosque Nacional Mariscal Cáceres (BNMC), creado en 1963 en una área de 156,000 has de la provincia del mismo nombre en una area parcialmente adyacente a donde se estableció el PNRA Posteriormente, este BN no ha sido implementado para el manejo de la actividad forestal allí, como si ha sido el caso del Bosque Nacional von Humbolt

No existen localidades ni poblaciones humanas al interior del PNRA En el distrito de Huicungo, se localizan 10 caseríos agropecuarios con alrededor de 5,700 habitantes (APECO 1996) En el distrito de Piaz, se localizan ¼ comunidades campesinas con alrededor de ¼ Habitantes

Las areas del BNMC, colindantes con el PNRA son objeto de consesiones forestales y actividad extractiva de madera

En los pasados años, la zona fué escenario de la masificación del cultivo de coca, narcotráfico y violencia subversiva, situación que ha cambiado sustantivamente en esta provincia actualmente, con la sustitución del cultivo de coca principalmente por platano y café Sin embargo, muchas areas agropecuarias se ubican en zonas no aptas para dicha actividad

Una posible intervención es relativa al apoyo a la ejecución de estudios ZEE y de clasificación de suelos por capacidad de uso mayor, complementados por catastros integrales de derechos agropecuarios, para orientar el acondicionamiento territorial

Actualmente muchos agricultores están volcándose a cultivar café, alentados por la espectativa de mejorar sus ingresos mediante su comercializacion En Bellavista en encuentra una sede del convenio AID-ADEX dirigido a la promoción de distintos cultivos como el café, maiz, soya y su comercializacion

En forma independiente de dicho programa, los campesinos de Mariscal Caceres han logrado comercializar naranja para Chiclayo, en cantidades modestas Existe un potencial de produccion de otros frutales como piña, taperiba, cerezo, etc y su transformación local para pulpa de fruta, nectar, jaleas, mermeladas, etc Una propuesta intervención es la realización de estudios tecnicos para el diseño de proyectos cuyo financiamiento pueda ser gestionados en forma independendiente por las comunidades locales en otras fuentes cooperantes publicas o privadas

En San Martín existen mercados locales para una amplia variedad de productos agropecuarios y silvestres nativos, sin embargo su transformación local es muy limitada El Instituto de Investigaciones de la Amazonía Peruana, con el apoyo del TCA, ha venido publicando varias investigaciones sobre las posibilidades de transformación agroindustrial de recursos silvestres que permita dar valor agregado a los productos locales

Existe una demanda masiva en las comunidades rurales por asistencia tecnica agropecuaria Una propuesta intervencion se dirige a aplicar cursos de capacitación e intercambios de experiencias,

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pasantías, para entrenar a tecnicos y agricultores líderes locales Otras formas de intervención pueden dirigirse a mejorar los modulos educativos de los institutos técnicos locales, incorporando enfoques agroforestales y ambientales dentro de la curricula educativa

Reserva Nacional Pacaya Samiria

La Reserva Nacional Pacaya Samiria (RNPS) esta ubicada en parte de las provincias Alto Amazonas, Loreto y Requena del departamento de Loreto Sus antecedentes como area protegida son desde 1940, Fué creada originalmente en 1948, siendo ampliada en 1972 y en 1982 hasta alcanzar su actual extensión de aproximadamente 2 1 millines de ha Mayormente conformadas por llanuras inundables y tierras bajas

La población existente en su área de influencia corresponde a 173 centros poblados con 77,000 personas Sus recursos contribuyen al bienestar de alrededor de 100,000 personas en el departamento de Loreto (Pronaturaleza 1997a)

La cosecha de recursos silvestres, pincipalmente de pescado fresco representa la casi unica fuente de ingresos monetarios para la mayoria de la población Se considera pertinente un programa que a la vez que abordar el manejo integral de los recursos ictiológicos, permita definir las cuotas anuales para la cosecha de pescado y su comercialización

El monitoreo de la fauna acuática y terrestre que se sugiere realizar deberá contemplar la participación activa de las comunidades locales

Reserva de Biósfera del Noroeste (RBNO)

Conformada por el Parque Nacional Cerros de Amotape (PNCA) (91,300 has), el Coto de Caza El Angolo (65,000 has) y la Zona Reservada de Tumbes (75,000 has) se ubica entre las provincias de Tumbes y Contralmirante Villar del departamento de Tumbes y la provincia de Sullana del departamento de Piura El PNCA fue creado en 1975 y su delimitación es clara (INRENA 1991)

La población total en el área suma alrededor de 18,000 personas y corresponde principalmente a comunidades campesinas o Grupos Campesinos beneficiarios de la Reforma Agraria de los distritos San Jacinto, Pampas de Hospital y Casitas (Tumbes) y Lancones y Marcavelica (Piura), que desde décadas anteriores tuvieron como principal actividad la habilitación de materia prima para las industrias del parquet y cajonerías, además de abastecer las demandas urbanas de carbón y leña Estas actividades complementadas con la crianza de ganado caprino y agricultura de subsistencia, no significó el desarrollo del extractor rural, por el contrario fue empobreciendose al igual que el bosque, por la alta eliminación de cobertura arborea (INRENA 1994)

La actividad agrícola y ganadera es intensiva en las areas colindantes del PNCA y en la ZRT, sin embargo el uso de pastizales al interior del PNCA también existe El personal del PNCA/INRENA identificó tres areas criticas desde el punto de vista social/ambiental en el

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PNCA Teniente Astete y Cazaderos, por las areas dedicadas allı al cultıvo y la crıanza de ganado, parte alta del río Tumbes, por la caza furtıva, y Huásımo, Cazaderos y parte sur del PNCA, por la ınvasıón de la borrachera (*Ipomoea carnea*) (INRENA 1991)

Las potencıales ıntervencıones están referıdas a apoyar la ejecución de autodıagnostıcos comunıtarıos que permıtan examınar de manera detallada las posıbılıdades de mejoramıento de los sıstemas productıvos y el ıncremento del valor agregado de la producción agropecuarıa Secuencıalmente, medıante actıvıdades de capacıtación ınstıtucıonal, extensıon técnıca, asıstencıa para estudıos de mercado y dıseño partıcıpatıvo de proyectos económıco-productıvos, asegurar el seguımıento a un proceso de trabajo basado en las capacıdades locales

Santuarıo Nacıonal Manglares de Tumbes (SNMT)

El SNMT fue creado en 1988 con el objetıvo de proteger el unıco ecosıstema representatıvo de Bosques de Manglar en territorıo peruano Se ubıca en el departamento de Tumbes y su superfıcıe es de 297,236 has

La población de la zona corresponde a un numero no muy alto de personas locales (60) Además de ellas exısten numerosas empresas langostıneras ınstaladas allí Los problemas aquı están lıgados a las competencıas sectorıales entre los Mınısterıos de Agrıcultura y Pesquerıa, este últımo encargado de otorgar los permısos para el funcıonamıento de las empresas langostıneras al ınterıor de los manglares

Las potencıales ıntervencıones consısten en la concertación ıntersectorıal para elaborar e ımplementar un plan de manejo de recursos de manglar que sean aceptadas también por las empresas langostıneras, para favorecer el ordenamıento ambıental de los bosques de manglares

Reserva Nacıonal de Calıpuy/Santuarıo Nacıonal de Calıpuy (RNC/SNC)

La Reserva Nacıonal de Calıpuy y el Santuarıo Nacıonal de Calıpuy se establecıeron en 1981, la prımera sobre 64,000 has de pastızales destındos a favorecer la reproducción de poblacıones sılvestres del guanaco y la segunda sobre 4,500 ha destınadas a la protección del rodal mas denso de *Puya Raımondıı,* además de complementar la protección del guanaco (INRENA 1994)

Ambos sıtıos de localızan en los dıstrıtos de ¼, provıncıa de ¼, departamento de La Lıbertad La población total en este espacıo geográfıco es de ¼ y corresponde prıncıpalmente a comunıdades campesınas

La ınteracción entre dıchas comunıdades y estas areas protegıdas es precarıa, ya que estas últımas carecen de manejo efectıvo Por lo mısmo, una potencıal ıntervencıon sería la planıfıcación partıcıpatıva para la conservacıon y el desarrollo de ambas areas protegıdas y de sus areas colındantes que sırvan para que las areas protegıdas cuenten con planes de manejo, comıtes locales de gestıon con partıcıpación comunal, a la vez que se desarrollen ıntervencıones practıcas en torno a las necesıdades socıoeconómıcas de las comunıdades locales

Zona Reservada Pantanos de Villa (ZRPV)

Fue creada en 1989 sobre una superficie de 396 has con el propósito de proteger el habitat de aves migratorias Esta area de localiza dentro del area urbana del distrito de Chorrillos, provincia y departamento de Lima

El crecimiento urbano de varios distritos del sur de Lima han conducido al uso de porciones de la ZRPV como sitio para depositar desmote y basura De manera reciente, existe una controversia entre el INRENA, el Municipio de Lima Metropolitana, el municipio distrital de Chorrillos sobre la autorización para la instalación de una fabrica de fideos de la empresa molinera Luchetti, de capitales chilenos

Esta controversia ha revelado los problemas existentes que enfrentan lugares naturales con diversidad biologica que se ubican dentro del espacio urbano-industrial Aunque formalmente la planta industrial de la firma Luchetti se ubica fuera de la area delimitada de la ZRPV, una operación industrial en sus inmediaciones tiene posibles implicancias ambientales perjudiciales

Por lo mismo este caso ha involucrado a otras instituciones y organizaciones sociales preocupadas por el futuro ecológico del lugar Municipios locales, colegios, ONGs, etc se han movilizado en defensa de los Pantanos de Villa demandando al gobierno la reubicación de la planta industrial Luchetti

La evaluacion de los principales impactos de potenciales intervenciones con las diferentes poblaciones

Como la actividad de Conservación de la Diversidad Biológica y Ecosistemas Frágiles comprenderá sitios donde existen Areas Naturales Protegidas, habrán dos situaciones relativamente diferenciadas para las comunidades locales a) aquellas comunidades que se ubican al interior de actuales ANP existentes, casos de la ZRTC, PNH, RNPS, PNTM , y, b) aquellas comunidades que se ubican en la zona de influencia de dichas ANP o en lugares donde no existen ANP Estas últimas corresponden a lo que se denominan zonas de amortiguamiento, areas colindantes mayormente conformadas por bosques secundarios y areas intervenidas El analisis de potenciales intervenciones para mejorar el nivel socio-económico de la población enfatizan oportunidades en este espacio geográfico

La diferenciación es importante para enfocar el tipo de actividades económicas que es posible en cada escenario y las prioridades a seguir En principio, según la normatividad vigente, para las poblaciones que viven al interior de las ANP, las posibilidades de aprovechamiento comercial de los recursos silvestres están limitados drasticamente En estos casos, lo que puede ser comercializado procede de la actividad agropecuaria, principalmente Sin embargo, excepto la comercialización de pocas cantidades de algunos cultígenos, o de animales menores como gallinas, patos, etc las comunidades locales no tienen mucho que ofrecer al mercado

Como se sabe, la comercialización de recursos silvestres esta excluida de las ANP, siendo esta

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norma de mayor rigor para el caso de los Parques Nacionales que en relación a Zonas Reservadas (ZR) En efecto, en algunas ZR como el caso de la ZR Tambopata Candamo, se permite legalmente la comercialización de determinados recursos silvestres como hojas de crisneja En el caso de la RN Pacaya Samiria, se permite la comercialización de recursos pesqueros

En el caso del PNH, las percepciones distintas sobre lo que puede cosecharse o utilizarse a su interior por parte de algunas comunidades campesinas tiene relación con derechos sobre tierras anteriormente adquiridos antes de la existencia del PNH

Las prohibiciones a la cosecha comercial de recursos silvestres no tiene consenso entre las poblaciones locales muchas veces porque las necesidades económicas más apremiantes obligan al agricultor a recurrir a situaciones como la extracción clandestina de madera, caso de la Zona Reservada Tambopata Candamo, en una amplia zona donde los suelos dedicados a la agricultura y ganadería son pobres

En el contexto de una economía de mercado, las posibilidades económicas de mejoramiento de los ingresos para las comunidades locales resultantes de la comercialización de sus productos agricolas tienen bastantes dificultades, debido a los bajos precios, costos elevados de transporte y mercados locales reducidos Su dependencia de determinados monocultivos como el arroz o el café los expone a depender de los flujos de precios de dichos productos

En ese sentido, las potenciales iniciativas para mejorar los ingresos económicos de las poblaciones locales deben basarse en la diversificación productiva Igualmente será importante el seguimiento y monitoreo de las actividades piloto sugeridas para dar valor agregado a los productos agropecuarios o recursos silvestres de las diferentes poblaciones, una vez elaborados los estudios técnicos que permitan verificar la factibilidad ecológico-económica de los productos identificados

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Cuadro 1 Problemas socio-económicos y potenciales intervenciones por regiones geográficas

Region	Actores	Problemas socioeconomicos	Potencial intervención	Supuestos
ZRTC/ PNBS - Madre de Dios	CBOs (comu nidades nativas)	Aprovechamiento comercial restringuido de flora y fauna al interior del PNBS	Apoyo a investigacion participativa para planes de cosecha sostenible de recursos silvestres	Fortalecimiento institucional de CBOs y NGOs
	Agricultores	Agricultura no sostenible	Apoyo a desarrollo de sistemas agroforestales demostrativos	Experiencias innovativas
			Apoyo a diseño participativo de proyectos económico-productivos	Apoyo a seguimiento para financiamientos
			Estudios tecnicos para valor agregado a recursos agrosilvopastoriles	
	Mineros	Actividad minera no ambientalmente	Catastro integral de derechos piloto	CTM funcionando
	Sector publico		Estudio ZEE piloto	Respaldo publico a planes piloto
	MEPPI/ Sector publico	Construcción de carreteras sin regulacion ambiental	Monitoreo ambiental	
	Empresarios/ Sector publico	Crecimiento de turismo sin planificacion	Plan de Desarrollo Turistico regional	
			Asistencia gerencial a casas	
PNRA/ Provincia Mariscal Caceres San Martin	INRENA/ Sector publico	Bosque Mariscal Caceres sin status definido	Diseño participativo y aplicación de plan piloto de ordenamiento territorial	Fortalecimiento institucional de CBOs y NGOs
	CBOs	Areas de potencial DB sin proteccion	Incorporación de comunidades locales a proteccion de areas sensibles	
	Agricultores	Chacras en suelos no aptos para producción agropec	Apoyo a clasificación de suelos por capacidad de uso mayor	CTM provincial funcionando
	Madereros	Extracción de madera desordenada	Catastro integral de derechos piloto	
	CBOs	Cosecha de recursos silvestres con quimicos	Planes participativos de cosecha sostenible de recursos silvestres	
		Reseción económica post sustitución de cultivo coca	Estudios tecnicos para valor agregado a recursos agrosilvopastoriles	
	Sector publico	Vías de comunicación deterioradas	Monitoreo ambiental	
	Sector publico	Ausencia de asistencia tecnica agropecuaria	Cursos, capacitación, intercambio de experiencias, pasantías	Tecnicos, agricultores líderes identificados
			Fortalecimiento de modulos de institutos tecnicos locales	

	ONGs		Incorporación de variables en currícula educativa	

(Cont Cuadro 1)

Region	Actores	Problemas socioeconomicos	Potencial intervención	Supuestos
Callejon Huaylas PNH - RBH	Empresas/ pequeños mineros Empresas/ CBOs CBOs (comunidades campesinas)	Mineria dentro del PNH, contaminación de aguas, relaves Turismo desordenado en PNH-RNH Sobrepastoreo y ganado de baja calidad Agricultura de subsistencia dentro del PNH 4 zonas críticas dentro del PNH Biotecnología andina en proceso de deterioro	Plan piloto de ordenamiento minero en toda la RBH Implementación de nuevos sitios turísticos Planes de manejo participativo de pastizales asociado a reforestación de especies silvestres Apoyo a determinación de conservacion in situ de cultivos andinos Talleres de resolución de conflictos con mecanismos apropiados Evaluaciones de factibilidad de biotecnología andina	CTM funcionando
Region	**Actores**	**Problemas socioeconomicos**	**Potencial intervención**	**Supuestos**
PNTM/ Provincia Leoncio Prado Huanuco	Sector publico CBOs (colonos)	PNTM sin limites definidos confusión con colonos asentados en partes bajas	Diagnostico del Estado Actual y del Potencial Desarrollo/conservación Completar delimitación del PNTM Apoyo a diseño e implementación de Plan Maestro PNTM Apoyo a diseño e implementación de Programa Desarrollo Integral	Fortalecimiento institucional de CBOs y NGOs Participación activa de TIMA (CTM provincial)
	Madereros (colonos)	Extracción de madera desordenada Chacras en suelos no aptos para producción agropec Identificación, empadronamiento y organización de colonos inconclusa	Catastro integral de derechos piloto Estudios ZEE y de suelos Apoyar continuación de delimitación de areas ocupadas microcuencas priorizadas por el PEAH y titulación de tierras	Respaldo publico a planes piloto

Reseción económica post sustitución de cultivo coca	Estudios tecnicos para valor agregado a recursos agrosilvopastoriles	

Attachment D Gender Analysis

El proyecto ha incorporado el enfoque de genero como un componente fundamental a lo largo del analisis y las intervenciones propuestas El enfoque de genero atraviesa todas las lineas de intervencion mediante por un lado, el fortalecimiento de la capacidad institucional en el sector privado y publico y el apoyo a la planificacion participativa de los actores sociales claves involucrados en el proceso De otro lado, este enfoque procura apoyar toda modalidad de intervencion que impulse una mayor equidad entre varones y mujeres en su articulacion al proceso de desarrollo a traves de la conservacion de la diversidad biologica Nuestra propuesta de trabajo con un enfoque de genero, esta inspirada en el programa Manejo de ecosistemas y recursos con enfasis en genero (MERGE) basada en siete principios basicos

Estos principios expresan la importancia de la participacion comunitaria en la conservacion, la relevancia del genero para la conservacion exitosa y con equidad y la importancia del entrenamiento para la sustentabilidad de los proyectos de conservacion Estos principios[1] son

- El potencial para la conservacion con base comunitaria esta condicionado por factores historicos, ecologicos, socioeconomicos y politicos en diversas escalas
- El manejo de recursos para la conservacion involucra directa o indirectamente la negociacion entre multiples grupos, con niveles distintos de poder y de recursos cuyos intereses estan muchas veces en conflicto
- La participacion de diferentes grupos de interes dentro de las comunidades locales es un elemento necesario para alcanzar conservacion con equidad social
- Las relaciones de genero diferencian los vinculos que las mujeres y los varones establecen con los recursos naturales y los ecosistemas, con respecto al conocimiento, uso, acceso, control e impacto sobre los recursos naturales y las actitudes en relacion a los recursos y a la conservacion
- Las iniciativas que se basan en el enfoque de genero y otras estrategias para el empoderamiento de grupos locales tendran mas exito y seran mas equitativas

- La participacion de diferentes grupos de interesados en procesos de aprendizaje enfocados en genero que fomenten el aprendizaje vivencial y el pensamiento critico, mejora la capacidad de los grupos locales para negociar sus intereses en la conservacion
- A largo plazo, la conservacion tendra exito si la capacitacion de los grupos de interesados esta acompanado por estrategias de cambio institucional y de relaciones de colaboracion que provean continuidad en la investigacion, la asistencia tecnica, el intercambio y en otras actividades participativas con comunidades locales

El grado de "apropiacion" de las intervenciones por parte de los beneficiarios directos de la actividad es fundamental si partimos del principio que el recurso humano y su grado de compromiso con las actividades es determinante para el exito de las intervenciones asi como para su sustentabilidad Subestimar el rol de los beneficiarios o no tomar debida cuenta de los diferentes roles cumplidos por varones y mujeres en la conservacion y apropiado manejo de los recursos puede provocar el fracaso de cualquier proyecto, aun aquellos en los que se haga un fuerte despliegue de recursos tecnicos

A pesar de la escasa experiencia en la implementacion de propuestas de manejo de recursos naturales con una perspectiva de genero, existen algunas herramientas tales como el programa MERGE arriba mencionado basado en experiencias latinoamericanas

Este documento recoge algunos rasgos de la participacion por genero en el cuidado y manejo de los recursos naturales a partir de proyectos pasados o en curso de organizaciones gubernamentales y no gubernamentales La incorporacion de la variable genero en los proyectos vinculados a la diversidad biologica es aun muy incipiente o totalmente inexistente, sin embargo hemos intentado reunir aspectos exitosos de estos proyectos En el cuadro N 1 hemos organizado por areas tematicas potenciales intervenciones y potenciales contrapartes intentando integrar el componente de genero en proyectos orientados al mejor manejo y conservacion de los recursos naturales existentes en las areas nacionales protegidas y sus entornos

A fin de apoyar un desarrollo sustentable con equidad de genero, las intervenciones buscan incorporar no solo las necesidades y los intereses de las mujeres y sus organizaciones de base -comedores, prógrama del vaso de leche, club de madres - si no tambien desean expresar la division de roles por genero y la manera diferenciada como varones y mujeres se relacionan con los recursos Las intervenciones pretenden asegurar la mayor participacion posible de la poblacion – y sus sectores mas discriminados – asi como un impacto visible y factible de ser medido en su calidad de vida Todas las intervenciones propuestas deberan ser reformuladas o afinadas en consulta con las organizaciones de base y/o las/los beneficiarias directas de la intervencion

Las contrapartes potenciales en la implementacion de las intervenciones deberan comprometerse a destinar un/una profesional con entrenamiento y experiencia en metodologias con perspectiva de genero a fin de asegurar la apropiada implementacion de las actividades A fin de asegurar la pertinencia de las actividades propuestas asi como de la forma de su implementacion, se propone una prueba de entrada y salida[2] para cada intervencion a fin de contar con un mecanismo de monitoreo y evaluacion de cada actividad

Las intervenciones estan orientadas por la busqueda de los siguientes objetivos generales

- Asegurar y fortalecer la participacion de las organizaciones de base, con enfasis en las poblaciones campesinas y nativas incluyendo las de mujeres
- Mejorar la calidad de vida de la poblacion procurando el uso de sus propios recursos y el manejo mas eficiente de ellos
- Fortalecer el empowerment de la poblacion y sus organizaciones
- Lograr mejoras visibles en el estatus de la mujer al interior de la comunidad
- Promover la equidad en las relaciones entre varones y mujeres a traves de mecanismos participativos de planificacion y toma de decisiones conjunta en tareas productivas y reproductivas

Lineas de intervencion

Las recomendaciones toman en cuenta prioritariamente los siguientes espacios institucionales los maestros y padres de familia a traves de las escuelas y Asociaciones de Padres de Familia, las mujeres a traves de los clubes de madres u otras organizaciones y la asamblea de la comunidad

- Promover actividades selectivas de agroforesteria y reforestacion partiendo de un diagnostico tanto de las zonas criticas como de las especies mas apropiadas Esta intervencion puede canalizarse a traves de los clubes de madres asi como de los colegios e institutos tecnologicos Esto ya se ha hecho de forma esporadica y aislada en algunas zonas con bastante exito, sin embargo creemos que es importante tambien involucrar a las autoridades (siempre varones) y demas pobladores en la reforestacion al interior de los predios usando como incentivo la demostracion de los beneficios a traves de proyectos piloto
- Fomentar el establecimiento de biohuertos y crianza de animales menores – y/o fortalecer los ya existentes - a traves de las familias y escuelas con el objetivo central de mejorar el nivel nutricional de los ninos[3] y con ello su capacidad para el rendimiento academico El impacto de esta actividad podria medirse en coordinacion con el sector salud a fin de hacer un seguimiento de mejoras en peso y talla para ninos en edad escolar y pre-escolar, La seleccion de cultivos y especies debera obedecer no solo a los recursos disponibles en la zona sino tambien al valor nutritivo de las frutas, hortalizas y carnes Es necesario que se valorice el aporte de estas actividades para mejorar la calidad de vida de la poblacion aunque no tengan mayor posibilidad de vincularse al mercado o a cualquier otro tipo de comercializacion local[4] Esta intervencion implica generar cambios en la dieta de los pobladores de la zona y revalorizar la produccion local A este respecto, la tendencia a consumir productos procesados provenientes de la costa es un rezago de la epoca de la coca en la que no habia casi produccion agricola local

- Divulgar y fomentar el uso de los recursos de la zona con respecto a plantas medicinales y su aplicacion en la atencion de enfermedades comunes de la poblacion local[5] Debera incidirse principalmente en aquellos remedios caseros que pueden resolver enfermedades endemicas en la infancia y dolencias

ginecologicas comunes en las mujeres de la zona De acuerdo a estudios en la zona, el porcentaje de familias que usan plantas medicinales es bastante significativo pero hay una tendenciá a usar mas plantas de la chacra que las del bosque con lo cual se esta perdiendo el conocimiento de las propiedades medicinales y curativas de las plantas del bosque

- Es necesario fortalecer la conciencia ambiental en la zona[6] en el sentido de **divulgar informacion suficiente y adecuada sobre el impacto de la deforestacion y depredacion en la disponibilidad de recursos futuros y en el equilibrio ecologico** Cualquier iniciativa para contar con la poblacion en proteccion y conservacion de recursos demanda una vision clara de sus beneficios Creemos que es necesario trabajar no solo con jovenes a traves de las escuelas e institutos sino tambien con la poblacion adulta (muchas veces complice o participe de la depredacion) Una ventaja para la implementacion de esta intervencion a nivel de escuelas es que ya ha sido incluido en la curricula por el sector educacion y entonces existe una isntancia a la cual plegarse Los que existen no se adecuan a las necesidades especificas de la selva sino que estan inspirados en la costa y sierra

- Incentivar la **produccion artesanal aprovechando la produccion de algodon** para la fabricacion de telares, hamacas y alforjas fomentando el uso del motivo representativo del area bajo proteccion, lo cual proveeria un nicho especialmente para las mujeres de la zona Esta actividad podria extenderse a distritos y caserios cercanos o dentro del area como una fuente complementaria de ingresos

Dado que son muy escasos o inexistentes los proyectos de conservacion que hayan incorporado organicamente y desde su diseno el componente de genero, lo que se describe a continuacion - excepto por PROGEMA - son intervenciones con comunidades campesinas o nativas cuyos beneficiarios directos son las mujeres o sus organizaciones No todos ellos tampoco han sido implementados en zonas de proteccion sin embargo consideramos que serian apropiados algunos de sus aspectos para las areas protegidas Este recuento ha sido utilizado como fuente para la propuesta de intervenciones con un enfoque de genero incluido en este documento

Proyecto de Genero y Medio Ambiente (PROGEMA) de Conservacion Internacional

PROGEMA es un proyecto que se inicio en enero de 1995 con el proposito de responder a la demanda local de atender equitativamente a los varones y a las mujeres como directos beneficiarios de los proyectos de conservacion y desarrollo presentes en la region de Tambopata, Madre de Dios Opera a traves de un programa de capacitacion dirigido a profesionales y lideres locales que trabajen en conservacion y desarrollo El programa se enfoca en el analisis de temas de genero referidos al manejo de recursos naturales con el fin de evitar que los proyectos de conservacion y desarrollo no refuerzen o creen desigualdades entre varones y mujeres[7] Conjuntamente con Planificacion Participativa Comunal (PPC), PROGEMA forma parte del componente de Capacitacion y Extension de PRODESCOT

Proyecto de capacitacion en biohuertos de APECO

Financiado con fondos de GTZ y administrado por Fonanpe consistio en la capacitacion en biohuertos y en organizacion con quince clubes de madres de la zona del PNRA Nuestra visita al campo confirmo el reconocimiento y visibilidad de este proyecto dentro de la comunidad aunque seria necesario hacer un estudio de valoracion de la comercializacion de hortalizas y/o el impulso de canales accesibles de comercializacion

Proyecto de Tecnologias Alimentarias de la Red Nacional de la Mujer Rural

El Proyecto ha finalizado hace dos anos y se encuentra dentro del marco institucional del Centro Flora Tristan pero operaba con relativa autonomia con fondos de Atellier de Espana El proyecto ha sido implementado en Tarapoto a partir de un diagnostico con las regidoras para el apoyo a microempresas para el procesamiento de alimentos Este proyecto busca estimular el aprovechamiento de tecnologias alimentarias para la generacion de ingresos complementarios para las mujeres A la fecha, han trabajado en el procesamiento de lacteos, frutas, carne y mani

Estudios socio-economicos

Existe informacion sobre la participación diferenciada de varones y mujeres en algunas zonas protegidas tales como las hechas en la reserva de Paracas y que consisten en diagnosticos socio-economicos de la poblacion dedicada a la pesca artesanal[8] Degen tiene tambien un trabajo previo en la comunidad de Tortugas donde se describe la actividad de la pesca artesanal y los roles por genero Un trabajo similar ha sido hecho por Milena Arias Schreiber en 1993 para Wildlife Conservation Society con enfasis en la problematica de pesca artesanal y la fauna marina, determinando el grado de interferencia entre las actividades de pesca y las capturas incidentales y dirigidas de animales marinos en el Puerto de San Juan de Marcona De otro lado, existe un estudio socioeconomico hecho por Amelia Garcia en la comunidad de Laguna Grande (puerto y rancherio) en Paracas El trabajo mas reciente ha sido hecho por INRENA con el apoyo del personal de la reserva en abril de 1997, se trata del I Censo de Pescadores Artesanales en la Reserva Nacional de Paracas presentado como informe a la Direccion General de Areas Naturales Protegidas y Fauna Silvestre Revisando los trabajos descritos y la consulta con profesionales trabajando en la zona concluiremos que entre los proyectos mas relevantes ejecutados en la zona esta la campana de educacion ambiental ejecutada por APECO con financiamiento de GTZ

Otra potencialidad para el desarrollo de actividades tiene que ver con dos clubes de madres existentes en Laguna Grande Existen dos grupos bien diferenciados y algunas veces en conflicto en la zona la comunidad del puerto que se dedica a la extraccion de mariscos y la comunidad de rancheros dedicada a la pesca en bote de peces y mariscos El Fenomeno del Nino ocasiono una abundancia de especies que estimulo la llegada estacional de poblacion dedicada a la extraccion de concha de abanico De acuerdo a informacion recogida a traves de encuestas por APECO, al menos la mitad de la poblacion no sabe que es la reserva ni las reglas que deben respetar quienes viven dentro de ella o en sus alrededores Los pescadores respetan las normas solo inicialmente para obtener la licencia de pesca y las campanas de creacion de conciencia ambiental no son regulares

Resulta fundamental contar con diagnosticos socio-economicos que reunan informacion considerando los diferentes roles y actividades productivas que cumplen

varones y mujeres en las comunidades Estos diagnosticos podrian ser impulsados desde el interior de las comunidades a traves de autodiagnosticos con un(a) facilatador(a) externo y seria muy util en la identificacion de posibles intervenciones dado que, como ya hemos dicho antes, mujeres y varones se relacionan de una manera distinta con los recursos y presentan necesidades tambien diversas

Proyecto de titulacion y saneamiento de la propiedad rural

Este es un proyecto liderado por la Red Nacional de la Mujer Rural del Centro Flora Tristan cuya finalidad es ordenar los criterios para el saneamiento y titulacion de los predios rurales y optimizar el proceso de levantamiento de informacion y catastro rural para facilitar la adecuada inscripcion de los derechosde propiedad y posesion de predios en las Secciones Especiales de la Propiedad Inmueble de las Oficinas Registrales Regionales de acuerdo al DL 667, normas modificatorias y complementarias[9]

Proyecto REPROSALUD

Este es un proyecto implementado por el Movimiento Manuela Ramos y ALTERNATIVA a nivel nacional y trabaja en tres lineas basicas salud reproductiva, creditos y transformacion de recursos (e g la fabricacion de escobas de paiasaba en la selva) El proyecto se articula a todas aquellas organizaciones de base lideradas por mujeres organizaciones del vaso de leche, comedores y clubes de madres Sus intervenciones se han dirigido a Huancavelica, Puno, Ancash, Lima este, la sierra de La Libertad, Tarapoto y Pucallpa

Red de Promocion de la Mujer

Esta fue creada como resultado de un proceso participativo impulsado por el estado peruano a traves del Consejo Nacional de Poblacion Un grupo de especialistas en el enfoque de genero fueron encargadas del proceso de recoger informacion a nivel nacional sobre las necesidades y las demandas de las mujeres en todos los departamentos Como resultado se publico un documento de consenso, el Programa

Nacional de Promocion de la Mujer Existen nucleos a nivel departamental y regional que articulan las diferentes organizaciones vinculadas al trabajo con mujeres Su vinculacion al estado ha hecho posible que hayan sido consideradas como representantes legitimas de las mujeres en instancias de toma de decisiones tales como los CTMR

ENDNOTES

1 Version revisada en Marianne Schmink Marco conceptual para genero, conservacion y gestion de los recursos naturales En Genero y manejo sustentable de recursos Poats, Arroyo y Asar (edit) FLACSO, Memorias de la Conferencia Internacional de MERGE Quito, febrero de 1996

2 Dado el alto indice de analbetismo en la poblacion femenina, se propone la intervencion de un/a consultor/a externa al momento del diseno y aplicacion de las pruebas, las mismas que pueden ser grupales y/ graficas si el caso lo requiere

3 El diagnostico socioeconomico de la zona reporta que la dieta diaria se sustenta en carbohidratos y tambien da cuenta de un alto porcentaje de desnutricion cronica infantil

4 CEDISA realizo un estudio de valorizacion de la micro-comercializacion de verduras que confirma que los ingresos por esta actividad no son tan insignificantes como podria pensarse Los ingresos generados por esta actividad podrian destinarse a la compra de semillas y asi romper la dependencia en alguna medida aunque es mas dificil semillar en selva que en sierra

5 Al respecto hay estudios muy interesantes sobre el trabajo de parteras en varias zonas de selva, especificamente en Tarapoto

6 En cada reunion pregunte a la poblacion respecto a su relacion con el area del Parque, si esto los beneficiaba o perjudicaba de alguna forma Las respuestas nos hacen pensar que no tienen una idea clara de lo que implica vivir cerca a un area protegida Esta observacion se confirma en las conclusiones del estudio socioeconomicoantes mencionado

7 Memoria del Programa de Desarrollo basado en la conservacion de Tambopta - PRODESCOT 1995-1996 Conservacion Internacional Lima, 1997

Ver por ejemplo Peter Degen, 1990 para un diagnostico de la pesca artesanal en la reserva, Milena Arias Schreiber, 1993 para el Wildlife ConservationSociety

9 Informacion obtenida en entrevista con la Doctora Ivonne Macassi, directora de Flora Tristan e impulsora del proyecto Tambien se ha usado como fuente su folleto para la "Campana nacional por una titulacion de tierras con equidad"

Cuadro N 1 Potential activities with a gender approach

Area tematica	Objetivo especifico	Potencial intervencion	Indicador	Potencial contraparte
Reforestacion	Apoyar un proceso participativo en la conservacion del medio ambiente y los recursos naturales	Talleres de capacitacion en reforestacion con organizaciones de base y escolares	Numero deadultos y ninos capacitados Extension reforestada	CONAM APECO INRENA Gobierno local
Desarrollo humano y generacion de ingresos	Mejorar el estatus de la mujer en la comunidad	Proyecto piloto para el establecimiento de un biohuerto y granja comunal	Incremento en el ingreso familiar proveniente de la comercializacion	PROMUDEH Red de Promocion de la Mujer APECO Red Nacional de la Mujer Rural (RNMR)
Educacion, Salud y Generacion de Ingresos	Mejorar el nivel nutricional de las familias	Valoracion de la comercializacion de hortalizas y frutales	Aumento en el rendimiento academico de los ninos en la escuela	Ministerio de Educacion
Generacion de ingresos	Apoyar la generacion de ingresos familiares complementarios	Apoyo a la organizacion de ferias comunales		
Desarrollo humano y conservacion del medio ambiente	Promover el aprendizaje comunitario de los roles diferenciados en la tarea de conservacion Promover respeto mutuo por el aporte en el cuidado de los recursos naturales	Talleres comunales para los relatos de 24 horas	Reduccion de conflicto entre varones y mujeres a traves de indicadores de violencia domestica	PROMUDEH CENTRO DEMUS
Salud	Mejorar la salud de la poblacion revalorizando los recursos existentes en la zona	Talleres de divulgacion sobre el uso de plantas medicinales de la chacra y el bosque	Numero de personas capacitadas aplicando los metodos en su propia familia y/o a nivel comunitario	Ministerio de Salud Proyecto REPROSALUD

Salud	Recuperacion y revaloracion de la medicina tradicional	Proyecto piloto de demostracion sobre la manera de aplicar plantas medicinales	Numero de personas interesadas en el proyecto Numero de familias con al menos un miembro capacitado	Instituto de Medicina Tradicional Organizaciones de base
Educacion ambiental	Fortalecer la conciencia ambiental con enfasis en los sectores mas jovenes de la poblacion	Concursos escolares de dibujo con participacion de maestros y padres de familia	Horas destinadas a la preparacion de las jornadas Convenios y auspicios	Ministerio de Educacion Maestros APAFAS
Educacion ambiental	Fortalecer la conciencia ambiental en los pobladores de la zona	Convenios para el impulso de adecuaciones curriculares en educacion ambiental Talleres de capacitacion con maestros sobre educacion ambiental	Numero de participantes y organizaciones representadas en la formulacion delos convenios Campanas escolares de educacion ambiental al resto de la poblacion	Maestros Gobierno local y regional Direccion de Educacion APECO
Generacion de ingresos	Promover la generacion de ingresos familiares complementarios	Jornadas de capacitacion con clubes de madres sobre posibilidades de produccion artesanal de acuerdo a los recursos de la zona	Numero de pobladores produciendo artesania para uso domestico y para comercializacion	Clubes de madres
Fortalecimiento institucional	Revaloracion comunal para el aprovechamiento racional de los recursos disponibles	Concursos para la creacion de simbolos representativos del area protegida	Porcentaje de uso del simbolo en su produccion artesanal	Jefatura del Area Protegida Instituto Nacional de Cultura Gobierno local

Salud y tecnologias alimentarias	Generacion de ingresos y mejora en la calidad de vida de las familias	Recojo y divulgacion del uso de técnologias alimentarias a traves de ferias y demostraciones comunitarias	Numero de microempresas creadas Porcentaje de la dieta familiar compuesta por productos locales procesados	Red Nacional de la Mujer Rural
Salud y nutricion	Recuperacion del valor nutricional de los productos locales	Concurso de tecnologias alimentarias	Numero de participantes en el concurso Reduccion del consumo de productos procesados foraneos	Red Nacional de la Mujer Rural Organizaciones de base comedores y vaso de leche
Organizacion y gestion	Fortalecer la capacidad de las organizaciones de base para la gestion de empresas campesinas familiares	Cursos de capacitacion en gestion y manejo de microempresas y/o empresas familiares diversas	Numero de familias y/u organizaciones capacitadas y aplicando los principios de gestion	Red de Promocion de la Mujer
Salud publica	Mejorar las condiciones de sanidad en la comunidad	Proyecto piloto en el manejo de desechos y en tecnicas sencillas de reciclaje	Numero de familias utilizando los metodos aprendidos	Ministerio de Salud Promotores de salud
Organizacion y liderazgo	Fortalecer la participacion de las organizaciones de base en el manejo y conservacion de recursos	Identificacion de lideres y capacitacion en liderazgo para quienes forman parte de los CTMR Talleres de capacitacion en planificacion participativa	Numero de iniciativas impulsadas por las mujeres en el CTMR Numero de participantes a los talleres	Red de Promocion dela Mujer PROMUDEH CENTRO

Salud y nutricion	Recuperacion del valor nutricional de los productos locales	Concurso de tecnologias alimentarias	Numero de participantes en el concurso Reduccion del consumo de productos procesados foraneos	Red Nacional de la Mujer Rural Organizaciones de base comedores y vaso de leche
Modificaciones legales	Mayor acceso de la mujer campesina y nativa en la titulacion y saneamiento de la propiedad rural	Apoyar el proyecto de titulacion de tierras con equidad de genero Taller de capacitacion a mujeres sobre sus derechos de propiedad	Numero de unidades agropecuarias encabezadas por mujeres con titulacion saneada Convenios con universidades y juzgados	Centro Flora Tristan/ Area Desarrollo Rural y Derechos Humanos Ministerio de Agricultura/ Proyecto Especial de Titulacion de Tierras (Brigadas de titulacion) Universidades locales Organizaciones femeninas de base CEPES
Capacitacion legal	Proveer a los funcionarios de justicia con informacion actualizada sobre los derechos de propiedad de las mujeres	Taller de sensibilizacion a jueces y funcionarios Convenios de capacitacion Campana de difusion de derechos	Numero de expedientes de titulacion de tierras para mujeres resueltos Numero de funcionarios capacitad	Ministerio de Justicia Radios locales Ministerio de Agricultura/ Direccion regional de Agricultura
Salud ambiental y salud dela poblacion	Mejorar la salud de la poblacion	Proyecto piloto de reciclaje y manejo de los desechos a nivel de las familias	Numero de familias que utilizan los sistemas de reciclaje de basura domestica	Ministerio de Salud Gobierno local Organizaciones de base

Generacion de informacion actualizada con un enfoque de genero	Contar con informacion actualizada sobre las caracteristicas socio-economicas de la poblacion que vive dentro y en los alrededores de las ANP	Autodiagnosticos apoyados por un facilitador externo Concurso de dibujo sobre actividades economicas de la zona y los roles de genero	Numero de participantes en las jornadas de autodiagnostico Numero de participantes al concurso Numero de poblaciones cubiertas	Asambleas comunales y autoridades locales Maestros y APAFAS Universidades locales Jefatura de las ANP

POLICY ANALYSIS

USAID has long been involved in policy analysis and dialogue in support of improved management of environmental resources in Peru A thorough review of gaps in laws and regulations, with particular attention paid to citizen participation in the formulation of public policy, was completed in April 1997 by Manuel Pulgar-Vidal, of the Peruvian Society for Environmental Law (SPDA), with Mission support Drawing on that review, USAID identified a menu of topics for policy assistance that was featured in the Concept Paper, dated 23 March 1998, "Biodiversity and Fragile Ecosystems Conservation and Management "

In turn, the Concept Paper's menu has been reorganized and refined in this Activity Assessment, three categories of policy assistance having been identified

- Support the development of a common awareness for the national biodiversity strategy and natural resource use planning
- Support opportunities to strengthen SINANPE
- Promote natural forest policies that help Peru meet ITTA standards

Eight specific interventions, each corresponding to one of the above three topics, are described in the main document Identified in the matrix contained in this attachment are

- the policy issue,
- ongoing policy dialogue,
- gaps in that dialogue, and recommended USAID-funded interventions in each of the eight policy areas

MATRIX ELEMENTS

1 A COMMON AWARENESS FOR THE NATIONAL BIODIVERSITY STRATEGY AND NATURAL RESOURCE USE PLANNING

1 1 Economic Valuation Criteria for Biodiversity Conservation and Carbon Sequestration

Issue

Natural resource use planning, such as it currently is in Peru (see below), involves limited application of economic criteria, in part because environmental and natural resource economics (ENRE) is at an incipient stage of development in Peru Consequently, economic analysis is rarely applied to help resolve environmental conflicts and decide on efficient patterns of natural resource development

Ongoing Policy Dialogue

CONAM is well aware of the need to enrich the economic content of natural resource use planning Also, Peruvian economists have carried out limited empirical research (e g , natural resource accounting at the sectoral level)

Gaps in Ongoing Dialogue

Empirical economic research of the causes and impacts of deforestation and related topics has received very little support As a result, methodologies being used in other countries to evaluate biodiversity loss, carbon sequestration, and so forth are not easy to apply in Peru

Interventions

- Technical assistance and funding (competitively allocated) for empirical investigation of Biodiversity and carbon sequestration values and their capture,
- Presentation of research findings in publications and conferences,
- Use of research findings in short-courses drawing participants from CONAM, INRENA, and other governmental agencies, environmental organizations, and universities

1 2 Incentives for Biodiversity Conservation and Sustainable Use

Issue

Access to biological diversity is almost entirely unregulated, as a result, biodiversity values are neglected almost entirely in the marketplace Internalization of those values requires that rights of access be defined, and also that uses of diverse biological resources be expanded (e g , through biotechnology) Also regulations for the use of natural forests, wildlife and fisheries, should include, accoding to the Law on biodiversity, incentives for conservation and sustainable practices on the use of those resources

Ongoing Policy Dialogue

The GoP is participating in international negotiations, among the five members of the Andean Pact for example, aimed at defining access rights At the same time, domestic legislation is being crafted to enhance control of the unregulated extraction of samples used in pharmaceutical and other research Also, a national Biotechnology Plan is being developed

Gaps in Ongoing Dialogue

Some of the discussion of options for regulating access to genetic resources and for biotechnology development appear to be based on unrealistic expectations of biodiversity values, what is required for biotechnological research and development (e g , stronger intellectual property rights), and so forth No incentives exists in current regulations for sustainable practices

Interventions

- Technical assistance for assessing rules of access to genetic resources
- Technical assistance for assessing biotechnology development options, including strengthening of intellectual property rights,
- Workshops involving key stakeholders,
- Technical assistance for developing research on possibilities for introducing economic incentives as part of management policies of natural resources

1 3 Planning for Ecological-Economic Zoning

Issue

Natural resource use planning is fairly ineffective in Peru, because of acute sectoral cleavages in the GoP, excessive governmental centralization, and other institutional limitations Regardless, Peru has, along with other members of the Amazon Cooperation Treaty, committed itself to ecological-economic zoning in its Amazonian territories

Ongoing Policy Dialogue

CONAM is playing a leading role in ecological-economic zoning in Peru It is also establishing an institutional framework, including the CTM and CTMRs, for carrying out effective natural resource planning involving two or more economic sectors

Gaps in Ongoing Dialogue

Economic criteria are incorporated poorly or not at all in plans, zoning documents, etc (see policy area 1 1, above) In addition, there does not appear to have been much discussion of policy instruments, including economic instruments, that could be used to effect plans Related to this is the absence of a joint implementation authority in the

GoP, which could facilitate forestry projects that have carbon sequestration benefits

Interventions

- Technical assistance on the use of economic and other policy instruments for implementing natural resource use plans
- Ttechnical assistance on joint implementation options

1 4 Implementation of the Law for the Sustainable Use of Biodiversity

Issue

The biodiversity law was enacted as part of Peru's commitment to the implementation of the CBD Several new planning, legal and policy issues need to be implemented within its framework Although CONAM must lead the implementation of this law, various ministries and the Congress have either the mandate or independent initiatives for the same issues The intellectual property rights, now under guidance by INDECOPI, which regulates all aspects of property rights, is in conflict with CONAM because regulations are being dbeloped independently

Ongoing Policy Dialogue

The first step for the implementation of the law is the drafting of the National Strategy on Biodiversity (ENDB), which is being developed in a nation wide process in 15 focal points, in 15 departments CONAM is aware of the need to develop a policy awareness for the next step which will be the desing of an Action Plan and the implementation of the biodiversity strategy

Gaps in Ongoing Dialogue

Biological diversity appears to be a low priority for CONAM because of conflicting overlap with other institutions There is little hope of implementing the Law and the convention since CONAM is developing regulations outside the ENDB framework

Interventions

- Technical assitance for the regulation of the Law on biodiversity,
- Technical assitance for developing a national system for monitoring the implementation of the CBD
- Workshops with key members of central and local governments to discuss the issues and

benefits, and to promote the implementation of the ENDB

2 STRENGTHENING SINANPE

2 1 Implementation of the Protected Areas Law

Issue

The Protected Areas Law has incorporated recommendations of the Plan Director Once the regulationlamentation is aprooved, by a Supreme Decree, implementing the Law will need much technical assistance over several years

Ongoing Policy Dialogue

INRENA has said that the regulation will be pre-published for discussion before aproval, in 1998

Gaps in Ongoing Dialogue

The reglamentation of the Law is being prepared in INRENA with very little participation of members from the Direccion General de Areas Protegidas

Interventions

- Technical assistance and facilities to develop participatory instruments for the Protected Areas System management,
- Technical support to develop proper plans, as necessary, in key protected areas,
- Technical support for the establishment of local mangement committees,

2 2 Protection and Consolidation of Key Biodiversity-Rich Areas

Issue

Sixteen out of the 38 Priority Areas for conservation are not currently covered by SINANPE, while several proposals for new protected areas are awaiting, for a decision to be established

Ongoing Policy Dialogue

It is apparent under binational dialogue with neighboring countries, that some border protected areas could be established Although CONAM does not support the establishment of new protected areas, decisions are usually taken at higher levels of the government, since protected araes are enacted by Presidential Decrees A new protected area was established in Gueppi in 1997 (Colombia and Ecuador border) while the proposal for the Amarakaeri Communal Reserve, which overlaps with Mobil's Block 78 in Madre de Dios, is still pending

Gaps in Ongoing Dialogue

INRENA has not made any statement about establishing protected areas on uncovered priority areas

Interventions

- Support local or regional governments, local population and NGOs, for consultation and design of technical briefs for new protected area' proposals
- Technical support for developing management plans for these areas, including buffer zones

3 NATURAL FOREST POLICIES THAT HELP PERU MEET ITTA STANDARDS

3 1 A Reorganized Natural Forest Management System for Sustainable Production

Issue

Along with INRENA, the DGF has been shifted from one agency to another during the last eight years This has interfered with institutional instability, which is needed for careful planning and efficient development of forest resources Furthermore, private entrepreneurs are left without the confidence required to invest in sustainable production

Ongoing Policy Dialogue

INRENA was transferred from MAG to the PCM in January 1998, and back again in June In addition, new forestry legislation, called for in the 1990 Environmental Code This proposed new legislation, which would replace the current law adopted in 1975, is currently being considered by the Peruvian Congress

Gaps in Ongoing Dialogue

The proposed law has serious gaps For example, concessions smaller than 40,000

hectares are not mentioned Also, the role and functions of the National Forestry Superintendency, which would be created with passage of the law, remain unclear, except that the DGF would remain under INRENA but with no implementing powers

Interventions

- Technical assistance to advise on the pros and cons of creating a new Superintendency,
- Technical assistance on forest rights, generally, and timber concessions, specifically

3 2 Disincentives and Institutional Impediments to Sustainable Forestry

Issue

Unsustainable forestry arises from a series of failures, including (a) institutional failures (e g , property rights not clearly defined), (b) market failures (e g , the absence of markets for watershed stabilization, carbon sequestration, and other environmental services), and (c) policy failures (e g , subsidies and trade barriers) As a result of these failures, economic agents get wrong signals about the true scarcity of natural resources, and incentives to develop those resources sustainably are weakened

Ongoing Policy Dialogue

The new forestry law is currently being considered by the Peruvian Congress

Gaps in Ongoing Dialogue

See policy area 3 1 (above)

Interventions

- Technical assistance to INRENA and CONAM on the use of innovative management tools (e g , economic instruments) and the building of partnerships with MEF, CNF, and grassroots organizations

3 3 Forest Certification Standards and Monitoring Mechanisms

Issue

This new approach in forestry management intend to be a specific incentive for sound management forest practices The Forest Stewardship Council has set some ten principles to develop standards for good management practices, that need to be locally developed for every type of forest These practices will include timber and other products of the

forests, thus incorporating innovative and sustainable practices of forest management

Ongoing Policy Dialogue

There is no legal framework for forest certification However, the new forestry law proposed, when enacted, will give the necessary space for certification Within the forest private sector, there is at least one company which has already demanded certification

Gaps in Ongoing Dialogue

Standards for sustainable forest management practices have to be determined in an open discussion Also regulations regarding the implementation for forest certification will need to be enacted A potential partner (WWF), who is actually leading this initiative in Peru, only intends to work in varzea areas, and standards for other types of forests should be developed

Interventions

- Technical support for developing standards for certification in a participatory process,
- Technical support for dissemination of the management practices related to certification
- Capacitation for forest certification

ATTACHMENT F PROPOSAL FOR AN SO-LEVEL CLIMATE CHANGE INDICATOR

OVERVIEW

In June 1997, President Clinton committed the USG to providing at least $1 billion to assist developing and transition countries to combat the threat of global climate change The first step in this process has been the development of the USAID Climate Change Initiative (CCI) which details USAID's climate change action plan for the next five years Completion of this document prompted a second step the development of a plan to measure and report our progress under the Initiative

G/ENV has been given the lead for tracking the implementation and results monitoring of USAID activities under the CCI To do this, an Agency-wide team has developed indicators designed to capture the impact of climate change-related programs supported by USAID Results captured through this effort will be reported under the Agency Objective for climate change The indicators were designed to meet several criteria 1) to comprehensively cover the relevant activities that exist, 2) to generate data from the range of relevant programs that can be aggregated, 3) to match as closely as possible existing bureau and mission indicators, and 4) to place the burden of conversions and calculations, especially in terms of carbon equivalents, on the Global Bureau

The results and indicators in this packet have been reviewed Agency-wide and modified based on extensive comments from Bureaus and Missions We realize that their utility will be best tested through application The information gathered in the first year will help refine the indicators for subsequent cycles In addition, we urge you to provide any extra information that might be relevant to this effort when you return the requested information

Please note the following

- G/ENV has been given the lead for managing and reporting on the implementation of the Climate Change Initiative

- Missions should report on as many indicators as possible, except where they are clearly irrelevant to the Mission's program, or where the level of achievement of the indicator is beyond the manageable interest of the Mission's program

- Missions should report on all biodiversity, forestry, agriculture, health, energy, and other activities that have climate change implications

- Missions do <u>not</u> need to create new climate change Strategic Objectives or Results under which to report on these indicators These GCC indicators do <u>not</u> need to be reported in Mission R4s unless also tracked in the Mission's own performance monitoring plan (PMP)

- Because G/ENV will be aggregating the data submitted in the GCC indicators, G/ENV is requesting baseline data for FY 97 If your program has been in place for less than a year, your baseline should be zero, and work initiated should be reflected in next year's target

- Missions are not required to report on result #4, "Reduced vulnerability to the threats posed by climate change" for this year's baseline This result, which tracks an important part of USAID's climate change work, will be used to identify Agency activities that reduce vulnerability for reporting in FY 98

- G/ENV must collect the data for the climate change indicators from all USAID operations (missions, regional and global programs) by July 31

- The package has been divided into sections according to four desired results Each section includes a description of each indicator and a form to use in submitting data related to that indicator

R1 Increased participation in the Framework Convention on Climate Change (UNFCCC), pages 3-5,
R2 Reduced net greenhouse gas emissions from the land use/forest management sector, pages 6-14,
R3 Reduced emissions from the energy sector, industry and urban areas, pages 15-21
R4 Reduced vulnerability to the threats posed by climate change, pages 22-23

G/ENV will collect and compile the data for the indicators from the attached data collection forms More detailed instructions for the data collection tables are provided on the following pages

Please submit completed data forms by E-mail to climate@usaid gov
For questions on specific indicators or the Initiative reporting process, please contact the appropriate sectoral contact

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RESULT 1 INCREASED PARTICIPATION IN THE FRAMEWORK CONVENTION ON CLIMATE CHANGE

A significant component of USAID's contribution to the USG post-Kyoto negotiating strategy is to assist developing countries in building the institutional and human capacity to undertake meaningful participation in international efforts to reduce greenhouse gas emissions Although the definition of meaningful participation will undoubtedly entail different things for different countries, there are some key indicators that missions can use to determine what progress they are making to help countries achieve this goal Some of these are easily measured, such as whether a Joint Implementation (JI) project is undertaken with USAID's assistance Other indicators present more difficult subjects for measuring success, such as whether USAID has assisted a country to integrate climate change into its strategic planning process

Indicator 1

In order to measure USAID's contribution to encouraging and facilitating meaningful participation by developing countries in the UNFCCC, we have created a list of activities that would constitute "meaningful participation " Using a single indicator, the Agency can report on its contribution to U S diplomatic goals

The chart on the following pages lists the ways in which a USAID-assisted country might be viewed as participating in the UNFCCC One point should be given for each achievement in any of the following areas
(More than one point can be awarded in a given area if, for example, USAID can be credited with helping generate more than one JI project)

- institutionalization of national capacity to assess and respond to climate change impacts at the economic, social, and political level,
- integration of climate change into national strategic, energy, and sustainable development strategies,
- design and completion of national emissions inventory,
- design and completion of national mitigation and vulnerability analysis,
- design of National Climate Change Action Plan,
- implementation of
- establishment of procedures for receiving, evaluating, and approving JI proposals,
- establishment of procedures for monitoring and verifying greenhouse gas emissions,
- development of growth baselines for pegging greenhouse gas emissions to economic growth,
- development of legally binding emission reduction targets and timetables,
- development and implementation of flexible market mechanisms

Definitions

Adaptation adjustments in practices, processes or structures of systems to projected or actual changes of climate (may be spontaneous or planned)

Emissions inventory detailed listing of GHG sources and sinks

Growth Baselines An approach that would link countries' emissions targets to improvements in energy efficiency

Joint Implementation (JI) The process by which industrialized countries can meet a portion of their emissions reduction obligations by receiving credits for investing in GHG reductions in developing countries

Mitigation actions that prevent or slow the increase of greenhouse gases (GHGs) by reducing emissions from sources and sinks

National Climate Change Action Plan plans that delineate specific mitigation and adaptation measures that countries will implement and integrate into their ongoing programs These plans form the basis for the national communications that countries submit to the UNFCCC Secretariat

UNFCCC the object of this convention is to achieve stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system

Framework Convention on Climate Change - Indicator Table

Instructions Please include the name of the country Under the Points column, give one point for each of the activities or policy measures undertaken in that country with USAID support or as a result of USAID efforts Please total these points at the bottom of this column

USAID Activity Code/Primary Emphasis Code for activity achieving result	Country _____ **Activity or Policy Measure**	**Brief Description of Achievement**	**Points (1 pt per achieve-ment)**
	institutionalization of national capacity to assess and respond to climate change impacts at the economic, social, and political level		
	Integration of climate change into national strategic, energy, and sustainable development strategies		
	Design and completion of emissions inventory		
	Design and completion of mitigation and vulnerability analysis		
	Design of National Climate Change Action Plan		
	Implementation of National Climate Change Action Plan		
	Establishment of procedures for receiving, evaluating, and approving joint implementation (JI) proposals		
	Establishment of procedures for monitoring and verifying greenhouse gas emissions		
	Development of growth baselines for pegging greenhouse gas emissions to economic growth		
	Development of legally binding emission reduction targets and timetables		
	Development and implementation of flexible market mechanisms		
		Total Points	

RESULT 2 REDUCED NET GREENHOUSE GAS EMISSIONS FROM THE LAND USE/FOREST MANAGEMENT SECTOR

Indicator 1 Area where USAID has initiated interventions to maintain or increase carbon stocks or reduce their rate of loss

In order to capture the full scope of USAID land use activities, please report on areas where USAID activities are making progress in protecting carbon stocks through preliminary interventions (on-the-ground carbon impacts may or may not have been realized) "Progress" is defined as activities which include one or more of the following

- resource or land management plans developed,
- community or household participation engaged in program implementation,
- resource management initiated,
- monitoring and evaluation system in place,
- site-specific policy constraints being addressed (as opposed to national policy work captured under indicator 4)

Unit Hectares

Indicator 2 Area where USAID has achieved on-the-ground impacts to preserve, increase, or reduce the rate of loss of carbon stocks

This indicator captures a subset of the area reported under Indicator 1 Please report only on areas where carbon impacts have been achieved Measurement and monitoring of biomass or carbon are not required for this indicator Please provide a brief (two sentence) justification for including the area in this category to have available if requested during an audit (e g , for 2a - a partner's assessment that an area has met rigorous criteria for protection, or documentation of the stabilization of forest area, for 2b - a partner's report documenting an area that has been converted from degraded agricultural land into a functional agroforestry plot)

2a Area of natural ecosystems where carbon stocks are preserved and/or increasing (areas with *minimal or no* harvest of biomass) Areas included under this indicator are those without significant harvest of biomass This includes protected areas, areas used for the extraction of non-timber forest products, and community managed forests with minimal timber extraction Please report the number of hectares for areas where on-the-ground impacts have been realized and documented or where improved management techniques have been comprehensively adopted

Unit Hectares in each habitat type

2b Area of managed forest, rangeland, and agricultural lands with reduced rate of loss of carbon or increased carbon stock (areas with *moderate or high levels* of harvest of biomass) Please report hectares where reduced rates of carbon emissions or increased carbon stock are apparent (e g , through an increase in standing biomass, decrease in decomposition or fire risk, etc) See Definitions of Terms (page 7) for a

description of these categories Please report under the following categories

- sustainable forest management for timber using reduced impact harvesting
- agroforestry
- reforestation/afforestation
- sustainable agriculture

Unit Hectares in each land use category (Annex 1) and by habitat type

Indicator 3 National/sub-national policy advances in the land use/forestry sector that contribute to the preservation or increase of carbon stocks and sinks, and to the avoidance of greenhouse gas emissions

For this indicator, please report only on USAID-assisted major national or sub-national policies that are not captured by site specific activities reported on through indicators 1-3 For example, include key policy achievements related to national, state or provincial law (e g , Bolivian Forestry Law) or significant far-reaching private sector policy reforms (e g , National Environmental Action Plans) but not those affecting a specific site (e g , legal demarcation of individual site or granting of community access to single location)

One point is given for each of three steps (see data collection table on page 11) completed towards the adoption of legislation or administrative action that

- facilitates improved land use planning
- facilitates sustainable forest management
- facilitates establishment and conservation of protected areas
- improves integrated coastal management
- decreases agricultural subsidies or other perverse fiscal incentives which hinder sustainable forest management
- corrects protective trade policies which devalue forest resources
- clarifies and improves land and resource tenure

Unit Points

Indicator 4 Value of public and private investment leverage (in 1997 dollars) by USAID for activities that contribute to the preservation or increase of carbon stocks and reduction of greenhouse gas emissions

4a Value of funding leveraged directly in support of USAID activities and programs This would include

(i) funding leveraged from partners for joint USAID activities,

(ii) funding for activities in which USAID developed enabling policies, regulations, or provided pre-investment support (prorated),

(iii) obligated or committed funding for direct follow-on MDB loan programs (prorated),
(iv) obligated or committed funding for direct follow-on private-sector funded programs

that reach financial closure (prorated),
(v) joint implementation investments, (vi) Development Credit Authority investments
Due to the variety of ways that dollars leveraged may be calculated, please provide a brief description of your methodology (See data collection table on page 13)

Unit U S Dollars

4b Value of funding generated to replicate USAID-pioneered programs

Unit U S Dollars

Definition of Terms
Land use/forest management, global climate change indicators

INDICATOR 2A

Conservation of natural ecosystems

"Natural areas" include any areas that have not experienced serious degradation or exploitation of biomass Areas where non-timber forest products are harvested can be counted in this category but not those that are managed for timber The latter are included in 2b below The distinction is important as different approaches are employed in estimating carbon for "natural areas" (2a) and "managed areas" (2b) Natural areas include 1) protected areas, 2) areas where non-timber forest products are extracted if significant biomass is not removed (often managed as community-based forest management areas), 3) any other areas which exclude larger-scale biomass harvest from a management regime including many areas managed by communities and/or indigenous groups

Include only the hectares where on-the-ground impacts have been documented or comprehensive management has been implemented, e g , areas of a protected area where deforestation has been halted It is acceptable to count parts of an area where deforestation or degradation has been stabilized, or additional areas as they achieve management goals and demonstrate that degradation has been halted

INDICATOR 2B

Sustainable forest management for timber, using Reduced Impact Harvesting (RIH)

A timber management activity will be considered to be have a positive impact on carbon (relative to conventional methods) if it employs RIH practices and/or other key criteria RIH is a package of practices proven to minimize environmental damage and carbon emissions during the logging of natural tropical forest To be included, an activity must include most of the following practices

- tree inventorying, marking and mapping
- careful planning and marking of skidder trails
- vine cutting prior to harvest, where appropriate
- directional felling of trees
- appropriate skidding techniques that employ winching and best available equipment (rubber tired skidder/animal traction) to minimize soil damage
- proper road and log deck construction
- a trained work force and implementation of proper safety practices
- fire mitigation techniques (fire breaks)
- existence of a long-term management plan

Report on the area where government, industry or community organizations are carrying out forest management for commercial timber using the techniques above, or forest management areas that have been "certified" as environmentally sound by a recognized independent party Only the area where sound planning and harvesting is being currently practiced should be included (not the whole concession or forest)

Agroforestry The term "agroforestry" covers a wide variety of land-use systems combining tree, crop and/or animals on the same land Two characteristics distinguish agroforestry from other land uses 1) it involves the deliberate growing of woody perennial on the same unit of land as agricultural crops and/or animals either spatially or sequentially, and 2) there is significant interaction between woody and non-woody components, either ecological or economical For our purposes, to be counted, at least 15% of the system must be trees or woody perennials grown for a specific function (shade, fuel, fodder, windbreak)

Include area of land under an agroforestry system in which a positive carbon benefit is apparent (i e , through the increase in biomass, litter or soil organic matter) Do not include agroforestry systems that are being established on forest lands that were deforested since 1990

Reforestation/Afforestation The act of planting trees on deforested or degraded land previously under forest (reforestation) or on land that has not previously been under forest according to historical records (afforestation) This would include reforestation on slopes for watershed protection, mangrove reforestation or reforestation to protect coastal areas, commercial plantations and community tree planting on a significant scale, and/or the introduction of trees in non-forested areas for ecological or economic purposes

Include area under reforestation or afforestation (i e , plantation forests and/or community woodlots) Do not include natural forested areas which have been recently deforested for the purpose of planting trees Do not include tree planting in agroforestry systems (include this under agroforestry)

Sustainable Agriculture Agricultural systems that increase or maintain carbon in their soil and biomass through time by employing certain proven cultural practices known to reduce carbon transport or emission This will require consideration of soil, water and nutrient/crop management For reporting purposes, sustainable agriculture systems are those that employ or promote at least three of the following

- no-tillage or reduced tillage
- erosion control/soil conservation techniques, especially on hillsides
- perennial crops in the system
- higher crop yields through better nitrogen and soil management
- long-term rotations with legumes
- the use of organic mulches, crop residues and other organic inputs into the soil
- better management of agrochemicals, by stressing careful fertilizer management that will increase yields while minimizing the use of petro-based agrochemicals which increase emissions

Include area under sustainable agriculture as defined by the criteria above Do not include agricultural systems that are being established on lands deforested since 1990

FY 97 USAID-Sponsored Activities that Contribute to Climate Change Initiative

USAID activity name	USAID activity code or primary emphasis code	Location			The Site and USAID's Involvement					Additional info you have (chose from the info codes below)
		Country	Region, Province, or State	Site	Principle activity(ies) (list 1 per line using the activity codes below)	Area where USAID has initiated activities (hectares) **(Indicator 1)**	Area where USAID has conserved carbon (hectares) **(Indicator 2)**			
							Predominate vegetation type (1 per line, use vegetation codes below)	Natural ecosystems **(2a)**	Managed lands **(2b)**	
Example Ecodevelopment Program	EVCB	Mexico	Sierra Madre Occidental	El Complicado Biosphere Reserve	1	40,000	e	1,000		1, 2
					1	40,000	f	500		
					5	200	k		150	

Instructions for Table for Compiling Land Use Data

For each site where USAID has initiated activities, pick 1 to 3 primary activity codes (from the list below) which best describe your program *If more than one activity code applies to a site, please use a separate row to describe each activity* For example, a USAID program could include a component to improve the internal management of a strictly protected area and also a sustainable agricultural component in the buffer zone, as illustrated in the example above

To ensure our information is complete, please fill in all the boxes that apply We understand that some of the quantitative information you provide may be estimates based on your best judgement

Codes for USAID-Supported Activities

1Conservation of natural ecosystems (may include protected area management, extraction of non-timber products, etc but *not* timber harvesting)
2Sustainable forest management for timber using reduced-impact harvesting
(non-timber forest products may also be harvested)
3Afforestation/reforestation/plantation forests
4Agroforestry
5Sustainable agriculture

Vegetation Codes

Natural Ecosystems
a) Temperate grasslands
b) Tropical grasslands and savannah
c) Mixed woodland and savannah
d) Boreal forests
e) Temperate and sub-polar broadleaf forests or woodlands
f) Temperate evergreen (coniferous) forests or woodlands
g) Sub-tropical and temperate rainforests
h) Tropical dry forests (including monsoon forests)
i) Tropical lowland moist/wet/rain forests
j) Tropical highland moist/wet/rain forests
k) Mixed mountain and highland systems
l) Wetlands
m) Mangroves)
n) Warm deserts and semi-deserts
o) Cold winter deserts and semi-deserts
p) Tundra communities and barren Arctic deserts

Managed lands
qAgricultural systems - (less than 10 % of the area under trees)
rAgroforestry systems - (greater than 10 % of the area under trees)
sPlantation forests - (at least 80% of the area under planted trees)

Codes for Available Additional Information

1 Maps
2 Geo-referenced site coordinates
3 Biomass inventory
4 Rainfall data
5 Soil type data

Climate Change Forestry and Land Use Policy Matrix					
Primary Policy Category Code (letter)	Secondary Policy Category Codes (letter)	Policy Description	USAID Activity Code/Primary Emphasis Code for activity achieving result	Scope (N or S)	Policy Stages Achieved as of FY 97 (Stage #)
t	u,x,z	Eden's forestry law	EVCB	S	2,3,

Instructions for Data Collection Table policy matrix

These indicators are being used to help USAID convey the climate change-related impact of policy efforts In the land use/forestry area, this indicator focuses on policies that are intended to improve carbon stocks either directly by protecting land or improving its management, or indirectly by creating economic incentives for better land use practices and trends Because development and implementation of a policy is a process that can take many years, the policy indicator is indexed to record progress in this continuum

Policy Categories Please choose the policy category below which most closely describes your policy intervention

t facilitates improved land use planning
u facilitates sustainable forest management
v facilitates establishment and conservation of protected areas
w improves integrated coastal management
x decreases agricultural subsidies or other perverse fiscal incentives which hinder sustainable forest management
y corrects protective trade policies which devalue forest resources
z clarifies and improves land and resource tenure

Scope

S Subnational - policies that affect a tribal nation, province, state or region that are neither national nor site specific in impact
N National - policies that influence issues on a country-wide level

Policy Steps

1 Policy preparation and presentation Draft bill, policy or regulation, vetted through relevant stakeholders in government, non-government, the private sector and civil society, and introduced for debate in appropriate legislative, regulatory, or governmental body

2 Adoption Policy intervention is approved and adopted by the appropriate administrative agency or legislative body Can take the form of the voting on a law, the issuance of a decree, etc

3 Implementation and enforcement Actions that put the policy interventions into effect, such as agency personnel trained in procedures, appropriate institutions created or strengthened, or legislation implemented through the appropriate government agency

AS

Indicator 4 Dollars leveraged through agreements with USAID donor partners (forestry and land use sectors)

Instructions In the first column, list all relevant activities or projects In the right-hand columns, note the amount of 1997 dollars that are directly and indirectly leveraged by USAID for activities that contribute to the preservation or increase of carbon stocks and reduction of greenhouse gas emissions (See Indicator 4 on page 6 for definitions)

Country_____ **Activity and Source of Leveraged Funds**	USAID Activity Code/Primary Emphasis Code for activity achieving result	Direct Leverage (4a)	Indirect Leverage (4b)

RESULT 3 DECREASED NET GREENHOUSE GAS EMISSIONS FROM THE ENERGY SECTOR, INDUSTRY AND URBAN AREAS

Indicator 1 Emissions of carbon dioxide (CO_2) equivalents avoided, due to USAID assistance (carbon dioxide, methane, and nitrous oxide)

Missions will report on any of the following six indicators that are appropriate for their programs, and USAID/W will make the necessary conversions from these results to obtain the metric tonnes of CO_2 equivalents avoided

- MW-h renewable energy produced
- MW-h fossil fuel based energy saved through end use energy efficiency
- MW-h fossil fuel based energy saved through energy efficiency in generation, transmission, distribution (including new production capacity)
- MW-h of energy produced as a result of switching to cleaner fossil fuels (including new production capacity)
- tonnes of methane (CH_4) captured from solid waste, sewage, and/or coal mining
- tonnes of nitrous oxide (N_2O) saved through improved agricultural management of soils and/or fertilizer use

Unit Metric tonnes of carbon dioxide equivalents

Indicator 2 Decreased CO_2 emitted per MW-h of energy produced (a *national*-scale indicator for use in those countries where national data is available This data should be available in countries that have completed an emissions inventory)

Unit Metric tonnes CO_2/MW-h

Indicator 3 Policy advances, due to USAID assistance, that contribute to the avoidance of greenhouse gas emissions

One point is given for each of three steps completed toward the adoption of legislation or administrative action that

- facilitates improved demand side management or integrated resource planning
- facilitates competitive energy markets that promote market-based energy prices, decrease fossil fuel subsidies, or allow open access to independent providers
- facilitates the installation of energy efficient or other greenhouse gas reducing technologies, including improved efficiencies in industrial processes
- facilitates the use of renewable energy technologies
- facilitates the use of cleaner fossil fuels (cleaner coal or natural gas)
- facilitates the introduction of cleaner modes of transportation and efficient transportation systems
- promotes the use of cogeneration

Unit Points

Indicator 4 Institutional capacity increased, due to USAID assistance, which leads to reductions in greenhouse gas emissions or increases in energy efficiency

4 a Number of strategies or audits completed
Unit One point for each strategy or audit completed

4 b Number of strategies or audits implemented
Unit One point for each strategy or audit implemented

Indicator 5 Value of public and private investment leveraged (in 1997 dollars) by USAID for activities that reduce greenhouse gas emissions

5a Value of funding leveraged directly in support of USAID activities and programs This would include (I) funding leveraged from partners for joint USAID activities, (ii) funding for activities in which USAID developed enabling policies, regulations, or provided pre-investment support (pro-rated), (iii) obligated or committed funding for direct follow-on MDB loan programs (prorated), (iv) obligated or committed funding for direct follow-on private-sector funded programs that reach financial closure (prorated), (v) joint implementation investments, (vi) Development Credit Authority investments Due to the variety of ways that dollars leveraged may be calculated please provide a brief description of your methodology

Unit U S Dollars

5b Value of funding generated to replicate USAID-pioneered programs

Unit U S Dollars

Indicator 1 Emissions of CO_2 equivalents avoided

Instructions For each activity contributing to this indicator, write a brief description of the activity in the first column, and write the result in whichever of the six reporting columns corresponds to this activity (For example, for a renewable energy activity, put the MW-h of renewable energy produced in column two (1a), and if the activity captured methane from a landfill, put the tonnes of methane captured in column six (1e)) USAID/W will make the appropriate conversion into metric tonnes of CO_2 equivalents avoided

Country Activities	USAID activity code or primary emphasis code	1a CO_2 emissions avoided through renewable energy activities		1b CO_2 emissions avoided through end use energy efficiency improvements		1c CO_2 emissions avoided through energy efficiency improvements in generation, transmission, and distribution (including new production capacity)		1d CO_2 emissions avoided as a result of switching to cleaner fossil fuels (including new production capacity)			1e Tonnes of methane captured from solid waste, coal mining, sewage	1f Tonnes of nitrous oxide emissions avoided through improved agriculture
		MW-h produced	Fuel Type replaced[1]	MW-h saved	Fuel Type saved[1]	MW-h saved	Fuel Type saved[2]	MW-h produced	Old Fuel Type[2]	New Fuel Type		

[1] Provide fuel type replaced/saved if known If not, USAID/W will convert MW-h based on country's 1990 fuel mix levels

[2] Provide site-specific fuel type information if known If not, USAID/W will convert MW-h based on country's 1990 fuel mix levels

Indicator 2 Decreased CO_2 emitted per MW-h of energy produced

Instructions If these data are available for your country, please enter the total amount of energy produced by the country (MW-h) and the corresponding amount of carbon dioxide emitted (metric tonnes)

Country _____

MW-h of energy produced _____

Corresponding metric tonnes of CO_2 emitted _____

Indicator 3 Policy advances that contribute to the avoidance of greenhouse gas emissions

Climate Change Energy/Industry/Urban Policy Matrix				
Policy Description	**USAID Activity Code/Primary Emphasis Code for activity achieving result**	**Policy Advance (a - g)**	**Scope (S or N)**	**Policy Steps Achieved as of FY 97 (Step #)**

Instructions for Data Collection Table policy matrix

These indicators are being used to help convey the climate change-related impact of USAID's work to promote policy reform In the areas of energy, industry and urban development, the indicator focuses on policies that lead to increased energy efficiency and the use of renewable energy and cleaner fuel technologies Policies listed should affect at least the community or municipal level, but policies that are national in scope should also be included To reflect the fact that the development and implementation of a policy can take many years, the policy indicator is indexed to record incremental progress

Policy Categories Please choose among the policy categories below the one that most closely describes your policy interventions

a facilitates improved demand side management or integrated resource planning
b facilitates competitive energy markets that promote market-based energy prices, decrease fossil fuel subsidies, or allow open access to independent providers
c facilitates the installation of energy efficient or other greenhouse gas reducing technologies
d facilitates the use of renewable energy technologies
e facilitates the use of cleaner fossil fuels (cleaner coal technologies or natural gas)
f facilitates the introduction of cleaner modes of transportation and efficient transportation systems
g promotes the use of cogeneration

Scope

S Subnational - policies that affect a municipality, province, state, or region
N National - policies that influence issues on a country-wide level

Policy Steps

1 Policy preparation and presentation Draft bill, policy or regulation, vetted through relevant stakeholders in government, non-government, the private sector and civil society, and introduced for debate in the appropriate legislative, regulatory, or governmental body

2 Adoption Policy intervention is approved and adopted by the appropriate administrative agency or legislative body Can take the form of voting on a law, the issuance of a decree, etc

3 Implementation and enforcement Actions that put the policy interventions into effect, such as agency personnel trained in procedures, appropriate institutions created or strengthened, or legislation implemented through the appropriate government agency

Indicator 4 Institutional capacity

Instructions In the first column describe the activity (e g "industrial pollution prevention and energy efficiency auditing in metal finishing") In the second column, give the number of industrial firms/municipalities that have undertaken audits or developed greenhouse gas reduction strategies In the third column provide the number of industrial firms or municipalities that have implemented the strategies or audit results

Country Activity	USAID Activity Code/Primary Emphasis Code for activity achieving result	Number of audits or strategies completed	Number imple-mented

Indicator 5 Dollars leveraged through agreements with USAID donor partners (energy, industry and urban sectors)

Instructions In the first column, list the activities or projects taking place In the right-hand columns, note the amount of 1997 dollars that are directly and indirectly leveraged by USAID (See Indicator 6 on page 15 for definitions)

Country Activity and Source of Leveraged Funds	USAID Activity Code/Primary Emphasis Code for activity achieving result	Direct Leverage (5a)	Indirect Leverage (5b)

RESULT 4 REDUCED VULNERABILITY TO THE THREATS POSED BY CLIMATE CHANGE

The preliminary indicators to monitor USAID programs that reduce vulnerability to the threats posedby climate change do not measure performance Rather, they are created to identify Agency programs that are reducing vulnerability to climate change (even if they were not conceived of as climate change programs) in several key areas coastal zone management, disaster preparedness, agriculture and food security, and biodiversity and forestry [DATA TO REPORT ON THESE INDICATORS WILL BE COLLECTED BY USAID/W IN THE FY 1998 REPORTING CYCLE THEY ARE INCLUDED HERE FOR YOUR REVIEW]

We recognize that there will be some overlap That is, some activities will fall into more than one category Please include each activity in only one place and include a reference to other relevant categories in your brief description

<u>Key Area</u>

(I)**Coastal Zones** - Number of programs that are reducing the vulnerability of coastal populations, infrastructure, habitats and living resources to accelerated sea level rise or other environmental changes associated with climate change (eg , water availability, resource availability, temperature)

(ii)**Emergency Preparedness** - Number of programs that are increasing ability to cope with and minimize the damage from natural disasters (eg, drought, famine, disease outbreaks) through surveillance, early warning, emergency preparedness, capacity building, etc

(iii)**Agriculture and Food Security** - Number of programs that are increasing adaptability and resilience of agriculture and food systems to changes in temperature, water availability, pest and pathogen presence or prevalence, soil moisture and other changes in environmental parameters (eg , crop diversification, water conservation and delivery, flexible market and trade systems)

(iv)**Biodiversity/Natural Resources** - Number of programs that are increasing the adaptability of natural ecosystems and levels of biodiversity to changes in temperature, water availability, pest and pathogen presence or prevalence, soil moisture and other changes in environmental parameters (eg , establishment of biological corridors, habitat conservation, preservation of ex situ germplasm)

(v)**Human Health and Nutrition** - Number of programs that are reducing vulnerability to climate change through improved access to and quality of health services, vector control, nutrition and environmental health interventions

Indicator USAID Programs that Reduce Vulnerability to Climate Change

Key Area (I, II, III, IV, V)	Mission	Strategic Objective (Name and Number)	Budget	Duration	Type of Prgm (see list below)	Description	USAID Activity Code/Primary Emphasis Code for activity achieving result

Codes for Tracking and Recording Programs

Key Areas	Program Types
I Coastal Zone	1 Urban/Infrastructure 2 Natural Resource
II Disaster Preparation Relief	1 Early Warning System 2 Humanitarian Response 3 Capacity Building
III Agriculture & Food Security	1 Research and Development 2 Policy Reform 3 Extension/Demonstration
IV Biodiversity & Forestry	1 Preservation of Biodiversity 2 Forest Conservation
V Human Health and Nutrition	1 Improved Quality of Health Services 2 Vector Control 3 Improved Nutrition

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ASSESSMENT OF CONDITIONS FOR BIODIVERSITY AND FRAGILE ECOSYSTEMS CONSERVATION AND MANAGEMENT IN PERU

PREPARED FOR USAID/PERU

STRATEGIC OBJECTIVE 4 Improved Environmental Management in Targeted Sectors

EPIQ Assessment Team

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Alfredo Garcia, Anthropologist
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JUNE 26, 1998

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RECOMENDACIONES PARA DETERMINAR PRIORIDADES DE INTERVENCIONES EN CONSERVACION DE DIVERSIDAD BIOLOGICA Y ECOSISTEMAS FRAGILES

RESUMEN

La priorizacion de las areas consideradas en el analisis se presenta en la Tabla 1

TABLE 1 Priority areas for site interventions

ANP	PUNTAJE	LINKAGE USAID	FINANCIAMIENTO COMPROMETIDO
PN Rio Abiseo	19 5	SO4	No
PN Huascaran	17 5	G/ENV	KFW, Holanda
PN Bahuaja - Sonene	16 5		Holanda
RN Pacaya - Samiria	16 5	SO4	WWF, TNC
PN Cerros de Amotape	16		KFW
RN Paracas	15	SO4	KFW, Alemania, WWF
PN Manu	15		UE, WWF
RN Titicaca	12		GEF
SN Manglares de Tumbes	11 5		Holanda
PN Tingo Maria	10 5	SO5	No
ZR Pantanos de Villa	9		UE, otros
SN Calipuy	6		No

Esta seleccion no limita necesariamente las intervenciones al ambito de las areas protegidas, como podria suponerse Las intervenciones deberan impactar en las zonas de amortiguamiento de las areas protegias, asi como en la minimizacion de amenazas locales, como se plantea en el analisis de amenazas

Igualmente, en las intervenciones se podran incluir areas donde no existan araes naturales protegidas, siempre y cuando cumplan con los criterios de riqueza en diversidad biologica y las posibilidades de conservacion de bosques o de demostracion de cambios climaticos

Este informe tambien analiza la matriz de evaluacion de la gestion de las areas protegidas y sugiere algunos cambios asi como su actualizacion

I SELECCION DE PRIORIDADES PARA LAS INTERVENCIONES

El trabajo reciente de Vasquez (1997), para realizar el ejercicio de aplicacion de la matriz de evaluacion de la gestion de las areas protegidas, utilizo cinco criterios

a Biological Representativity
b Size
c Organizational level
d External financial and technical support
e Data availability

Bajo estos criterios, Vasquez selecciono catorce areas del SINANPE sobre las cuales evaluo la gestion Once de estas areas, ademas de la Zona Reservada Pantanos de Villa (muy cercana a Lima) y el Parque Nacional Tingo Maria, son priorizados en este documento, considerando los siguientes criterios

a) CRITERIOS BIOLOGICOS

- REPRESENTATIVIDAD BIOLOGICA

Se considera si el area representa adecuadamente una region biogeografica (CDC, 1991) y una de las 38 zonas prioritarias para la conservacion de la diversidad biologica en el Peru (Rodriguez, 1996) Este ultimo analisis, identifico zonas con alto numero de especies, alto numero de endemismos y las combino con las prioridades por ecosistemas, ademas de las zonas criticas

Las zonas que coinciden con una zona prioritaria y cubren su representatividad alcanzan puntaje =3, las areas que no representan una ZP, tienen puntaje= 1 Las areas que tienen un reconocimiento internacional, suman un punto adicional

- TAMANO DEL AREA

Segun las categorias de manejo, el documento tecnico del Plan Director (FANPE, 1995) considero superficies minimas deseables para las diferentes categorias del SINANPE, de modo que garanticen el cumplimiento de los objetivos de creacion

Parque Nacional	> 250,000 ha
Reserva Nacional	> 50,000 ha
Santuario Nacional	> 50,000 ha
Santuario Historico	> 2,500 ha
(Refugio Silvestre)	> 5,000 ha
(Reserva Paisajistica)	> 25,000 ha

Las areas que cumplen con este requisito, tienen puntaje = 1

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- ESTADO DE CONSERVACION DEL ECOSISTEMA

Para este criterio se ha considerado la evaluacion hecha por WWF y el Banco Mundial (Dinerstein et al, 1995), la cual combina la importancia biologica de las ecorregiones en Latino America y el Caribe, con el estado de conservacion de los ecosistemas El estado de conservacion es medido considerando perdida de habitat, degradacion, tasa de conversion, tamaño de bloques de habitats y grado de proteccion De esta clasificacion los ecosistemas peruanos mas amenazados y de primera prioridad regional son

- En peligro (puntaje= 4)

Yungas Peruanas
Bosques Secos Tropicales
Manglares (en general)

- Vulnerables (puntaje= 3)

Bosques humedos del rio Ucayali
Bosques de Varzea
Bosques montanos de la Cordillera Real Oriental
Paramo de la Cordillera Central
Puna de los Andes Centrales
Puna Humeda de los Andes Centrales
Desierto de Sechura *

- Relativamente estables (puntaje= 2)

Bosques humedos del rio Napo
Bosques inundables de la Amazonia Occidental
Bosques humedos de la Amazonia Suroccidental

(*) Elevado a primera prioridad para completar cobertura regional

- PRESENCIA DE BOSQUES , O POTENCIAL PARA DEMOSTRAR CAMBIOS CLIMATICOS

La conservacion de los stocks de carbono, muy importantes en los bosques tropicales, es una manera de minimizar los efectos del cambio climatico Al mismo tiempo, existen ecosistemas que de producirse el calentamiento de la tierra, sufririan sustanciales cambios (i e humedales, glaciares, lagos, etc) La presencia de estos ecosistemas se considera tambien como criterio para la seleccion de las areas a trabajar Si existen bosques, puntaje = 3, si hay potencial para mostrar cambios climaticos, puntaje = 2, si es minimo, puntaje=1

b) CRITERIOS DE OPORTUNIDADES

- POSIBILIDADES DE SUBIR DE CATEGORIA EN LA MATRIZ

Las posibilidades mas claras estan en la elaboracion de planes de manejo, donde al menos se subirian 5 puntos Claramente, Huascaran, Cerros de Amotape y Bahuaja Sonene podrian subir de categoria (puntaje= 2), con intervenciones que contribuyan con los planes de manejo de las areas En otros casos, el numero de puntos para subir a la siguiente categoria es un poco alto, por lo que se considera no muy facil (puntaje= 1) Aquellas areas que en la matriz estan alejadas mas de 15 puntos de la siguiente categoria se consideran metas dificiles (puntaje= 0)

- CAPACIDAD DE GESTION DE POSIBLES CONTRAPARTES

Este criterio se refiere a la capacidad actual de las instituciones, que existen en torno a algunas areas, para manejar y administrar las posibles intervenciones El puntaje es como sigue 0= nada, 1= inestable, 2= debil, 3= bueno, 4 muy bueno, 5= excelente

- OPORTUNIDADES DE ACCION

La voluntad politica por intervenir, las posibilidades de fondos provenientes de otros programas o actividades de AID, especialmente relacionados con desarrollo alternativo y las oportunidades para un salto en la matriz a la siguiente categoria, son algunos criterios que pueden mejorar las opciones de las intervenciones que se propongan Una combiancion de estas oportunidades con la disponibilidad de fondos, seran buenos argumentos para tomar la decision final para intervenir

Ya que en todas las areas protegidas hay especies amenzadas de flora y fauna, esta es tam bien una oportunidad Significa posibilidades de intervenciones de manejo o recuperacion de especies en las diferentes categorias de CITES y sobre las cuales generalmente existe una fuerte presion de uso por las poblaciones locales Ademas, muchas de estas especies se conocen como especies bandera o carismaticas por la sensibilidad publica que despiertan

Estos criterios, que son fundamentales para la decision final, no han sido incluidos en el analisis discrimante pero si tomados en cuenta para las recomendaciones finales

- FINANCIAMIENTO COMPROMETIDO

La presencia de otros donantes internacionales, en muchos casos es un factor que contribuye al desarrollo integral del ambito de las areas protegidas Sin embargo, las restricciones presupuestales, el tiempo de duracion de los proyectos, o las lineas predefinidas por los donantes, establecen a veces un marco incompleto a la zona Tambien puede ser que hubieron trabajos previos pero que ahora estan detenidos Este factor se considera muy seriamente en la decision final Ademas, la presencia de cooperacion internacional, debe ser organizada y siempre vista como oportunidades de intervencion, si se puede evitar la duplicacion del esfuerzo

RESULTADOS

Las prioridades obtenidas del ejercicio, presentadas en el ANEXO 1, son contrastadas con los aportes financieros significativos y las posibilidades de colaboracion con otras intervenciones del USAID, en la Tabla 1

TABLE 1 Priority areas for site interventions

ANP	PUNTAJE	LINKAGE USAID	FINANCIAMIENTO COMPROMETIDO
PN Rio Abiseo	19 5	SO4	No
PN Huascaran	17 5	G/ENV	KFW, Holanda
PN Bahuaja - Sonene	16 5		Holanda
RN Pacaya - Samiria	16 5	SO4	WWF, TNC
PN Cerros de Amotape	16		KFW
RN Paracas	15	SO4	KFW, Alemania, WWF
PN Manu	15		UE, WWF
RN Titicaca	12		GEF
SN Manglares de Tumbes	11 5		Holanda
PN Tingo Maria	10 5	SO5	No
ZR Pantanos de Villa	9		UE, otros
SN Calipuy	6		No

De este analisis se desprende claramente que tal vez no es necesaria una intervencion en Manu, ya que esta bien cubierta financieramente, el proyecto de la Union Europea en Manu, que empieza este año y que aporta 7 millones de Ecus para 5 años, ademas de otros progaramas financiados por WWF De igual modo sucede con la RN Titicaca, donde pronto empezara un proyecto de 4 millones de dolares para 5 anos En el PNBS, va a empezar un proyecto de cerca de 2 millones dolares para 3 años, por parte del gobierno de los Paises Bajos En varias areas del sistema, entre ellas Paracas, va a invertir KFW, banco de Alemania, para equipamiento e infraestructura En los casos que existen financiamientos parciales, las intervenciones deberan coordinarse con los otros donantes

Dos areas necesitan ser comentadas La prioridad alcanzada por los bosques secos del Noroeste, es discutible debido al bajo volumen de carbono que almacenan, en comparacion

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con los bsoques humedos tropicales, sin embargo, es seguro que los bosques secos son de alta singularidad en diversidad biologica , estan muy amenazados y soportan una fuerte presion de uso Tal vez amerita alguna intervencion, si eso permite un cambio de categoria en la matriz

El Parque Nacional Tingo Maria es actualmente el unico de su categoria sin saneamiento fisico legal Esta area tiene suficiente apoyo politico para ser considerado con una pequeña intervencion, para solucionar este problema y contribuir a la implementacion de su zona de amortiguamiento La ubicacion en un area de cultivos de coca y las otras intervenciones de USAID, hacen propicia una intervencion

II POTENCIAL PARA SUBIR EN LA MATRIZ DE EVALUACION

Las calificaciones realizadas por Vasquez, califican la gestion de las areas (Tabla 2)

TABLE 2 MANAGEMENT QUALIFICATION OF SOME PROTECTED AREAS

Poor 0 -39%	Deficient 40-59%	Acceptable with limitations 60-69%	Good 70 - 84%	Excellent 85 - 100%
PNTM	PN Huascaran 57 0% PN Cerros de Amotape 57 2% PN Bahuaja-Sonene 58 1%	RN Paracas 61 4% PN Rio Abiseo 64 2% PN Manu 65 0%	RN Pacaya Samiria 72 9%	

La posibilidad de pasar de " manejo aceptable con limitaciones" a "bueno", o de "deficiente a aceptable con limitaciones" son obvias para algunas areas Sin embargo, es necesario revisar en cual de los criterios usados para esta calificacion se puede hacer cambios

El ANEXO 2 incluye una tabla con los puntajes maximos alcanzables (columna de la derecha) y los valores alcanzados por cada una de las areas con posibilidad de intervencion Este analisis no incluyo sin embargo la Zona Reservada Pantanos de Villa (ZRPV) ni el Parque Nacional Tingo Maria (PNTM) Aqui se puede ver que ni los programas de extension, ni las coordinaciones con el sector privado, no haran ningun cambio en las evaluaciones como para facilitar un "upgrade" Las mejores posibilidades son en planificacion, en manejo participativo (el cual depende de convencer al jefe para permitir la participacion de la poblacion en la toma de decisiones) y en monitoreo ecologico

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Los resultados sobre posibilidades de upgrade, se dan en pesos diferenciados que se han incluido en la matriz de seleccion de sitios (2 puntos si la posibilidad es alta, 1 punto si la diferencia es >5, <12, 0 puntos si la difenrencia es > 12)

III ANALISIS DE LA MATRIZ DE EVALUACION DE LA GESTION DE ANP

La matriz disenada por Vasquez para evaluar la gestion de las areas protegidas, considero doce elementos de gestion de ANP, como medida indirecta del grado de conservacion de la biodiversidad

Como es obvio para una evaluacion de la gestion, la implementacion de la administracion del ANP lleva el mayor peso (40%) Segun esta matriz, basta con poner personal suficiente, darle capacitacion, financiamiento para pago de personal y construir puestos de vigilancia, para mejorar significativamente la gestion de un area y lograr pasar de la primera a la segunda categoria Por otro lado, la minimizacion de amenazas politicas (conflictos con otros programas del Estado) no mejora mas que en 6% la gestion de las areas y por lo tanto la capacidad de conservar diversidad biologica

Una comparacion de las evaluaciones de la RNPS y el PNH ha demostrado ciertas inconsistencias en el momento de aplicar la matriz, y seguramente han habido cambios desde entonces Por ejemplo, 22 de las ANP del sistema han sido inscritas en los registros publicos y se consideran casi completamente saneadas

En esta perspectiva, aun cuando el ejercicio no tuviera errores, se estima que el modo de garantizar la conservacion de diversidad biologica debe ser un reflejo de la minimizacion de amenazas, la participacion activa de la sociedad civil (local, ONGs, otras instituciones) en la gestion y la planificacion participativa del manejo del area, ademas del seguimiento de los elementos de la biodiversidad criticos o importantes y una adecuada zonifciacion del ANP A continuacion una propuesta para mejorar la matriz

La propuesta de modificacion

Tomando como base la matriz de Vasquez (1997), al mismo tiempo que los objetivos de conservacion de diversidad biologica, se hacen las siguientes sugerencias para mejorar la forma de medir la gestion de las ANP

CRITERIO	VALOR VASQUEZ	VALOR SUGERIDO
LEGAL		
1 Saneamiento fisico-legal	6%	15 %
ADMINISTRACION		
2 Personal	14%	10%
3 Infraestructura y equipamiento	12%	5%
4 Financiamiento	14%	10%
PLANEAMIENTO		
5 Planes de manejo	15%	5%
6 Planificacion participativa	4%	5%
Zonificacion adecuada		5%
GESTION DEL AREA		
7 Participacion en el manejo	4%	10%
8 Programas de extension	3%	
9 Coordinacion con el sector privado	4%	
Uso de ANP acorde a objetivos y categoria		10%
CONOCIMIENTO DEL AREA		
10 Monitoreo del estado de la biodiversidad	9%	10%
USO DE RECURSOS		
11 Conflicto en el uso de recursos	9%	
AMENAZAS EXTERNAS AL MANEJO		
12 Conflictos con otros sectores del Estado	6%	15%

La justificacion a los nuevos criterios o pesos otorgados se da a continuacion

Base legal (15%)
El saneamiento fisico-legal del area es el instrumento mas importante para las instancias intersectoriales y locales Este saneamiento incluye la inscripcion en los registros publicos, la demarcacion fisica de los limites y la concordancia con las propiedades colindantes al ANP

Administracion (25%)
La administracion de las areas, es una responsabilidad del Estado Si bien la cooperacion puede aportar en infraestrutura y equipamiento (de ahi el 5%), los gastos recurrentes deberian ser cubiertos por fondos del Estado, esta deberia ser una cualidad del financiamiento Tambien podrian medirse por otros parametros mas cualitativos como duracion del personal en el cargo o la capacidad de gestion de las areas expresada en proyectos gestionados exitosamente por el jefe del area, entre otros

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Planeamiento (15%)
El plan maestro (de largo plazo) y los planes anuales, turisticos, de manejo de recursos, etc, son instrumentos de gestion que deben ser elaborados participativamente y actualizados periodicamente, estas cualidades garantizan el consenso en las actividades y minimiza los conflictos de uso En este proceso debe efectuarse tambien la zonificacion del area

Gestion del area (20%)
La gestion tiene dos elementos fundamentales, la participacion o gestion participativa del area, que se refiere a acuerdos para el uso consumtivo o no de los recursos del ANP, donde debe participar la sociedad civil (pobladores locales, empresas turisticas, asociaciones de productores o de usuarios, etc) La compatibilidad y el ordenamiento de las actividades dentro y en el entorno de un ANP, con los objetivos de creacion de la misma y la categoria de manejo, son elementos importantes en la buena gestion de las areas y que garantizan mas directamente la conservacion de la diversidad biologica

Monitoreo/conocimiento del area (10%)
Es un instrumento para la gestion del area que deberia retroalimentarla, pero puede ser independiente de la administracion (el financiamiento y la ejecucion pueden ser externos) El conocimiento del area y el seguimineto de su estado de conservacion, es esencial para medir efectividad del manejo y es una funcion no implementada de las ANP Ademas, puede ser un instrumento para contribuir a crear conciencia ambiental y servir como defensa del ANP

Amenazas externas al manejo (15%)
Las amenazas al manejo, por niveles de decision iguales o superiores al que rigen al SINANPE, son sin duda de un impacto grande sobre la base legal, la administracion y la gestion del area (pueden cambiar los usos) Este factor le da un alto nivel de inestabilidad al sistema y debe ser asi considerado al momento de evaluar el SINANPE

Antes de empezar la nueva actividad, sera necesario revisar la matriz y actualizarla Igualmente, se recomienda introducir la propuesta de modificacion hecha en el presente documento, de modo que las evaluaciones consideren indicadores que tambien califiquen de alguna manera la gestion de las areas

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ANEXO 1 MATRIZ PARA EVALUAR PRIORIDADES DE INTERVENCIONES

Criteria	PNBS	PNH	RNP	PNRA	PNTM	RBNO PNCA	RNPS	SNMT	PNM	RNC SNC	RNT	ZRPV
Biological representativity	3	4	4	4	1	4	4	2	4	1	4	2
Size of ANP	1	1	2	1	0	0	1	0	1	1	0	0
Ecosystem conservation status	3	3	2 5@	4	4	4	3	4	3	3	3	3
Forests/CC potential	3	2	1	3	1	2	3	2	3	1	2	1
Institutional support	1 5	1 5	1 5	1 5	1 5*	1	1 5	0 5	1	0	1	1
Upgrade opportunities	2	2	1	2	–	2	1	1	2	0-	0	--
Capability of potential partners	3	4	3	4	3	3	3	2	1	0	2	2
TOTAL	16 5	17 5	15	19 5	10 5	16	16 5	115	15	6	12	9

(@) parcialmente, sin contar area marina
(*) INRENA administration special interest, tourism potential

ANEXO 2 - MATRIZ DE EVALUACION DE ALGUNAS AREAS DEL SINANPE (segun Vasquez, 1997)

	PNH	PNCA	PNBS	RNP	PNRA	PNM	RNPS	SNMT	ZRPV	RNT	PNTM	SNC	Max
Saneamiento	1	3	3	3	3	1	3	3		2		2	6
Personal	6 12	3 9	4 79	4 09	5 75	6 78	7 86	3 1		4 52		0	14
Infraestructura equipo	1 92	1 92	4 8	1 92	6 72	6 72	6 72	6 72		1 92		0	12
Financiamiento	10 64	8 4	8 4	12 6	8 4	8 4	7	7		14		0	14
Planes de manejo	7 5	8 25	3 25	7 5	8 75	10	8 75	10		3 25		0	15
Planif participativa	4	3	4	3	3	3	3	3		1 8		0	4
Manejo participativo	1	1	1	2	1	1	0	0		0		0	4
Programas de extension	3	3	3	1 95	3	3	3	3		0		0	3
Coordinacion sector privado	4	4	4	4	4	4	4	4		0		0	4
Monitoreo ecologico	6 3	5 85	6 03	5 4	4 95	4 5	7 65	8 1		5 4		2 7	9
Conflicto uso de recursos	5 85	9	9	9	9	9	9	5 85		5 85		0	9
Conflicto con otros prog Estado	3 9	3 0	3 9	3 9	3 9	3 9	3 9	3 9		3 9		0	6
TOTAL	57 03	57 18	58 07	61 43	64 23	65	72 93	60 71		40 78		4 95	100

PNH= Parque Nacional Huascaran, PNCA/RBNO= Parque Nacional Cerros de Amotape/Reserva de Bisofera del Noroeste , RNP= Reserva Nacional de Paracas, PNRA= Parque Nacional Rio Abiseo, PNTM= Parque Nacional Tingo Maria, SNMT= Santuario Nacional Manglares de Tumbes, ZRPV= Zona Reservada Pantanos de Villa, RNT= Reserva Nacional del Titicaca, SNC= Santuario Nacional Calipuy