# Global Environment Facility

GEF

**Mohamed T. El-Ashry**
*Chief Executive Officer*
*and Chairman*

1818 H Street, NW
Washington, DC 20433 USA
Tel: 202.473.3202
Fax: 202.522.3240/3245
Email: melashry@worldbank.org

February 12, 2001

Dear Council Member,

The World Bank, as the Implementing Agency for the project, *Colombia: Conservation and Sustainable Use of Biodiversity in the Andes Region*, has submitted the attached proposed project document for CEO endorsement prior to final approval of the project document in accordance with World Bank procedures.

The Secretariat has reviewed the project document. It is consistent with the proposal approved by the Council in May 2000 and the proposed project remains consistent with the Instrument and GEF policies and procedures. The attached explanation prepared by the World Bank satisfactorily details how Council's comments and those of the STAP have been addressed. I am, therefore, endorsing the project document.

We have today posted the proposed project document on the GEF website at www.gefweb.org. If you do not have access to the Web, you may request the local field office of the World Bank to download the document for you. Alternatively, you may request a copy of the document from the Secretariat. If you make such a request, please confirm for us your current mailing address.

Sincerely,

cc: Alternate, Implementing Agencies, STAP

THE WORLD BANK/IFC/M.I.G.A.

# OFFICE MEMORANDUM

DATE: January 25, 2001

TO: Mr. Mohamed El-Ashry, CEO/Chairman, GEF

FROM: Lars Vidaeus, GEF Executive Coordinator

EXTENSION: 34188

SUBJECT: ***Colombia - Andean Region Conservation and Sustainable Use of Biodiversity***
**Final GEF CEO Endorsement**

1. Please find attached the electronic file of the Project Appraisal Document (PAD) for the above-mentioned project for your final endorsement. This project was approved for Work Program entry at the May 2000 Council meeting, under streamlined CEO endorsement procedures.

2. The PAD is fully consistent with the objectives and content of the proposal endorsed by the Council as part of the May 2000 Work Program. Further improvements from earlier versions have been introduced during final project pre-appraisal (September, 2000), appraisal (November, 2000) and negotiations (December, 2000). These include: a) social aspects of the project have been fully developed and are now presented in three annexes (Annexes 11, 12 and 13). The social aspects have also included a new annex describing the project's strategy with respect to security issues in Colombia (Annex 17); b) project costs and co-financing have been finalized (Annex 3); c) a monitoring and evaluation program has been agreed (Annex 16) and d) implementation arrangements have been defined to the level of all the needed contractual arrangements between the Bank and IaVH and between IaVH and the donors and project beneficiaries. GEFSEC, Council and STAP reviewer's comments received at Work Program entry have also been addressed. The changes introduced and comments addressed are outlined below.

3. There were no substantial changes in the scope and total costs of the project. However it is worthwhile mentioning that the two-phase approach for the project has been made more operational since Work Program Entry. The grant is expected to be implemented over a six year period and has been divided into two phases - each phase lasting 3 years. At the end of Phase 1 and during the mid-term evaluation, the triggers/targets agreed between IaVH and the Bank would be subject to an evaluation and judgment would be used by Bank Management on whether to proceed to phase II or not. The triggers/targets are an integral part of the Grant Agreement between IaVH and the Bank.

***Comments by GEFSEC***

4. *Consultations during project preparation*. As recommended by GEFSEC, additional information on consultations and participatory processes have been included in the PAD. These are described in a new Annex untitled Social Assessment and Participatory Process (Annex 11). This annex covers the following key points: 1) a socio-economic profile of the Andes Region; 2) identification of the main social issues; 3) a description of the institutional context; 4) description of the national consultations and participatory process; 5) how social issues have been taken into account in the selection of project zones; 6) description of the regional participatory process carried out during preparation; 7) how social issues have been taken into account in each project zone (Table 1); 8) formulation of a participatory framework during project implementation.

5. *Institutional Arrangements.* As recommended by GEFSEC and GEF council, the detailed institutional arrangements have been defined and agreed on. The IAvH has provided the Bank with copies of letters of intent from the CARs to participate in the execution of the project indicating the counterpart fund amounts that they would allocate to the project. In addition, and on a yearly basis, the IAvH would sign a Cooperation Agreement with the CARs that would specify the yearly amount of funds for the project. Resources provided to project activities by CARs, as counterpart financing would be executed directly by them in their jurisdiction area. The Netherlands have already submitted a letter of intent and a signed funding agreement between IAvH and the Dutch Embassy would be a condition of effectiveness of the Bank grant agreement. The Netherlands Grant would be executed directly by IAvH. In addition to these contractual arrangements, mutual responsibilities and obligations regarding project implementation and investment financing would be presented on a yearly basis through the POAs that the Bank will review and approve in September each year. Full details of these arrangements are presented in the PAD (section under institutional and implementation arrangements).

6. *Participation by NGOs and other actors.* The project has further refined the participation of NGOs and other partners by defined the selection criteria and the potential NGOs/partners for each of the conservation zones. This new information is provided in Annex 11 - Section 6 - Participation strategy during project implementation.

7. *Proposed Seed Fund*. As recommended by GEFSEC, the feasibility/nature of the Capital Seed Fund was further analyzed since Work Program Entry. The Bank and IaVH agreed that this fund will not be an endowment/sinking fund, but an investment fund for sub-projects. The three years time period and small size of the fund did not justify designing an endowment or sinking fund. The criteria for using this fund have been defined in the PAD (see Component 4 in Annex 2). The detailed featuresof this fund will be described an operational manual specific to the fund. This manual would have to be acceptable to the Bank before Grant funds are disbursed for such fund's activities.

8. ***Comments by Council***

9. *Growing GEF biodiversity project portfolio in Colombia.* The council members from Switzerland and UNDP raised the need to ensure an operational coordination among the diverse biodiversity projects in Colombia. Annex 14 and 15 relates that the Minister of Environment (MMA), UNDP and the World Bank have established a Permanent GEF Committee that will: a) ensure that the GEF initiatives follow the National Biodiversity Strategy; b) coordinate the thematic complementarities and geographical locations; c) exchange lessons learned and experiences among projects; d) ensure the efficiency in use of financial and human resources; e) make an economy of scale on technical assistance needs. Further more, the annexes detail how this Permanent GEF Committee will ensure coordination among the different projects. To better understand that there are no geographical overlaps, please refer to the MAP produced for the project , included in the PAD and showing all the other GEF biodiversity projects in Colombia.

10. *Project Co-financing.* The council member from Switzerland and UNDP asked for clarification of the type of financial commitment from the CARs. Counterpart funds have been secured for the CARs and the Netherlands Embassy and these represent financial commitments and not in kind support. The arrangements with the CARs as well as with the Netherlands Embassy are spelled out in the PAD under the institutional arrangements section (pages. 14-17). Please also refer to Paragraph 5 of this memo for details.

11. *Intersectoral Coordination & effects of development projects on biodiversity*. The council members of Switzerland asked for further defining the intersectoral coordination sub-component. Annex 2 - Component 4 of the PAD clarifies that the lack of basic knowledge is one of the main causes behind sectoral policies inconsistent with biodiversity conservation and sustainable use. Biodiversity training for ministries and sector associations employees will be organized. Training will be followed by workshops for the sectors to evaluate the impact on biodiversity of current sectoral policies and to propose coherent policy modification. Additional workshops for ministries and sector associations will be organized to develop proposals for reduction of environmental impacts and maximizing policy effectiveness through intersectoral policy coordination. The project will not finance environmental impact assessment of development projects. This is the responsibility of the "polluters". The project emphasizes the need to train the ministry in charge of monitoring these mega-projects to become better informed about biodiversity and its threats.

12. *Detailed project costs by co-financier.* The council members from Switzerland and UNDP requested greater details on project costs. The detailed costs now distinguish more clearly which activities are financed by which co-financiers (Annex 3, detailed costs).

- *Sustainability and recurrent costs.* The council members from France requested further clarification of project recurrent costs and long-term sustainability. Each component of the project will attempt to put in place self-financing mechanisms to recover the initial investment

and/or to make the project financially viable in the long term. These mechanisms will include those that generate income for local communities and for public and private organizations involved in biodiversity conservation. The project will also design, adapt and promote incentives and other economic instruments for sustainable agricultural production (such as compensation for environmental benefits and services) when appropriate and feasible. Pilot projects will be undertaken in project sites in order to implement and test these instruments. In addition, the project is making a strong commitment to social sustainability by creating a democratic, decentralized and participatory process where local institutions will implement different activities. The Annex 11 and 12 describe this in further details than previous versions. A monitoring and evaluation program has been added since Work Program Entry (Annex 15), describing the flexible learning approach (a lesson learned from earlier GEF projects) and enabling the project through social and biological monitoring to make adjustments. This approach will enhance the likelihood of sustainable impacts.

13. *Independent Monitoring and Evaluation.* The council members of Switzerland asked for clarification on the independent nature of the evaluation system to be used udner the project. The IAvH would be responsible for ensuring that project results and impacts are monitored throughout the life of the project. The project has agreed to use a participatory approach and to employ independent consultants to carry out the monitoring and evaluation functions of the project. Performance monitoring indicators have now been included in Annex 15 to maintain the objectivity of the evaluation system. The PCU will contract independent consultants annually to visit sites where activities are taking place and review specific indicator performance and to make suggestions on how to improve project performance. A self-evaluation and peer review mechanisms will be applied through participatory processes with project stakeholders. Self-evaluation and peer reviewing is considered a key element of the project as the participants become evaluators rather than objects of evaluation. This mechanism will also allow for the analysis and discussion of both measurable results and working processes in addition to facilitating the systematization of conclusions and learned lessons, turning into a valuable planning and adjustment instrument, and can be used periodically without incurring in further expenditures in terms of human, technical and financial resources.

14. *Threathened species of global importance*. The council Members of Switzerland asked to provide the names of the two endangered species mentioned in the performance indicators' table. Unfortunately, we are not able to provide the names of the two endangered species that will be worked on in more details, since they will have not been selected yet. The project will carry out assessments of conservation opportunities in transformed landscape (Component 2 - Activity 1 in Annex 2). Based on the results of these assessments, two endangered species that will become part of the Activity 2 will be identified.

***Comments by STAP Reviewer***

15. *Participation of indigenous people in project activities*. The STAP reviewer had asked for further definition of the participation of indigenous people in the project in particular with respect to private reserves. The PAD has incorporated a new Annex 12- Indigenous Peoples Strategy that responds to the STAP reviewer comments. Specifically, the project has defined that the most likely group to be participating in the project are the Cofanes and the cooperation will address the following aspects: i) the declaration of the Patascoy reserve of a larger portion than their traditional territory (in land which currently belongs to the state), benefiting them; ii) the marketing of medicinal plants and other non timber forest products; and iii) the intercultural characterization of their territory.

16. *Degree of involvement of stakeholders in the project*. The STAP reviewer had asked how labor associations, farmers organizations and other representatives of civil society will be involved. This questions has been answered in Paragraph 6 of this memo.

17. *Capacity Building aspects.* The STAP reviewer asked whether the project will enhance government/NGO capacity for using knowledge/information for monitoring the status of biodiversity and the changing incentive structures of the population. This aspect has been built in different project components. In component 2, there is a specific sub-component to disseminate the lessons learned from management tools. In component 3, a dissemination program of the Andes biodiversity and an indicator system for state-pressure-response have been proposed as key project activities. And finally in component 4, training on biodiversity will be specifically done to decision makers in other ministries that have impacts on the environment.

18. We look forward to receiving your final endorsement of the Project Appraisal Document so that we may proceed to Board approval.

Cc : Messrs./Mmes. Lafourcade, Brizzi, Hernandez (LCC1C); Redwood, Serra, Cackler Lovejoy, Cervigni, Luff, Bradley, Anria, Ruiz, Garfield (LCSES); Davis, Correa, (ENVGC); Carvalho (LEGLA).

IRIS1
ENVGC ISC

**Document of**
**The World Bank**

Report No: 21723-CO

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED GRANT FROM THE

GLOBAL ENVIRONMENT FACILITY TRUST FUND

IN THE AMOUNT OF USD 15 million

TO THE INSTITUTO DE INVESTIGACION DE RECURSOS BIOLOGICOS ALEXANDER VON HUMBOLDT

FOR AN

ANDEAN REGION CONSERVATION AND SUSTAINABLE USE OF BIODIVERSITY PROJECT

March 14, 2001

Environmentally and Socially Sustainable Development
Colombia, Mexico & Venezuela Country Management Unit
Latin America and the Caribbean Regional Office

## CURRENCY EQUIVALENTS

(Exchange Rate Effective January, 2001)

Currency Unit = Colombian Peso
COP $1.0 = US$.00044
US$1.00 = COP$ 2252

## FISCAL YEAR

July 1, 2000 - June 31, 2001

## ABBREVIATIONS AND ACRONYMS

| | |
|---|---|
| CAR | Regional Autonomous Corporation *(Corporación Autónoma Regional)* |
| CAR | Regional Autonomous Corporation of Cundinamarca |
| CARDER | Regional Autonomous Corporation of Risaralda |
| CAS | Country Assistance Strategy |
| CAS | Regional Autonomous Corporation of Santander |
| CBD | Convention on Biological Diversity |
| CDMB | Regional Autonomous Corporation of the Meseta de Bucaramanga |
| CI | Conservation International |
| CONIF | National Corporation for Forestry Research *(Corporación Nacional de Investigación y Fomento Forestal)* |
| COP | Conference of the Parties of the CBD |
| CORMACARENA | Regional Autonomous Corporation of the Macarena Region |
| CORPOAMAZONAS | Regional Autonomous Corporation of the Amazonas region |
| CORPOBOYACÁ | Regional Autonomous Corporation of Boyacá |
| CORPOCALDAS | Regional Autonomous Corporation of Caldas |
| CORPONARIÑO | Regional Autonomous Corporation of Nariño |
| CORPONOR | Regional Autonomous Corporation of Norte de Santander |
| CORPORINOQUÍA | Regional Autonomous Corporation of Orinoquía |
| CORTOLIMA | Regional Autonomous Corporation of Tolima |
| CRQ | Regional Autonomous Corporation of Quindío |
| CVC | Regional Autonomous Corporation of Valle del Cauca |
| DAMA | Administrative Department of the environment of the Capital District |
| DNP | National Planning Department (Departamento Nacional de Planeación) |
| FIGAU | Investment Fund for Urban and Environmental Management (*Fondo de Inversión para la Gestión Ambiental Urbana)* |
| GEF | Global Environmental Facility |
| GoC | Government of Colombia |
| GTZ | German Agency for Technical Cooperation |
| IAvH | Alexander von Humboldt Institute (*Instituto de Investigación de Recursos Biológicos Alexander von Humboldt)* |

| | |
|---|---|
| Vice President: | David De Ferranti |
| Country Director: | Olivier Lafourcade |
| Sector Director: | John Redwood |
| Sector Leader: | Adolfo Brizzi |
| Task Team Leaders: | Claudia Sobrevila/Juan Pablo Ruiz |

| | |
|---|---|
| IBRD | International Bank for Reconstruction and Development |
| IDB | Interamerican Development Bank |
| ILO | International Labor Organization |
| INDERENA | National Institute for Natural Resources (*Instituto Nacional de Recursos NaturalesRenovables y del Ambiente*) |
| IUCN | International Union for the Conservation of Nature |
| MMA | Colombian Ministry of the Environment |
| MoE | Colombian Ministry of the Environment |
| MSP | Medium Size GEF Project |
| NGO | Non Governmental Organization |
| NPAS | National Protected Areas System |
| PAD | Project Appraisal Document |
| PCD | Project Concept Document |
| PCU | Project Coordination Unit |
| PLANTE | Alternative Development Plan (Plan de Desarrollo Alternativo) |
| PNUMA / UNEP | *Programa de las Naciones Unidas para el Medio Ambiente,* United Nations Environment Program |
| PRAES | *Projectos Ambientales Escolares* |
| RAC | Regional Advisory Committee |
| SINA | National Environmental System *(Sistema Nacional Ambiental)* |
| SPNN | National Parks System *(Sistema de Parques Nacionales Naturales*) |
| TNC | The Nature Conservancy |
| TORs | Terms of Reference |
| UAESPNN | National Parks Administrative Unit (*Unidad Administrativa Especial del Sistema de Parques Nacionales Naturales*) |
| UNCTAD | United Nations Conference of Trade and Development |
| UNDP | United Nations Development Program |
| UNEP | United Nations Environment Program |
| WB | World Bank |
| WCS | Wildlife Conservation Society |
| WWF | World Wildlife Fund |

## Colombia

## Andean Region Conservation and Sustainable Use of Biodiversity

## Contents

# Colombia

## Andean Region Conservation and Use of Biodiversity Project

## Project Appraisal Document

## Latin America and the Caribbean Regional Office
## Colombia, Mexico and Venezuela Country Managing Unit

| | |
|---|---|
| Date: March 14, 2001 | Task Team Leader/Task Manager: Claudia Sobrevila and Juan Pablo Ruiz |
| Country Manager/Director: Olivier Lafourcade | Sector Manager/Director: John Redwood |
| Project ID: CO-GE-63317 Sector: Environment | Program Objective Category: Environmentally Sustainable Development |
| GEF Supplement ID: CO-GE-63317 | Focal Area: Biological Diversity |
| Lending Instrument: GEF Grant | Program of Targeted Intervention: |
| Program of Targeted Intervention: | [ ] YES [ ] NO |

**Project Financing Data** [] **Loan** [ ] **Credit** [ ] **Guarantee** [X] **Grant** [ ] **Other [Specify]**

**For Loans/Credits/Others:**

Amount ((SDR11.8 m) (15.0 million equivalent): (GEF Grant)

Financing plan (US$m): 30.0 million

| Source | Local | Foreign | Total |
|---|---|---|---|
| Cofinanciers | | | |
| Local Governments (CARS) | 8.0 | | 8.0 |
| The Netherlands | 2.5 | 1.5 | 4.0 |
| GEF | 11.5 | 3.5 | 15.0 |
| Other local | 1.0 | | 1.0 |
| Other donors | 1.5 | 0.5 | 2.0 |
| Total | 24.5 | 5.5 | 30.0 |

Borrower: N/A
Recipient: Instituto de Investigación de Recursos Biológicos Alexander Von Humboldt
Guarantor: N/A
Responsible agency(ies):

| Estimated disbursements (Global Supplement FY/US$M): | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|---|---|---|---|---|---|---|---|
| Annual | 1.5 | 2.0 | 3.0 | 3.0 | 2.5 | 2.0 | 1.0 |
| Cumulative | 1.5 | 3.5 | 6.5 | 9.5 | 12.0 | 14.0 | 15.0 |

Project implementation period : 2001 - 2007 Closing Date: December 31, 2007

## A: Project Development and Global Objective

### 1a. Project development objective

The project development objective is to increase conservation, knowledge, and sustainable use of globally important biodiversity of the Colombian Andes[1] (the tropical Andes is considered by many to rank first in the list of biodiversity hotspots[2]). The project launches, in the Andes, Colombia' s National Biodiversity Policy and Proposed Action Plan that has been prepared in the framework of the Convention on Biological Diversity.

Specifically, the project will:

- support the development of a more representative, effective, and viable Andean protected area system;
- identify conservation opportunities in rural landscapes, develop and promote management tools for biodiversity conservation;
- expand, organize, and disseminate the knowledge base on biodiversity in the Andes to a wide audience of stakeholders and policy makers, and implement monitoring tools; and,
- promote inter-sectoral coordination to address some root causes of biodiversity loss in the Andes.

### 1b. Key performance indicators

Key performance indicators related to the project development objective include the following. Additional information is found in Annex 1.

- 6 regional active networks of protected areas established in project conservation zones
- Participatory management plans for 50% of existing national protected areas within the project conservation zones prepared and implemented
- 50% of remaining ecosystem types per ecoregion represented in protected areas.
- 4 biodiversity and socioeconomic surveys of different representative rural landscapes for the identification of conservation opportunities completed.
- 4 management tools for biodiversity conservation in rural landscapes (e.g. corridors, enrichment of productive landscape matrices and life fence rows) evaluated for biological effectiveness and economic viability.
- 2 management plans for 2 threatened species of global importance.
- Biodiversity baseline for the Andes region built based on information available.
- 8 comprehensive biodiversity assessments filling major knowledge gaps in the Andes.
- A biodiversity state-pressure-response indicators system implemented, updated and in use.
- A network of Andean biodiversity databases established with at least 15 institutional biodiversity databases systematized and linked to the network.

[1] For the purposes of this project, the Colombian Andes is defined as the areas encompassing over 500 m in the Eastern, Central, and Western Cordilleras (thus excluding a small number of other high altitude areas such as the Sierra Nevada de Santa Marta or the Sierra de Macarena).

[2] This assessment has been made, among others, by Conservation International (1998), Mittermeier (1998), and Myers (1989).

- Inclusion of biodiversity considerations in the MoE environmental licensing TORs and on guidelines of infraestrucutre, mining, energy and agricultural projects

**B: Strategic Context**

**1a. Sector-related Country Assistance Strategy (CAS) goal supported by the project (see also Annex 1):**

CAS document number: 17107-CO Date of latest CAS discussion: October 15, 1997

The CAS identifies protection and conservation of the environment as one of the major themes of World Bank Group assistance noting that the country is listed as one of the worldwide priority areas for conservation of flora and fauna. According to the CAS, "inadequate management of natural resources…has led to a growing deterioration as seen by the loss of biodiversity, deforestation…endangered strategic ecosystems, soil degradation, highly polluted rivers, canals and wetlands." This project contributes to the CAS' s strategic focus on sustainable development/protection and conservation of strategic ecosystems; improving the effectiveness of the recently introduced decentralized system for environmental management; and promoting employment opportunities for the poor through environmentally sustainable projects.

**1b. GEF Operational Strategy/program objective addressed by the project:**
Operational Program Number 4, Mountain Ecosystems and Number 3, Forest Ecosystems

Colombia ratified the Convention on Biological Diversity (CBD) on November 28, 1994. This project is consistent with Colombia's commitments to the CBD, with emphasis on Articles 6 (integration of biodiversity across sectors), 7 (biodiversity identification and monitoring), 8 (*in-situ* conservation), 10 (sustainable use) and 13 (education and public awareness).

With regard to the GEF Operational Program, the project supports the following key elements of the GEF Operational Strategy: Andean Region use of biodiversity, increased awareness, policy reform, capacity building, sectoral integration, and financial sustainability. Specifically, this project supports conservation of biodiversity and sustainable use in montane and forest ecosystems (Operational Programs 4 and 3) as well as the cross-sectoral area of land degradation. The project is fully consistent with the principles of the Conference of the Parties of the Convention on Biological Diversity (COP) as it takes an ecosystem approach to maximize biodiversity conservation under a variety of management regimes and involving a range of stakeholders including local communities, indigenous peoples, non-governmental organizations (NGOs), the private sector, and local, regional and central government agencies. Finally, the project also addresses issues of agrobiodiversity which were endorsed as a GEF Priority by the III Conference of the Parties in Buenos Aires (1996).

**2. Main sector issues and Government strategy**

**2a. Main sector issues**

Colombia is generally recognized to be one of the five "megadiverse" nations in the world (Mittermeier, 1998). With a total land surface area of 1.14 million $km^2$, representing about 0.8%

of the world's surface area, Colombia is home to about 15% of all known terrestrial species (Table 1-Annex 8). This makes Colombia one of the countries with the highest concentration of species per unit area. The country has the largest number of species of birds and amphibians in the world and ranks high in the number of vascular plants and vertebrates. Colombia also possesses 18 ecoregions (WWF/World Bank report, 1996), the second highest of any country in Latin America. The most recent ecosystem map of Colombia produced for the Humboldt Institute by Etter (1998) identifies 65 ecosystem types. Within Colombia, the Andes are biologically the richest biogeographic region, surpassing even the humid lowland forests of Amazonia. The Andes contain 21 distinct ecosystem types, each of which is remarkably diverse due to great fluctuations in altitude, climate, and geology resulting in geographical isolation, particularly in the valleys and mountainous areas. This has produced very high rates of endemism.

Biodiversity in Colombia is still not fully documented. Recently, field surveys in the "Cordillera Oriental" undertaken by the Instituto Alexander von Humboldt indicated that 30% of the 400 recorded bird species were new records for this area, 5 were new for the country and one is probably new to science. Inventories and field surveys are still required to further document the magnitude of Colombia' s biodiversity and support stronger priority setting exercises and policy formulation.

Of the Andean region, Colombia expereinces the most human intervention. For instance, two thirds of this area is highly impacted by human activities (about 70% of Colombia' s population lives in this region) and some ecosystem types are now very rare. A major cause of biodiversity loss is the advance of the agricultural frontier and associated deforestation and soil erosion. Agricultural and animal husbandry practices, logging activities, as well as inappropriate resource use patterns contribute to biodiversity loss and to greater rural poverty. The loss and degradation of natural habitats has endangered the survival of numerous species[3]. Invasive species also represent a threat to biodiversity, especially in freshwater ecosystems.

Social unrest is a critical consideration in biodiversity loss; violence and civil unrest have been endemic in the Andes for over 50 years. Some areas have strong presence of guerrilla organizations or right-wing paramilitary groups while at the same time other regions have expereinced less social and civil unrest. The area encompassing illicit crops production has steadily increased. Land clearing for illicit crops directly affects biodiversity as might the application of herbicides. Financial resources available to reduce biodiversity threats are limited by the current fiscal crisis affecting all central government activities. In fact, current projections indicate that central government spending on environment will continue to be reduced in the foreseeable future.

[3] The IAvH estimates that over 240 species of Colombian mammals, birds and reptiles are endangered (9% of the nation' s total) and over 550 vascular plants (1.5%). Most of these species are in the Andes region. No data are available on the status of amphibians, fish and invertebrates, although many are likely to be endangered of threatened. This is particularly worrisome for amphibians as the country is home to 609 species (37% of which are endemic), the most of any country in the world.

**2b. Government strategy**

*i) Institutional aspects*: The institutional framework for biodiversity in Colombia is one of the most comprehensive in Latin America and dates back to 1968 when the National Institute for Natural Resources – *Instituto Nacional de Recursos Naturales Renovables y del Ambiente* (INDERENA) was created. INDERENA was affiliated with the Ministry of Agriculture and was in charge of managing Colombia' s protected areas and of carrying out research activities on fauna and flora. In 1993, through Law 99/93, the government created the Ministry of the Environment –*Ministerio del Medio Ambiente* – (MMA) and launched its decentralization policy for environmental management. Environmental management responsibilities were transferred to the Regional Autonomous Corporations -*Corporaciones Autónomas Regionales*- (CARs). This law also created the National Parks Administrative Unit -*Unidad Administrativa Especial del Sistema de Parques Nacionales Naturales* (UAESPNN) within MMA, to develop a new approach to manage Colombia' s protected areas. UAESPNN initiated a new program called the National Protected Areas System of Colombia that supports different categories of protected areas, from regional to local, and from public or private to collectively owned. In addition, Law 99/93 also created four related research institutes in order to support scientific, technical decision and policy-making processes. These research institutes are conceived as joint ventures involving among others the Ministry of the Environment (as president of the board of directors), Colombia' s National Science Foundation, private and public universities, NGOs and CARs. In addition, these institutes are largely governed by more flexible administrative and legal rules as compared to the less flexible legal framework governing most public entities.

Within this context, the Alexander von Humboldt Institute – *Instituto de Investigación de Recursos Biológicos Alexander von Humboldt* (IAvH) was created. The mission of the IAvH is to promote, coordinate, and carry out research that contributes to biodiversity Andean Region use. The IAvH began activities in 1995, and took over some of the research functions previously carried out by INDERENA. It has a General Assembly and an active Board of Directors with nine members from diverse sectors that together make decisions on the policies and actions of the Institute. The IAvH has developed research activities in four main programs (biodiversity inventories, conservation biology, use and valuation, and policy and legislation) with two cross-cutting programs for information and training. In addition, strategic alliances with national and international entities have facilitated the forging of common interests and as a result have strengthened research projects. Finally over the last 5 years, the Institute has managed to reduce the percentage of national government contributions in its budget from 95% in 1995 to less than 50% in 1999. Its budget for 1998 was approximately $4.5 million.

Under the country's 1991 Constitution, the responsibility for environmental management was passed from the national government to the CARs, of which there are 33 in Colombia and 18 in the Andean region. CARs vary greatly in their access to financial resources, which depend on whether or not they are eligible to receive remittances from the power sector and on the extent of taxable land holdings, since a part of these taxes are passed on to them by the municipalities. CARs also vary greatly in their institutional capacity, as most recently noted in the National Report on Biodiversity[4] regarding institutional capacity at the regional and local level. In some instances, CARs have been able to strengthen their management and technical capacity in relatively short periods of time. IAvH has worked closely with some of the CARs, developing

[4] IAvH, *Informe Nacional Sobre el Estado de la Biodiversidad Colombia 1997*, Santafé de Bogotá, IAvH, PNUMA, Ministerio del Medio Ambiente, 1998 (Vol. 2). p. 232.

joint biodiversity assessments and regional planning tools. (See Table 1 Annex 10 for a list of CARs to be considered under the project).

*ii) Government plans and strategies*: The National Biodiversity Policy (MMA, 1997) was developed within the context of the Biodiversity Convention – ratified by Colombia through Law 165/94. At the request of MMA, IAvH led the preparation of the National Biodiversity Report as well as the National Biodiversity Strategy and Action Plan formulation processes. Both projects were supported by GEF through the United Nations Environmental Program (UNEP). The National Biodiversity Policy and the proposed Strategy and Action Plan[5] (1998) concentrate on three lines of action: conservation, equitable and sustainable use, and improved knowledge. In the National Biodiversity Report[6] (1998), the Andean region is identified as the leading regional priority in terms of biodiversity Andean Region use. Subsequently, MMA has established biodiversity conservation in the Andean region as a top environmental priority for the National Development Plan.

The proposed National Biodiversity Strategy and Action Plan (1998) is a 25-year plan for implementation of the National Policy using the following strategies:

i) promotion of conservation through: a) consolidation of the national system of protected areas; b) slowing the loss of biodiversity; and c) restoration of degraded ecosystems, protection of endangered species; and promotion of *ex situ* conservation;

ii) promotion and encouragement of the sustainable and equitable use of biological resources through: a) sustainable management of natural resources; b) development of the economic potential of biodiversity; and c) the assessment of the economic value of biodiversity; and

iii) expansion of knowledge base through improvement of scientific information and protection of traditonal knowledge

The plans and strategies mentioned above were carried out by IAvH using a highly participatory approach. This has allowed IAvH to step into a leading role for mainstreaming biodiversity Andean Region use in Colombia. IAvH has been asked by MMA to support the formulation of policies for regional and local governments and other sectors of society. The current project will be one of the vehicles to support the implementation of some components of the National Biodiversity Action Plan. IAvH will act as the coordinator and manager for project funds which will be executed by different actors that will be selected with strict criteria of demonstrated institutional capacity.

Consistent with the National Biodiversity Strategy and Action Plan, the Ministry of the Environment recently established the National Protected Areas System (NPAS) constituted by the "Sistema de Parques Nacionales Naturales" (SPNN, National Parks) and protected areas of regional and local character including private reserves and establishes an overall system of coordination and policy guidelines. This SPNN marks a significant change from the traditional

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5 *Colombia Biodiversidad Siglo XXI: Propuesta Técnica para la Formulación de un Plan de Acción Nacional en Biodiversidad* Instituto de Investigación de Recursos Biológicos Alexander von Humboldt. Edited by M.C. Fandiño y P. Ferreira. Santafé de Bogotá. IAvH, Ministerio del Medio Ambiente, DNP. 1998.

6 *Informe Nacional Sobre el Estado de la Biodiversidad Colombia 1997*, Santafé de Bogotá, IAvH, PNUMA, Ministerio del Medio Ambiente, 1998.

restrictive and exclusionary approach that is inherent in Colombian laws predating the 1991 Constitution. The SPNN focuses on the social dimensions of conservation and seeks to improve the effectiveness of conservation in protected areas by involving local communities and incorporating a diversity of methods such as collaborative management. It explicitly recognizes the conflicts created by the restrictive nature of the laws, arguing for transitional mechanisms that recognize that people are living in and depending on the parks and surrounding areas and that this is not necessarily incompatible with conservation of ecosystems. One of the important objectives of the policy is to contribute to solving conflicts over the occupation and use of protected areas and buffer zones, including those related to the overlapping areas of parks and communally titled lands of indigenous and black communities.

The MMA developed a *"National Strategy for the Conservation of the Andes"* in August 1999 that presents a well-structured coordinated program approach for the Andes. This document describes the rationale, complementarity, linkages and thematic and geographic differences among all the different GEF investments in the Andes region. The strategy demonstrates the cooperation and coordination between the Implementing Agencies and the Colombian Government in early project design and preparation.

Biodiversity actions as described above are fully backed by the current administration through The National Development Plan ("Plan Nacional de Desarrollo 1999-2002"). Within the Plan, recognition is given to sustainable development and proper management of natural resources and contains a Strategic Plan for the Environment ("Projecto Colectivo Ambiental") with three main objectives: (i) conservation and restoration of priority areas within strategic eco-regions; (ii) promotion of environmental sustainability of economic sectors; and (iii) promotion of sustainable regional and urban development.

Several programs are being carried out to support the objectives of the Strategic Plan for the Environment, some of which have some relation with the objectives of the proposed project. These include: (i) *Water Program*: strengthening legislation and institutions to optimize sustainable use of water; (ii) *Biodiversity Program*: seeking consolidation of the national protected areas system, and promotion of the Biodiversity Strategy and Action Plan; (iii) *Forest Program*: seeking the establishment of 160,000 ha of protective and productive forest; (iv) *Productive Systems Sustainability Program*: seeking the establishment of a research program to identify alternatives including substitution of illegal crops, establishment of incentives and mechanisms for reconversion and ecotourism; and (v) *Green Markets Program*: promoting the research of biodiversity-friendly goods and services, including supply, demand, barriers and opportunities; and, promoting such goods and services and commercialization and coordination of the implementation of the Clean Development Mechanism. All these programs are to be implemented with resources from the Ministry of Environment, a credit from the Inter-American Development Bank (IDB), the Regional Autonomous Corporations, the Fondo Nacional de Regalías, the Plan Colombia, Plante, the National Environmental Institutes (SINA) research institutes (including IAvH), International Bank for Reconstruction and Development (IBRD) credit, and IBRD-(Investment Fund for Urban and Environmental Management)FICAU credit among others.

Other government policies with an impact on Andean Region use of biodiversity include: a) the Plan Verde that provides incentives and resources for reforestation and restoration of natural forests; b) the National Forests Policy that seeks the consolidation and strengthening of national forests and regulates the use of plants within the forests; c) the National Water Policy that seeks

the conservation of headwaters and their ecosystems; and d) the Rural Development Policy that seeks entrepreneurial development in rural areas while seeking the sustainable use of natural resources.

Indigenous groups have been recognized by the government as key players in the management of biodiversity areas. In the past 5 years, indigenous territories have been demarcated and the regulations around these territories have been supporting many aspects of self-determination for each ethnic group. In fact, the Colombian Constitution recognizes the compatibility of indigenous management of the territory and conservation objectives. Private reserves are also starting to play an important role in biodiversity conservation, particularly because they have been legally recognized. However, there are limited incentives for private landowners to set aside land for conservation purposes. A regulation has been drafted which would provide for tax and fiscal incentives to promote private reserves and is in the process of being approved by the Ministry of the Environment.

## 3. Sector issues to be addressed by the project and strategic choices

### 3a. Specific project issues

*An Integrated National Protected Areas System.* Protected areas are the most important mechanism for biodiversity conservation. Although any protected area conserves biodiversity, it is important to move forward from isolated strict conservation areas towards systems of protected areas, based on an ecoregional perspective, in order to allow the conservation of biodiversity processes that take place at larger spatial and temporal scales. Today, particularly in the Andes, protected areas and corridors systems can only be achieved using different conservation categories. For the Andes in particular, protected areas under different categories within the Colombian National Parks system (Sistema de Parques Nacionales Naturales), today cover 7% of the region. In addition, some Autonomous Regional Corporations have begun the establishment of regional reserves. At the municipal level, no experience in protected areas establishment and management exists, but there is a great interest and potential for the establishment of municipal protected areas. Private efforts to create protected areas have also born fruit and the "Asociación Red de Reservas de la Sociedad Civil" counts today over 200 private reserves in the Andes Region. Finally, areas under land management categories declared by the state, such as Forest Reserves, can also be important parts of such systems. The current project addresses the need to develop an integrated system with a variety of protection categories at regional and local levels.

*Representativity and effectiveness of protected areas*. An estimated 7% of the Andean area is under some sort of protection regime (there are 29 national parks and over 60 regional parks in the Andes). However, a recent analysis[7] documents serious gaps in representativity of ecosystems at the NPAS and rapid processes of transformation of critical habitats, led by agricultural activity throughout the region. It is therefore urgent that actions be taken to ensure that critical habitats and unique ecosystems underrepresented and or under threat be identified and afforded protection. The project addresses the issue of representativity and the urgency of the pace of transformation. This will be achieved through the consolidation and improved management of protected areas and the designation of new areas protecting critical habitats and

[7] Etter et. al, 1999, Report on Representativity and Transformation of Ecosystems in the Andes.

ecosystems not yet adequately protected. Component 1 of the proposed project intends to result in a "Protected areas system more representative, effective and viable".

*Andean Region use in intervened areas*. The project will address the issue of Andean Region use of biodiversity in rural landscapes through a component specifically designed to promote biodiversity friendly practices and to promote goods and services compatible with sustainable use of biodiversity. The rural landscapes component will support activities to promote markets for biodiversity friendly goods and services and implement incentives for sustainable use.

*Lack of awareness*. This issue is addressed through the inclusion of a component to expand the knowledge base and activities designed to promote awareness. The project also includes activities geared to promote sound decision making and planning on issues affecting biodiversity in the context of the environment and agricultural sectors.

*Poor sector coordination*. Regional planning has not traditionally internalized biodiversity concerns and many farming practices used currently have not been biodiversity friendly. Many sectors of the Colombian economy have a tremendous, if unintended, impact on biodiversity. This is particularly true for sectors such as transportation, energy, and agriculture. There is an urgent need for national leadership on coordinating all environmental investments in the Andean region to maximize their effectiveness and working with non-environmental sectors to mitigate their impacts on biodiversity. Finally, common to all the problems of the sector, there is a pervasive lack of good knowledge on biodiversity and how to use and disseminate such knowledge to decision-makers. The project will promote the inclusion of biodiversity conservation goals in development strategies.

### *3b. Strategic Choices*

*a) Project Strategy and Phasing*: The current project is one of the vehicles designed to support the implementation of some key components of the National Biodiversity Action Plan (1998). The IAvH has been designated by the Ministry of Environment as the umbrella organism to coordinate and manage project funds and activities, however, most of the project will be implemented regionally and locally. The project has been designed as a comprehensive program for the Conservation of the Andes of Colombia. It includes protecting some of the few key ecosystems left in the Andes. The selection of these key ecosystems was done through a very strategic approach of biodiversity priorities, threats and social concerns. The project has been prepared in a participatory way to promote leverage of other resources and to have a multiplicative effect. The project requires a high coherence and consistency due to important number of players such as the CARs (Regional Autonomous Corporations), regional National Parks Administrative Units (UAESPNN - the Park Service), NGOs, universities in addition to productive and community organizations.

There is an inherent risk to the ambitious goals of the project. Other risks are the innovative aspects of the proposed project (decentralization, biodiversity conservation in modified landscapes, etc.), institutional complexities, and limited capacity in some of the areas. Reducing its size was considered during preparation but was discarded due to the loss of ownership and key features in project design. The strategic and comprehensive approach would also be lost. In order to reduce the risks of developing too large a project, it was agreed that the project will require 6 years to be completed and that it would be implemented in two phases. The first phase (3 years) has been designed to implement conservation actions in 5 critical zones where

assurances of success are most likely and to initiate the building blocks for the remaining zones (See next section for details on selection of these zones). At the end of the first phase, and before fully undertaking actions in the remaining zones, a mid-term review mission would be carried out to determine if pre-determined benchmarks have been met to warrant expansion of the project activities to new areas. The list of targets for the end of Phase 1 have been prepared and are described in Annex 1-A. The targets are an integral part of the Grant Agreement between the Bank and IaVH.

*b) Project Scope*: Several components of the project will have a region-wide focus while other components will be focused geographically. The region-wide activities will focus on the entire area of the Colombian Andes since they will look at sectoral issues, monitoring tools and scientific information that is needed across the region. This will apply to Component 3 Monitoring and Knowledge Management, and Component 4 Sectoral Integration. Components that involve on-the-ground investments shall be geographically focused. This is a function of the limited resources of the project and the undesirability of spreading these investments over large geographical areas, particularly considering that the Andean Cordillera represents 25% of the national territory and harbors a tremendous variety of biological, cultural, and institutional environments. For more geographically localized investments (Component 1 and to some extent Component 2), specific conservation zones have been selected (See next section).

*c) Selection of Priority Zones:* During early preparation, the IAvH carried out a detailed selection process using different sources of information (See Annex 8). The first study used was done by IAvH andidentified twenty one different ecosystem types in the Andean Region based on the preliminary map of natural ecosystems of Colombia (Etter, A.,1998)(See Annex 8). These units were considered the starting point of the prioritization exercise. The ecoregions maps of Colombia prepared by the World Wildlife Fund/World Bank (WWF/WB) in 1997 and later revised by WWF- Colombia in 1999 were overlaid with the Andean Ecosystems. The selection process also used the results of the Universidad Javeriana' s study which includes climatic, topographic and soil data amongst others to generate a map of potential ecosystems ( Etter, A. et al, 1999). Another important input into the selection process was the MMA' s "*National Strategy for the Conservation of the Andes*" that describes all the thematic and geographic investments by GEF in the Andes region. This allowed the preparation team to sort out certain areas already covered by other investments. The final analysis excluded areas with low viability and major social unrest, where significant investments are already taking place and with weak institutional capacity. As a result, a set of 11 candidate zones encompassing a representative sample of the Andean ecosystems and biodiversity were identified (See Map). Of these zones, five have been selected for Phase 1 (Table 1 – Annex 10). These zones include: 1) the Northeastern Paramos and Moist Forests, 2) the Alto Putumayo, 3) the Dagua-Calima-Paraguas Corridor, 4) the Altiplano Cundiboyacence, and 5) los Nevados Parks and neighboring coffee area. For Phase 2, given social unrest considerations and that additional biological and ecosystem losses will continue to be documented during Phase 1 implementation, the IAvH will select 3 to 5 of the remaining 6 zones by the time of the mid-term review. The six candidate zones for Phase 2 are: 1) the Cuchilla de los Cobardes and Chicamocha Canyon; 2) the la Rusia Paramo and Quercus Forest of Santander, 3) the Patía Valley and neighbor western Andes Chain mountain forests; 4) the Carare-Opón region; 5) the Tatacoa desert and; 6) the dry forests of the

## C: Project Description Summary

### 1. Project Components.

For a detailed overview of the project description and components, see Annex 2. The cost table below presents the financing plan for the project.

| **Component** | Indicative Costs (US$M) **PHASE 1** GEF | Total | Indicative Costs (US$M) **Entire Project** GEF | Total | **% GEF for entire projectl** |
|---|---|---|---|---|---|
| Project Conservation Areas | 3.22 | 7.27 | 5.56 | 12.53 | 44.0 |
| Andean Region use of Biodiversity in Rural Landscapes | 2.80 | 5.53 | 4.30 | 8.47 | 51.0 |
| Knowledge base & monitoring | 1.82 | 3.25 | 3.10 | 5.60 | 55.0 |
| Sectoral Integration | 0.30 | 0.40 | 0.50 | 0.86 | 58.0 |
| Project management | 0.77 | 1.27 | 1.54 | 2.54 | O.61 |
| **TOTAL** | 8.91 | 17.72 | 15.00 | 30.0 | N/A |

The six years' project contains five components:

### 2. Key policy and institutional reforms supported by the project

During the implementation of the project, the component on Sectoral Integration will aim to identify policy and institutional reforms that would support the project objectives, and to the degree possible, the project will support such changes. Examples of likely reforms to be supported by the project includes: modifications or clarifications of government policy and the legal framework, including the creation of economic incentives for conservation activities (currently under study by the National Government with new regulations to be defined); and, more flexibility concerning how conservation objectives can be achieved in protected areas including buffer zones surrounding national parks.

A preliminary review of the current framework of incentives for biodiversity conservation indicates that there is a comprehensive set of instruments on the books but their application has been inconsistent. Given the current social and institutional complexities in rural areas in Colombia, it was agreed that an analysis should be undertaken of opportunities in project areas to implement, in a consistent manner, appropriate incentives for biodiversity Andean Region use. The analysis of these opportunities will be done in parallel with the other technical studies (in particular the socio-economic analysis) and aim to incorporate the right tools when required. Accordingly, an activity involving the identification, design, and implementation of appropriate incentives regarding sustainable management of rural landscapes has been added.

## 3. Benefits and target population

The tropical Andes, because of the combination of high diversity and threats, is a global priority for biodiversity conservation. Arresting the loss of biodiversity in this area will result in important global and national benefits.

Aditionally, Colombia will benefit from improvements in the management of its natural resources through the new management tools to be developed and disseminated to other government sectors (Components 2 and 4). The project will also directly benefit rural populations and indigenous peoples through support for more sustainable use of biological resources. Bearing in mind that the project will intervene in prioritized conservation zones, some benefits (especially economic) will concentrate on specific geographic places and populations. A list of the target populations in the conservation zones is presented in Annex 10 – Table 1. The project' s investment in the creation and dissemination of knowledge will be of value to decision-makers but is also of great benefit to the scientific community both globally and nationally.

As a result of the project, there will also be a series of indirect benefits related to agriculture and land management, such as prevention of soil erosion, pollination, as well as direct potential benefits accruing from bio-prospecting, ecotourism and use of biological resources. These will primarily benefit local constituencies in the affected areas, providing potentially improved and more sustainable incomes for rural populations.

## 4. Institutional and implementation arrangements

The project is designed to build upon the already existent institutional strengths of the entities involved. Nevertheless, the new conceptual, methodological and operative contributions constitute a motivation to change or consolidate already ongoing changes and inter-institutional relations. Institutional sustainability of the project will be a key consideration. That is to say, the permanent adoption of the project's objectives by the institutions involved in a long term strategy to diminish the technical, financial and organizational dependence upon international cooperation projects.

Under this approach, the project will aim its institutional efforts to: a) guide and inform the main stakeholders about the distribution of responsibilities, motivation and organizational forms; b) increase the organizational capacity of the institutions in shared leadership, cooperative participation, participatory design and conflict resolution; c) adapt existing external abilities, increasing the technical confidence and cost-effectiveness of project results; d) design a realistic structure of tasks and activities, taking into account a participatory planning framework, adequate duration, flexibility and a follow-up and self-evaluation system.

*Implementation Period*

The grant is expected to be implemented over a six year period and has been divided into two phases - each phase lasting 3 years. At the end of Phase 1, during the mid-term evaluation, the triggers/targets agreed between IaVH and the Bank would be subject to an independent evaluation and judgment would be used by Bank Management on whether to proceed to phase II or not. The triggers/targets are an integral part of the Grant Agreement between IaVH and the Bank.

*Executing Agency: Instituto Alexander von Humboldt (IAvH)*

The Instituto Alexander van Humboldt (IAvH) will execute the project. (for a full description of the IAvH, please refer to section 2b). A letter sent in September 2000 by the Minister of Environment and Focal Point for the GEF designated full responsibility of the project to the IAvH. The IAvH General Director will be responsible for entering into legal agreements with the Bank and other project donors and will act as the official liaison for the project. The IAvH Director will also give general directives for the project, as well as approve and follow-up on the Annual Operating Plans. For other project matters, the IAvH director will be assisted as follows:

A) IAvH General Assembly . In accordance with the Institute' s by-laws, this Assembly is composed of 18 members from the Ministry of Environment, the National University of Colombia, Colombia National Sciences Foundation (Colciencias), Regional Autonomous Corporations (CARs), Non Government Organizations and Public and Private Universities. The Assembly meets once a year and determines the directives and policies of the Institute and selects the Annual Fiscal Auditing. For project purposes, the Assembly will oversee the overall auditing of the project to ensure that it is in compliance with the agreement entered into with the Bank.

B) IAvH Board of Directors. In accordance with the Institute's by-laws, the Board of Director has 9 members. This Board is chaired by the Minister of the Environment and includes members of private and public universities, NGOs, CARs and the Colombian National Sciences Foundation (Colciencias). For project purposes, the Board will oversee monitoring and evaluation of the project. It meets several times a year and will be responsible for project follow-up.

C) Tripartite Committee: In addition to the support from IAvH's Assembly and Board, the IAvH director will work closely with Bank and co-financier staff to approve the annual POAs and supervise project implementation (see section below on Project Supervision).

*Project Coordination Unit*

The IAvH will establish a project coordination unit (PCU), whose core staff will be a National Coordinator (NC) under the supervision of the General Director of the Institute, an Assistant and a Secretary. The National Coordinator will be responsible for the day-to-day operations of the project such as planning and report writing, coordinating the selection of beneficiaries and, supervising administrative and financial activities as well as technical monitoring and evaluation. The PCU' s responsibilities will also include the development of inter-regional, inter-institutional and inter-sectoral relations to give support regional and local project activities. The PCU will include the Thematic Unit (TU), the Regional Unit (RU), the Institutional Unit (IU) and the Financing and Administrative Units (discussed under the Financial management section, below) to support implementation of different aspects of the project. Currently, the IAvH already has a National Coordinator, a Financial Administrator and various Technical Coordinators which will continue working for the project.

A. Technical Experts***:*** The Thematic Unit (TU) will operate with four experts, each in charge of the four main project components (Conservation Areas, Biodiversity in Rural Landscapes, Knowledge Base and Monitoring, Sectoral Integration). These experts will have a technical background in the main topic of the component they will be responsible for and they

will prepare the Annual Operating Plans and the bi-annual technical reports. In addition, they will ensure conceptual and methodological coherence among all activities and the integrity of the project and providing feedback to regional coordinators and the PCU.

B. Regional Links*:* For Components 1 and 2, the Regional Unit (RU) will operate with 3 professionals who will ensure the coordination among the national office and the local activities in order to keep regional actors informed about the evolution of the project at national and inter-regional level and to foster the required support for the participatory design and implementation of the Annual Operational Plans. These professionals will be required to have experience in the region they will act and demonstrated abilities to work with many different actors. They will keep in close rapport with the technical experts. These regional staff will ensure the implementation of the Annual Operational Plans agreed. They will establish regional teams under the lead of a relevant regional entity, in many cases the Regional Autonomous Corporations (CARs). Representatives of the CARs, Non Governmental Organizations, regional universities, the National Direction of the National Natural Parks Unit, and members of the PCU (see below for description of the PCU), among others, will form part of both teams. The tasks and local activities of the project will be carried out through local and regional organizations such as NGO's, universities, local associations, CAR's, Regional Units of UAESPNN, through co-operation agreements and contractual figures. All stakeholders will evaluate their own results and will form part of the project's information, follow-up, control and monitory system.

C. Institutional Expert*:* The Institutional Expert will be in charge of organizing, implementing and evaluating a training and development program for the development of the biodiversity institutional capacity in the Andes. The institutional expert will also be in charge of strengthening the national, regional and local networks of actors related to the project.

*Project Management*

Successful project management will be contingent on: (a) effective decentralized execution of the project; (b) timely financial evaluations; (c) adequate information for decision making processes; (d) participatory processes with all the relevant actors and stakeholders; (e) timely responses to changes in the context of the project; (f) efficient relations and operative processes with GEF and the Government of the Netherlands. The participatory decision-making structure aims to increase the management capacity of the stakeholders in the five regions of the project (Phase 1) through the implementation of shared leadership principles.

A full description of project activities is spelled out in the Operational Manual. Yearly project management will be governed by Annual Operating Plans (POAs), which will include a statement of specific objectives for the year, a description of the activities, expected outputs, monitorable indicators, detailed estimated budgets and a procurement plan. POAs will be prepared by the PCU for the project as a whole (GEF, the Netherlands, CARs and other donors), indicating the source of financing in the budget.

Those CARs approached by IAvH during project preparation have responded very favorably with letters of intent to pledge cooperation and financial resources. Resources provided by CARs, as counterpart financing, will be executed directly by them in there area of jurisdiction. The Netherlands[8] and other donor contributions of counterpart financing will be executed

[8] The Netherlands has submitted a letter of intent and the full proposal is expected to be approved and signed with

directly by IAvH. Mutual responsibilities and obligations regarding project implementation and investment financing will be presented on a yearly basis through the POAs for review and approval by the IAvH, the Dutch Embassy in Colombia and the World Bank in September. The full description of all administrative procedures, including how to plan, prepare, select, procure, contract, finance and supervise project activities will be spelled out, as a condition of effectiveness, in the Operational Manual, which will guide the PCU in the implementation of the project.

The IAvH will submit to the Bank bi-annual progress reports tracking physical and financial performance targets by March 31 and September 30 of each year. Twice a year after receipt of the progress reports, the Bank, the IAvH and the Dutch Embassy, assisted by independent consultants, would conduct a mission to jointly review progress made against objectives and monitoring targets.

*Program Monitoring and Evaluation*. The IAvH would be responsible for ensuring that project results and impacts are monitored throughout the life of the project. The preparation team has agreed to use a participatory approach and the use of independent consultants to carry out the monitoring and evaluation functions of the project. Performance monitoring indicators are included in the Operations Manual and in Annex 14. As specific activities are developed in the POAs, corresponding performance indicators will be agreed upon. The PCU will annually visit sites where activities are taking place to review specific indicator performance and to make suggestions on how to improve project performance.

A self-evaluation mechanism will be applied through participatory processes with project stakeholders. Self-evaluation is considered a key element of the project as the participants become evaluators rather than objects of evaluation. This mechanism will also allow for the analysis and discussion of both measurable results and working processes in addition to facilitating the systematization of conclusions and learned lessons, turning into a valuable planning and adjustment instrument, and can be used periodically without incurring in further expenditures in terms of human, technical and financial resources. The evaluation by project stakeholders will also play the role of peer evaluation, which has been considered one of the most effective evaluation mechanisms in project with a variety of stakeholders. The results of these evaluations will be an integral part of the biannual review by Bank and donors.

*Mid-Term Review*. The Bank and the IAVH will not later than the 36th month after the Effective Date, undertake an in-depth review of the progress of the Project to evaluate the Project's implementation arrangements and its on-the-ground effectiveness based on the targets set forth in Annex 1 A of this document. For that purpose, the IAVH will , not later than one month before the date of such review, prepare, contract out an independent evaluation to consultants acceptable to the Bank under terms of reference satisfactory to the Bank, and furnish to the Bank, a report on the progress in the carrying out of all components of the Project, the achievement of such targets, and on lessons learned therefrom.

*Financial Management*

Administrative and Financial Staff*:* A Financial Administrator is already appointed for the project with high qualifications and will be responsible of the financial and administrative

IAvH before Grant Effectiveness.

aspects of the project such as ensuring that the Operational Manual is followed, contracting services and goods, monitoring financial transactions and reporting, etc. (see Financial management below for more details). This Financial Administrator will be assisted by two new staff in charge of procurement and in financial management, two additional outside accountants and one secretary which is already part of the IAvH staff.

Accounting and Financial Arrangements: Accounting and financial management of project resources will be under the responsibility of the PCU. The PCU will be responsible for project administration, signing contracts, authorizing payments, disbursing funds, supervising contracts technically, administratively and financially, consolidating project accounts and information, budgeting, preparing financial reports, establishing internal controls, contracting out independent audit for the project. Project accounting and management will start with the submission of SOEs. A year after project initiation and after installing an integrated project financial system acceptable to the Bank, the PCU shall prepare and submit to the Bank quarterly project management reports (PMRs) linking project expenditures to key monitoring indicators of activities carried out during each quarter. The formats and basis to produce those reports would be in accordance with the Bank Financial Management Manual and LACI procedures. In addition to project management reports, external audits of project financial statements and IAvH statements will be required on an annual basis (see below for more details). Operational, financial and audit procedures are being spelled out in the Operational Manual and will be a condition of Grant Effectiveness. Counterpart CARs' and the Netherlands' s funding will be managed independently from the GEF funds. These funds are financial resources and not in kind. The role of the PCU with respect to counterpart funds is to ensure their yearly budgeting in the POAs and to report the activities carried out for the project and funds utilized during the year The CARs have already submitted a commitment letter spelling out their contributions towards the project. The Netherlands has also submitted a letter of intent and the full proposal will be approved and signed with IAvH before Grant Effectiveness. The IaVH is also required to present signed Cooperation Agreements with the CARs participating in the project on a yearly basis stating clearly their financial contribution to the project.

Procurement: The full description of the procurement arrangements and plan have been discussed with the IAvH and are included in the Operational Manual and in Annex 6 of the PAD. The PCU will be responsible and would follow Standard Bank Procedures for all Project Procurement, and ensure their enforcement in procurement by beneficiaries. A three-year procurement plan and all procurement procedures are being included in the Operational Manual which is a condition of Grant Effectiveness. Procurement would include consultant services, goods and equipment.

Disbursements A Special Account shall be established in a Commercial Bank acceptable to the Bank. The account will be managed by IAvH. The IAvH, will be responsible to regularly submit withdrawal applications, supported by the appropriate documentation according to Bank disbursement procedures. The GEF grant would be disbursed against eligible expenditures as shown in Schedule C Annex 6. Disbursements would be made on the basis of full documentation for all expenditures made under contracts requiring prior review by the Bank (Schedule B-Annex 6). For all other expenditures, disbursements would be made against SOEs for which supporting documents would be maintained by IAvH and the beneficiaries and would be available to the Bank and to the independent auditors for review.. After the first year, it is anticipated that project financial monitoring mechanisms agreed with PCU will enable GEF

funds to be disbursed on the basis of PMRs linked to expected project activities during such quarter. Retroactive financing will be authorized for an amount up to SDR 390,000. Taxes are not eligible and they will be paid from the counterpart funds.

Financial System*:* The PCU has agreed to install an integrated financial system to monitor the financial and physical activities of the project. The integrated financial system would include planning, internal controls, accounting, project monitoring and financial reporting. The project chart of accounts would be structured accordingly assuring that project investments will be accounted by components and categories established in the PAD. This will be done before Grant Effectiveness. The project accounting and financial system would gather processed and accounting data in order to produce accurate financial information. The accounting and financial system would be linked with others project monitoring systems assuring reliable information.

Auditing Requirements: The PCU within the IAvH will be responsible for preparing combined financial statements for the project as a whole. The project account will be audited annually; consequently, an annual audit report of project accounts, and a separate opinion with respect to the Statements of Expenditures and the Special account will be prepared by independent auditors acceptable to the Bank, in accordance with International Standards on Auditing and the guidance provided in the "Guidelines and Terms of Reference for audits of Project with Financing by the World Bank in the Latin America and the Caribbean Region: (the guidelines). The auditors will be selected before the beginning of each year to be audited. The PCU will submit to the Bank a certified copy of the agreed audit report no later than four months after the end of each year. TORs for all audits should obtain the Bank's no objection. TORs for the first year Auditors are a conditon of Grant Effectiveness.

*Operational Manual:* The functions and responsibilities of the project management would be governed by the Operational Manual, which would include, among other aspects, project procedures, financial guidelines, annual POA cycle, criteria for selecting beneficiaries, staffing and assignment of staff responsibilities, supervision of beneficiaries, flow of funds, special account, budgeting, auditing, reporting as well as procurement and disbursement procedures. The Project Operational Manual will be a condition of Grant Effectiveness. We received a draft Operational Manual during negotiations. Detailed procedures for selecting beneficiaries on the diverses components have been included. The Manual will also contain the model contracts or "convenios" that will be used to disburse funds to implementers/ beneficiaries. The IAvH will submit for Bank approval detailed activities of each component in the yearly POA. For components 1 and 2 which involve activities on the ground, before selecting the implementers/beneficiaries, the IAvH will strictly apply the eligibility criteria for environment and social safeguards. (See Annex 11, 12 and 13). Specifically, the eligibility criteria that only project activities with no conflicts in land tenure and land use will be financed will be strictly followed. The Bank will monitor that these rules are followed during supervision.

## D: Project Rationale

### 1. Project alternatives considered and reasons for rejection

*Government execution*. An alternative to the project design consisted of a project executed by the Government of Colombia with the support of third party agencies. However, it was considered

preferable that the executing agency be independent of the central government budget, in view of the current financial difficulties and the difficulties associated with routing resources through the government budget.

*Period of execution and phasing of the project.* Consideration was given to a longer period of execution and a possible APL approach in view of limitations in institutional capability. A two phase, six-year project was finally selected as a feasible alternative. The project would be implemented in eight to ten different zones by regional entities under agreement with the IAvH on a more or less parallel track. During the first phase, the project would target its investments in five zones.

*Regional vs. local coverage.* A project covering only part of the Andes region was considered. However, the government has decided to assign a strategic, umbrella role to this initiative, requiring therefore that it deals with regional issues for the entire Andes. In the same vein, an alternative was considered to restrict the project to a single biogeographical unit as for example cloud forests or paramos. This alternative, being supported through some parallel activities supported in Colombia by the GEF, would not have provided the level of support required to address the issue of rapid loss of habitat and biodiversity in the Andes region as a whole.

*Conservation only approach*. Consideration was also given to a simpler thematic focus restricted to conservation (e.g., strengthening of the NPAS). However, as the National Biodiversity Plan clearly states, given the state of intervention in the Andes, a more comprehensive approach that includes agrobiodiversity (rural landscapes) is required to increase the effectiveness of the activities proposed. at the country level.

*Security and illegal crops issues.* Careful consideration was given to evaluate whether investing biodiversity conservation funds in Colombia has a high risk of being wasted due to the insecurity and to the illegal crops issues. After discussions with the Government, international NGOs working in Colombia and bilateral donors, it became clear that conservation work can be effective in Colombia as long as a balanced investment approach is taken. The IAvH submitted a strategy to deal with insecurity issues. The main key of this strategy include:

1) The project has taken multiple themes approach including investing in research and policy at the national level and investing in local areas not affected by the insecurity and illegal crops issues.

2) The selection of conservation zones carried out during preparation has focused heavily in avoiding high risk areas and therefore, ensuring project success even in the local areas investments.

3) Project design has taken into account the lessons learned from conservation actors that have been able to successfully implement conservation projects in many areas in Colombia for several consecutive years. .

4) A flexible response has been included where the project design allows the Conservation Zones to be monitored for security issues and to move out of a Zone to another at any time without loosing the objectives of the project. The IAvH has built in mechanisms in project execution where the local entities and NGOs that can work most effectively at the local level are selected. One of the selection criteria is their success in operating safely in areas.

5) The project has designed a monitoring system that will be able to tell IAvH where the risks are in real time.

6) And finally, the project is designed to move in gradually and firmly to one Zone, but it will be able to make tough decisions of pulling out of a Zone, if needed.

For a full description of security issues and how the project has been taking them into account is described in Annex 17.

## 2. Major related projects financed by the Bank and/or other development agencies (completed, ongoing and planned)

| Sector issue | Project | Latest Supervision (Form 590) Ratings (Bank-financed projects only) | |
|---|---|---|---|
| | | Implementation Progress (IP) | Development Objective (DO) |
| Bank-financed and prepared | | | |
| Develop the policy, institutional and technical base for sustainable natural resource management within decentralized framework, with emphasis on forestry sub-sector and Pacific Coast region | Natural Resources Management (Loan No. 3692) | S | S |
| Develop operational capacity to carry out an ambitious ten-year, community led, multi-sectoral development program in one of the most conflictive regions of Colombia | Magdalena Medio Regional Development Project/LIL (Loan No. 4371) | S | S |
| Develop methodology for establishment and operation of "*zonas de reserva campesina*" for areas of colonization affected by violence, illicit activities, and degradation of natural resources | Peasant Enterprise Zones for Peace Project/LIL (Loan No. 4363) | S | S |
| Provide matching grants for investment projects to be carried out by municipalities and communities in order to increase incomes and living standards of rural communities | Rural Development Investment Program (Loan No. 3250, completed) | S | S |
| Andean Region development of the Sierra Nevada de Santa Marta | Andean Region Use of Biodiversity in Sierra Nevada de Santa Marta (GEF grant and Bank LIL under preparation | | |

| | | | |
|---|---|---|---|
| Promotes a strategy for the sustainable use of biodiversity in the western slope of the Serranía del Baudó in a joint effort between governmental institutions and civil society, and for the benefit of the local communities<br><br>Community Based Management for the Naya Conservation Corridor (Medium size GEF project under preparation)<br><br>Supports the establishment and demarcation of indigenous territory as a strategy for natural resources conservation. It is working on the creation and management of the first "Indigenous National Park" in Mataven forest in the Amazon. | Sustainable use of Biodiversity in the Western Slope of the Serrania del Baudo" (Medium-sized Project under implementation).<br>Community Based Management for the Naya Conservation Corridor (Medium size GEF project under preparation)<br><br>Conservation of Mataven Forest (Etnollano) (Medium size GEF project under preparation) | S | S |
| <u>Other development agencies</u><br><br>. | - Indigenous consultation on the sustainable development plan for the Sierra Nevada de Santa Marta (implementation)<br>- Conservation of paramos and high-andean forest biodiversity in the Macizo Colombiano (GEF project under preparation)<br>- Biodiversity conservation in the Macarena Special Management Area (GEF project under preparation) | | |
| UNDP<br>Government of the Netherlands<br><br>Government of Spain<br>GTZ<br><br>WWF<br><br>TNC<br><br>IUCN | - Consolidation and institutionalization of the conservation strategy for the Sierra Nevada de Santa Marta (implementation)<br>- Biocommerce Initiative<br>- Checua river watershed erosion control project.<br>- Planning for the Northern Andes Ecoregion<br>- Western Andes Chain Program<br>- Sustainable Use Initiative for the Northern Andes Region | | |

IP/DO Ratings: HS (Highly Satisfactory), S (Satisfactory), U (Unsatisfactory), HU (Highly Unsatisfactory)

*2a) <u>Linkages with World Bank portfolio</u>*. The World Bank has supported a natural resources management project (Loan 3692 *Natural Resources Management)*. This US$ 65 million project (US$ 39 million lent by the Bank, US$ 7.10 million from the Netherlands and the rest from the

government), started in 1994 and is expected to close in December 2000. Its main objective is to develop policies and mechanisms that would help arrest the ongoing degradation of natural renewable resources in Colombia. The main components include: (i) support for the development of a national forest policy and of a strategy for natural resource management in the Chocó Region, including actions such as ecological zoning; the establishment of an environmental monitoring system for four ongoing forest use projects; and titling and demarcation of indigenous reserves and of Afro-Colombian communities; (ii) in the western Highlands, protection and rehabilitation of selected watersheds; (iii) investments in the improved management of national parks and buffer zones; (iv) strengthening of programs and institutions for forestry/environmental education, training, research and pilot projects; and, (v) the strengthening of the regional park system through a Dutch grant. Project implementation has proved satisfactory to date. It was the first phase of a longer-term program and has generated the policy, institutional, and technical base for future forest management and land titling investments in the Chocó Region. Although a different environmental and socioeconomic region from the Andes, experience and lessons learned will prove of great use to the current project, in particular those related to watershed management.

*2b) Collaboration with Other GEF Implementing Agency.* The MMA developed a *"National Strategy for the Conservation of the Andes"* in August 99 that presents a well structured coordinated program approach for the Andes. This document describes the rationale, complementarity, linkages and thematic and geographic differences among all the different GEF investments in the Andes region. This document is an evidence of cooperation and coordination between the Implementing Agencies and the Colombian Government in early project design and preparation. A summary of this strategy developed through consultations and meetings between the MMA, coordinators of the projects in the Andean Strategy and the GEF implementing agencies World Bank and UNDP is presented in Annex 14 and 15.

Due to the range of GEF biodiversity initiatives in Colombia the GoC with IA collaboration has taken important steps to define a coherent program approach in order to optimize resource allocation, ensure synergies and complementarities within the GEF biodiversity window and maintain overall coherency with national priorities, policies and plans. For a summary of this process and a presentation of the Colombia GEF portfolio please refer to Annex 14.

Other important initiatives related to the project are the WWF program for the northern Andes region, TNC project for the Eastern Andes Chain (Colombian and Venezuela) and the IUCN Northern Andes Sustainable Use Initiative to which the project has been in contact during preparation through the IAvH, which in all cases is a Colombian partner of these initiatives. Additionally, the IAvH is implementing the Biocommerce Initiative for Colombia with financial and technical support of the UNCTAD and the Government of Spain which will be of great support for the Rural Landscapes Component.

## 3. Lessons learned and reflected in proposed project design

### *Limited Institutional Capacity in the Government*

Project resources cannot be tied to inefficient disbursement procedures and project execution should be in the hands of agile and efficient institutions. The project uses an executing agency that would avoid bottlenecks in terms of capacity of implementation and budgetary authority.

The implementation and administration responsibilities will be with the executing agency, the IAvH, and no funds will be channeled through the central government's budgetary system.

***Protected Areas/Conservation Approach***

Effective biodiversity conservation requires a regional approach. The project seeks a conservation area approach that includes landscape management. Given that parks as islands of conservation are not socially nor ecologically sustainable, the project will establish conservation areas of varying types (IUCN categories I-VI), with sustainable, long-term management plans.

Varied local conditions require a tailored approach to specific protected areas. The project will incorporate local conditions in the design and management activities. With support from the PDF Block B, public participation has contributed to processes appropriate to the local context.

Effective management of conservation areas requires a participatory approach. Conservation activities will only work in the Colombian sociopolitical context if there is social consensus. Therefore the project seeks participatory management of protected areas. The participation strategies will accommodate local biophysical and socioeconomic particularities, depending on the region and zone.

***Economic Incentives/Development Plans***

Biodiversity concerns need to be incorporated to broader political and socio-economic frameworks. The project will assist in a major effort to incorporate biodiversity considerations into sectoral planning. This project, therefore, utilizes economic and other incentives as a conservation strategy, through reciprocal benefits agreements and the generation of local benefits.

***Project Implementation/Monitoring***

The project must be flexible during implementation. It needs to be evaluated regularly and adjustments need to be made to the components and strategies. The fact that the project is designed in two phases will provide for this flexibility and possibility of learning from one phase to the next. The participation strategy needs to be one of the most flexible activities

Better efficiency and effectiveness during execution require an adequate monitoring and evaluation system. The project will make efforts in the acquisition and expansion of the knowledge base and development of methodologies for monitoring and to construct appropriate indicators, and, in accordance with similar GEF projects in Colombia, will monitor the application of the national biodiversity policy and the contribution of the projects.

**4. Indications of borrower commitment and ownership**

The central government has committed its support in a number of ways: endorsement of the project by the GEF focal point (the Minister of Environment), participation in all preparation missions for the project, dedication of IAvH staff to prepare and coordinate all aspects of the project, identification by the Government of biodiversity conservation in the Andes as one of the top ten environmental priorities of the country (National Development Plan).

Through its 1991 Constitution, the Republic of Colombia has effectively decentralized the responsibility for environmental management to the Regional Autonomous Corporations. Ownership of the project by the CARs is critical to the project' s success. Every CAR that has been approached by IAvH during the preparation of the project has responded very favorably with pledges of cooperation and financial resources. The US$8.0 million of formal counterpart funds from the CARs is the most striking indication of their ownership of the project. During the pre-appraisal mission, the IAvH provided the Bank with copies of letters of intent to participate in the execution of the project indicating the counterpart funds that they will allocate to the project.. The Parks Unit has also confirmed its participation. Resources provided by CARs as counterpart financing will be executed directly by them in their jurisdiction area. Mutual responsibilities and obligations regarding project implementation and investment financing will be presented on a yearly basis through the POAs that the Bank will review and approve in September each year.

**5. Value added of Bank and Global support in this project**

As an implementing agency of the GEF, and a committed lender in the environment sector, the World Bank has an active biodiversity portfolio in Latin America and the Caribbean. The Bank brings its experience within this sector to bear on this project. Specifically in Colombia, the Bank has been supporting the Natural Resources Management Project (including protected area components in the Choco) for many years and has a number of other GEF biodiversity projects now under preparation (see section D2).

Beyond experience in the natural resource management sector, the World Bank also brings to this project its experience in social sectors. In Colombia the Bank is executing a project in the Magdalena Valley directed at helping with development and conflict resolution in rural populations. Finally, the Bank's extensive investment in Colombia, in sectors as varied as transportation, agriculture, and energy, provide potential access to some of the key non-environmental sectors this project aims to influence through the Sectoral Integration Component.

The value added of global support with GEF resources resides in the fact that GEF resources are critical for supporting the global incremental costs of biodiversity conservation in globally significant ecosystems and for providing a platform for strengthening national coordination in the sector, as a complement to regional action at the field level.

**E: Summary Project Analyses**

**1. Economic**

*Incremental Costs.* Project activities that will yield global benefits and generate incremental costs are eligible for GEF financing. To calculate the incremental costs of the project, an estimate of the baseline expenditure was made to establish the current and planned amount of funding for Andean Region use of biodiversity in the selected sites in the Andes region as well as for national level planning, during the life of the project. The difference between the cost of the baseline scenario (US$ 128.93 million) and the cost of the GEF alternative (US$ 158.93 million) is estimated at US$ 30 million. This represents the incremental cost of achieving global environmental benefits through establishing new protected areas, strengthening policy and legal frameworks for protected area management, developing mechanisms for Andean Region use of

biodiversity and natural resources in rural landscapes, and strengthening local and national capacity for conserving globally significant biodiversity. Co-financing for the GEF alternative from international and other local donors is estimated at US$ 15.0 million. The Regional Autonomous Corporations have committed to mobilizing US$ 8.0 million toward the GEF alternative; these will cover recurrent and investment costs for the conservation areas, rural landscapes and sectoral integration activities. The contribution from the CARs has been written in the GEF/Bank-IaVH grant agreement and will be provided on a yearly basis over the life of the project. The Netherland Embassy has committed US$ 4.0 million to IaVH for the first phase of the project. The signing of the Netherland - IaVH agreement is a condition of grant effectiveness of the GEF/Bank-IaVH grant agreement. NGOs and other organizations will contribute US$ 1.0 million as matching funds to the grants they will receive from the GEF project. Finally, US$ 2.0 from other donors will be sought during the life of the project. The GEF grant contribution would be US$ 15.0 million (see Annex 4 for the detailed Incremental Cost Analysis).

**2. Financial**

*Fiscal Impact*. The project would not directly result in an increase or decrease in revenues to government. Moreover, the protected areas would develop capacity to generate and retain funds through introduction of visitor fees and other income earning activities that will reduce pressure on the national budget. Tourism generated as a result of the project will also help increase Colombia' s tax base as a result of increased spending by consumers and foreign visitors.

Mechanisms to provide for the project' s long term sustainability have been otherwise provided for in project design in a number of ways: (i) development of revenue generating activities, such as ecotourism, bio-commerce, non-wood forest product development, etc.; (ii) investigation and implementation of recurrent funding mechanisms such as taxes and levies on production from natural resource exploitation and the creation of a fund for the areas to provide long-term financing for biodiversity conservation and local community participation; (iii) design of the project to ensure that it will not create an additional burden on public expenditure by identifying maintenance and additional costs within current budgetary allocations (part of baseline). The contributions by the CARs and IAvH will cover some salaries and expenses of staff working on the project as well as providing offices and other administrative support.

**3. Technical**

*Technical studies.* Seven technical studies have been contracted by the IAvH with PDF-B financing and one study has been financed through the WWF-World Bank Alliance. The results of these studies have been used to assist in the design of the project. All the teams leading the studies met with the IAvH and Bank representatives to review the results as a group. The studies address: i) institutional arrangements; ii) socio-economic assessment; iii) design of a system of indicators; assessment of representativity and transformation of Andean ecosystems under protection; iv) design of an education and awareness program; v) review of productive systems in the Andes and assessment of sustainability; vi) review of sustainability mechanisms for proposed project activities; and vii) regional cooperation plan. All technical studies have been concluded and the results have been integrated in this project document.

There are no other technical issues requiring special attention. It could be noted that some of the work to be carried out in the component on Andean Region Use of Biodiversity in Rural Landscapes is expected to lead to some innovative and technically interesting management tools.

**4. Institutional**

Institutional issues in the environmental management sector are particularly complex in Colombia due to the decentralization of environmental functions to the CARs. A study on the institutional issues was carried out during preparation and resulted in the institutional arrangements described before. Discussions during project preparation resulted in a strong recommendation by the Ministry of Environment to designate IAvH as the executor of the proposed project. A letter from MOE was received in September 2000 to that effect. Under the terms of the recommended structure, the project would be highly decentralized in its execution. Regional activities would be the responsibility of local actors such as the CARs, University, NGOs, associations, etc.. who would enter into collaborative agreements with the IAvH. Likewise, the Parks Unit, through the corporation recently announced by Minister Mayr, would also enter into a collaborative arrangement with the IAvH. The Bank met with a few CARs and discussed the institutional arrangements. These are spelled out in the section on institutional arrangements.

**5. Social**

A social assessment (SA) and participatory consultations have been completed for the project. Spanish versions of the full SA are available in the project files. The assessment was based on a review of literature, including recent reports such as "Economía y sociedad rural en los Andes colombianos", "Procesos socioeconómicos que actúan como actores de presión sobre la biodiversidad andina en Colombia" and "Conflicto agrario y medio ambiente". Interviews with experts were also carried out wherever information gaps existed. Finally, national and regional consultations were carried out during preparation to verify the outcomes of the social analysis.

The social assessment was carried out at two levels. The first level is the whole Andean Region. For this level of analysis, the overall socio-economic analysis was carried out, and the main social issues and the institutional context identified. With this information at hand, the preparation team carried out national level consultations to select the project intervention zones. The major factors used to select the project zones were the socio-economic issues and the biodiversity. This analysis is presented in Annex 11 (social assessment) and Annex 18 (biological analysis). Once this level of analysis was concluded, detailed socio-economic information was gathered for each major project zone. In addition, regional consultations were carried out in selected project zones. The results of the regional consultation process identified the key social issues for each project zone and determined the key activities that would be supported by the project to address these social issues. The results of this analysis are presented in Table 1 at the end of Annex 11.

A detailed summary of the socio-economic assessment is presented in Annex 11. Annex 11 includes:
1) a socio-economic profile of the Andes Region,
2) identification of the main social issues,
3) a description of the institutional context,

4) description of the national consultations and participatory process,
5) how social issues have been taken into account in the selection of project zones.
6) description of the regional participatory process carried out during preparation.
7) how social issues have been taken into account in each project zone (Table 1).
8) formulation of a participatory framework during project implementation.

The project pays special attention to the Indigenous People. The IAvH carried out consultations with the Indigenous People in the project zones and has completed an Indigenous Peoples Development Plan (IPDP) (see Annex 12). The project will not have any resettlement as indicated in Annex 13.

In sum, the following overall issues have been identified for the project:

- The selection of project zones was based on socio-economic data, issues of violence, and other social criteria;
- The project will not have negative social impacts on the populations in the project areas;
- There will be no resettlement in the creation of new protected areas (see Annex 13).
- The project has a clearly defined participatory focus.
- The project's local activities are being designed through a phased participatory approach (macrozones integrated plans and protected areas management plans) that aims at involving key stakeholders at a local level described in more detail Annex 11.

**6. Environmental**

a. Environmental issues:

Major: There is no major adverse environmental impacts expected as a result of this project.
Other: Minor environmental impacts might be expected from some on-the-ground investments.
b. Environmental category: [ ] A [x] B [ ] C

c. Justification/Rationale for category rating:

The Category B is designed to be entirely positive from an environmental standpoint, particularly by promoting Andean Region use of biodiversity. The project was based on a sound biological and environmental analysis of the current opportunities and threats in the Andean Region. See Annex 18 (biological) and 11 (social) for details. Component 2 will support activities in sustainable development area, but these will be screened for environmental safeguards before any investments are made. The environmental criteria are spelled out in the Operational Manual.

d. Status of Category A assessment: N/A

e. Proposed actions: Procedures for environmental impact assessments have been developed during project preparation and are spelled out in the Operational Manual.

g. Status of any other environmental studies: N/A

h. Local groups and NGOs consulted:

Consultations on this project have taken place within the context of the Environmental Alliance for the Andes and during project preparation activities. The project's local activities are being designed through a phased participatory approach that aims at involving key stakeholders at a local level. A summary of the consultations and participatory approach followed during project preparation and the strategy for project implementation is presented in Annex 11.

i. Resettlement
The Recipient has been informed about the Bank' s requirements to have a policy framework applicable to involuntary human resettlements arising from any other donation-financed subproject. The Recipient has responded by stating clearly that no resettlement will occur under the project. The Recipient has submitted an Annex as part of negotiations clearly explaining the safeguards they have taken in the design of the project to avoid at all cost resettlement. A summary of the measures to avoid resettlement is included in Annex 13. The Recipient will screen any activities of the project for potential resettlement issues and will decline financing activities that could present such cases. The project contemplates the creation of a National Park to protect the Cerro Patasco. This mountain is not been occupied by people. The local people (Cofanes) living next to it have asked for the creation of this park. (see Annex 12 on IPDP). The rest of the areas contemplated in the project are conservation easements in private lands and regional reserves with legal rights for people to live in them. Furthermore, the new legislation of the National System for Protected Areas has developed a wide range of categories of protected areas enabling people to live and using resources to support their livelihood and therefore avoiding any needs for resettlement. The project has set as the main eligibility criteria for supporting project activities related to private conservation easements or regional reserves, that they do not impact the land tenure and land use situation of local people. These eligibility criteria are an integral part of the Operational Manual which rules the project. Proposals for these activities will be submitted to the IAvH coordination unit and will clearly describe the current situation around resettlement issues. IAvH will only select proposals with no resettlement issues and proved to be solvent. The project was also designed to carry out activities in rural landscape with local people living around parks. These activities represent an incentive to improve the livelihood of people. So, in no way will project activities decrease people' s livelihood, totally on the contrary, it will improve it.

j. Borrower permission to release EA: [ ] Yes [ ] No [x] N/A

k. Other remarks:

**7. Participatory Approach**

a. Primary beneficiaries and other affected groups:

This project is being prepared under a strong participatory approach (Annex 11). The current project has benefited from the participatory exercise carried out by the IAvH to prepare the National Biodiversity Action Plan. This plan, prepared over the last year with GEF/UNEP enabling activities funds, is the basis of the current project design and involved approximately one hundred experts from the academic, government and NGO sectors. With PDF Block B

funds, efforts have been concentrated to identify the priority areas and potential partners at national and regional levels. At the national level, consultations have included the Ministry of Environment, the National Parks Unit, the Environmental Alliance for the Andes (12 national and international institutions), well known experts and NGOs. Once the priority regions were selected, consultations at the regional level have been carried out with all CARs of project phase 1 zones, the private reserves network, regional universities and environmental and social NGOs working locally. In addition, participatory mechanisms and processes have been designed for project implementation as summarized in Annex 11 and these will continue to be carried out at the national, regional and local levels. Some of these mechanisms include:

i) Coordination and participation mechanisms at regional decision making level;

ii) Consolidation of sectoral action policies;

iii) Participation strategy for each of the components of the project;

iv) Indigenous peoples development plan; and,

v) Application of gender focus in the conservation strategy.

Because of the scope of the project, having national, regional and local activities, the list of beneficiaries and stakeholders is presented in Table 1 of Annex 11. A summary list is presented below.

*Indigenous* communities: Cofanes (ZIO organization).

*Non-Indigenous communities/ Campesino Organizations:* Several organizations have already been contacted and include: the Association of Farmers Development *(Asociación para el desarrollo campesino*) and the Farmer' s Association for the Sustainable Development of Northern Boyaca (*Asociación Campesina para el desarrollo sustainable del norte de Boyacá)*.

*NGOs*: A database of over 400 social, environmental and education NGOs working in the Andes was collected during project preparation. A large number of them will be beneficiaries of project activities during implementation. The NGOs consulted during the project design phase are: The Nature Conservancy, Conservation International, WWF-Colombia, Pro-Sierra, the Civil Society Natural Reserves Network.

b. Other key stakeholders:

Other key stakeholders are municipal and departmental governments as well as CARs within project zones (See Table 1 in Annex 11). Also national level institutions such as environment, transport, agriculture and mines and energy ministries, National Planing Department, Parks Unit.

**8. Checklist of Bank Policies**

a. This project involves (check applicable items):

| | | | |
|---|---|---|---|
| [x] | Indigenous peoples (OD 4.20) | [ ] | Riparian water rights (OP 7.50) (BP 7.50) (GP 7.50) |
| [ ] | Cultural property (OPN 11.03) | [ ] | Financial management (OP 10.02) (BP 10.02) |
| ] | Environmental impacts (OP 4.01) (BP 4.01) (GP 4.01) | [ ] | Financing of recurrent costs (OMS 1.21) |
| [x] | Natural habitats (OP 4.01) (BP 4.01) (GP 4.01) | [ ] | Local cost sharing (OP 6.30) (BP 6.30) (GP 6.30) |
| [x] | Gender issues (OP 4.20) | [ ] | Cost-sharing above country three-year average (GP 6.30) (OP 6.30) (BP 6.30) |
| [ ] | Involuntary resettlement (OD 4.30) | [ ] | Retroactive financing above normal limit (OP 12.10) (GP 12.10) |
| [x] | NGO involvement (GP 14.70) | [ ] | Disputed territory (OP 7.60) (BP 7.60) (GP 7.60) |
| [x] | NGO involvement (OP 4.36) | [ ] | Other (provide necessary details) |

b. Describe issue(s) involved, not already discussed above:

**F: Sustainability and Risks**

**1. Sustainability**

The project will promote integration of biodiversity concerns with other sector policies and it will work towards intersectoral coordination that takes biodiversity and sustainable resource use into consideration. This will help influence the investments of the country, complementing and redirecting resources towards Andean Region use of biodiversity. Joint financial efforts of different sectors to promote Andean Region use will generate a larger positive impact on biodiversity.

- Each component of the project will attempt to put in place self-financing mechanisms to recover the initial investment and/or to make the project financially viable in the long term. These mechanisms will include those that generate income for local communities and for public and private organizations involved in biodiversity conservation.

- The project will design, adapt and promote incentives and other economic instruments for sustainable agricultural production (such as compensation for environmental benefits and services) when appropriate and feasible. Pilot projects will be undertaken in project sites in order to implement and test these instruments.

- The project will put in place ecotourism programs in protected areas where appropriate. Income generated from service fees and concessions will be used to maintain the protected areas and to promote Andean Region use of biodiversity in areas in and around protected areas.

- The project will aim at making use of the Clean Development Mechanism once it becomes available.

- The project will identify barriers to sustainable use of natural resources and will attempt to remove these barriers.

- The project will promote bio-commerce through facilitating the use of capital funds such as Banco Verde, Latin American Biodiversity Venture capital fund and Environmental Enterprises Assistance fund. For financing in the medium term, the project will establish a fund to support biodiversity-friendly resource use projects and a fund-raising mechanism that will attempt to channel funds from international sources such as Iniciativa de las Americas, ECOFONDO, Iniciativa de Bosques, Biodiversity Venture Capital Fund, resources from Spain, Germany, the Netherlands as well as the Clean Development Mechanism; national sources such as Fondo Nacional de Regalias (conservation areas and micro-catchments),; regional sources such as municipalities, NGOs and CONIF.

- The project will contribute to the reduction of uncertainty and costs and implicit risks in sustainable environmental investments and the creation of new markets by providing information, funds, and institutional and technical assistance as well as training and educational programs.

- The project will encourage the investigation of international markets for new products in agro-forestry and silvicultural systems using mechanisms such as CCI (Corporacion Colombia International).

- The participatory nature of the project will ensure social sustainability of project activities. It will also assist the peace process and the efforts to reconstruct of the damaged social fabric in Colombia by creating democratic, decentralized and efficient institutions, generating employment through participatory and alternative agricultural sector development, and therefore ultimately reducing poverty.

- Institutional sustainability will be further ensured through capacity building in existing institutions that are responsible for or involved in Andean Region use of biodiversity at the national, regional and local levels.

## 2. Critical Risks

| Risk | Risk Rating | Risk Minimization Measure |
|---|---|---|
| Violence | H | Focusing project activities on areas where violence has a low impact on conservation activities |
| Unforeseen land development: | | |
| - Formal (i.e. development plans) | M | Sound selection of project areas through overlays and public participation in agreement with development plans |
| - Informal | M | Areas of high incidence of illicit crops will not be part of project |
| Political support | N | Active participation of GoC in project design and implementation |
| Long-term financial sustainability not achieved | M | Project will establish sources of funds: i) CARs have long-term financing; ii) a fundraising unit will be established |
| Legal rights of people to use biodiversity infringed | N | Project based on incentives |
| Land tenure issues unresolved | M | Project will not buy land; project will define criteria for Fund and accommodate land tenure issues in the field |
| Lack of stakeholder interest (i.e. producer associations, sectoral agencies, decision makers) | M | Project will target identified groups and present benefits of changed practices |
| Intersectoral accords ineffective | M | Follow-up, monitoring and evaluation. Project will initiate publicity campaign and disseminate information about accords among interest groups |
| Corruption | N | Close supervision |
| Technical and institutional capacity inadequate for initiation of rural landscape transformation | H | Project activities dedicated to developing this capacity |
| Local media not sufficiently engaged | M | Program to target local media |
| Productive landscape systems compatible with biodiversity conservation not existent | M | Project investigating alternative income generating activities |
| Unwillingness of producers to participate in productive landscape transformation | H | Funding sources being developed; public involvement being sought; incentives being assessed |

| Risk | Risk Rating | Risk Minimization Measure |
|---|---|---|
| Overall Risk Rating | S | |

Risk Rating - H (High Risk), S (Substantial Risk), M (Modest Risk), N (Negligible or Low Risk)

## G: Grant Conditions

The main grant conditions are summarized in the table below.

| | Conditions of Effectiveness |
|---|---|
| PCU | * TORs, list of qualifications and criteria for evaluation and selection for key PCU staff;<br>* All PCU key staff selected |
| | [not in the Grant Agreement] |
| | *[this is part of the PCU key staff] |
| Financial Management, Audits | * progress satisfactory to the Bank in the carrying out of the Financial Action Plan |
| | [not in the Grant Agreement] |
| Grant Agreement between IAvH and the Netherlands | Signed |
| Cooperation Agreements CARs for 5 macrozones | Signed (amount specified US$500,000 equivalent) |
| Operational Manuals | Completed |

## H: Readiness for implementation

1. a) The engineering design documents for the first year's activities are complete and ready for the start of project implementation. _____
1. b) Not applicable. __X__

2. The procurement documents for the first year's activities are complete and ready for the start of project implementation. __
3. The Project Implementation Plan has been appraised and found to be realistic and of satisfactory quality. ___
4. The following items are lacking and are discussed under grant conditions (Section G):

**I: Compliance with Bank Policies**

1. This project complies with all applicable Bank policies. __X__
2. The following exceptions to Bank policies are recommended for approval. The project complies with all other applicable Bank policies. _____

| | | |
|---|---|---|
| Claudia Sobrevila/Juan Pablo Ruiz | Maria Teresa Serra | Olivier Lafourcade |
| **Team Leaders** | **Acting Sector Manager/Director** | **Country Manager/Director** |

## ANNEX 1: PROJECT DESIGN SUMMARY

COLOMBIA: ANDEAN REGION USE OF BIODIVERSITY IN THE ANDES

| **Narrative Summary** | **Key performance Indicators** | **Monitoring and Evaluation** | **Critical Assumptions** |
|---|---|---|---|
| CAS and GEF objectives:<br>WB: Reduction of poverty and protection and conservation of the environment<br>GEF: Conservation of biodiversity of global importance in the Andean Region<br>GoC: Implementation of National Biodiversity Strategy | | Evolution of CAS dialogue between WB and GoC | |
| Project Development Objective:<br>1. Increased conservation, knowledge and sustainable use of biodiversity of global importance in the Andes. | Improved management of biodiversity in the Andes (100% of the ecosystem types in the Andes representing the APAS; adoption of biodiversity friendly guidelines; and increased knowledge on biodiversity in the region) | Remote sensing at year 1 and year 5 combined with agricultural and biodiversity surveys; international and national use of new information base; awareness surveys of transect of stakeholders in year 1 and year 5 | Violence, poverty, political upheaval, economic restrictions,<br>Unforeseen land development are kept under control. |
| Outputs:<br>Andean Protected Area System more representative, viable and effective. | 6 regional active networks of protected areas established in project conservation zones, with management plans, under implementation<br>Management plans for 50% of existing national protected areas within the conservation zones prepared and implemented<br>1 new National Protected Area established<br>40 new private reserves consolidated<br>30 annual workshops held for dissemination and stakeholder involvement in the establishment of regional networks of protected areas<br>16 workshops held for dissemination and stakeholders involvement in the design and implementation of the management plans of project protected areas<br>50% of remaining ecosystem types | Technical report<br>Management plans<br>Legal instruments of creation at national and regional level,<br>Records of registration | Sustained political will<br>Stability of development trends<br>Long term financial sustainability |

| Narrative Summary | Key performance Indicators | Monitoring and Evaluation | Critical Assumptions |
|---|---|---|---|
| | per ecoregion represented in protected areas | | |
| 2. Incorporation of biodiversity considerations in rural landscape strategies. | 4 biodiversity and socioeconomic surveys of different representative rural landscapes for the identification of conservation opportunities completed<br>4 management tools for biodiversity conservation in rural landscapes evaluated for biological effectiveness and economic viability (e.g. corridors)<br>10 pilot sites with selected management tools implemented and monitored<br>2 management plans for 2 threatened species of global importance completed<br>2 main productive system types evaluated for the identification of practices to increase biodiversity conservation<br>Promotional material for practices and management tools for biodiversity conservation in rural landscapes produced (4 videos, 4 manuals, 15 booklets in accessible language)<br>Replication strategy for larger application of guidelines drafted<br>Package of incentives for Andean Region use of biodiversity designed and promoted<br>Green market promotion program initiated<br>Small grant fund established to promote biodiversity-friendly activities<br>3 of the project zones implemented with examples of adoption of promoted practices and management tools | Technical reports/ collection reports<br>Surveys<br>Report plans<br>Management plans<br>Survey of producers<br>Survey of Land use<br>Guidelines published & disseminated | Long-term financial sustainability<br>Legal rights of people to access biodiversity<br>Land tenure issues<br>Sustained stakeholder interest<br>Sufficient external resources to enable modifications<br>Acceptance of guidelines and management plans by producers<br>Replication strategy adopted and effective |
| Knowledge base of biodiversity expanded, organized for decision making, evaluation of impacts and | Biodiversity baseline for the Andes region built based on available | Collections reports<br>Documented increase | Violence<br>Natural/unnatural |

| **Narrative Summary** | **Key performance Indicators** | **Monitoring and Evaluation** | **Critical Assumptions** |
|---|---|---|---|
| disseminated to stakeholders. | information<br>Replicable methodological scheme for biodiversity assessment and monitoring designed<br>8 comprehensive biodiversity assessments completed, filling major knowledge gaps in the Andes<br>10 institutions and 80 people trained in taxonomy and collection management<br>10 institutions collaborating with the project biodiversity monitoring and assessments<br>2 landcover map updates of the Andes region, 4 years apart, based on satellite imagery completed<br>Biodiversity state pressure-response indicators system implemented, updated, and in use<br>Network of Andean biodiversity databases established<br>15 institutional biodiversity systematized and linked to the network<br>Active internet WebPages, electronic publication and newsletters addressed to decision-makers, scientists and general public<br>15 institutions and 100 people trained in biodiversity information management<br>Biodiversity information kits distributed amongst 1000 schools in project zones<br>100 schools trained for the design and implementation of schoolyard ecology projects<br>30 articles published in national news media<br>4 Andean biodiversity field guides published | in spp cataloged<br>Research papers<br>Annual project impact evaluation reports<br>Document data bases<br>Statistical reports<br>Monthly count of hits on website<br>Surveys of decision makers<br>Surveys of Teachers<br>Articles published | destruction of collections<br>Decision-makers' use of info, effect on plans<br>Effectiveness of educational campaign<br>Effectiveness of media campaign |
| Inclusion of biodiversity considerations in sectoral development programs. | Inclusion of biodiversity considerations in the environmental licensing TORs and on the environmental guidelines of infrastructure, mining, energy and agricultural projects.<br>7 biodiversity workshops on sectoral biodiversity impacts for ministries and sector associations held<br>Biodiversity impact monitoring | Agreements officially published<br>Biodiversity-friendly sector plans published. Minutes of meetings/ final accords published<br>Technical reports<br>Survey of plans | Effectiveness of intersectorial accords<br>Long term financial sustainability of accords<br>Corruption controlled |

| **Narrative Summary** | **Key performance Indicators** | **Monitoring and Evaluation** | **Critical Assumptions** |
|---|---|---|---|
| | reports for selected projects in the project conservation zone | | |
| Project Management, Monitoring and Evaluation | Effective operation of project office | Annual report<br>External project audit<br>Semi annual supervision reports<br>Monthly disbursement reports | Project successfully implemented |
| Major project components:<br><br>Project Conservation Areas | <br><br>$12.53 million | | <br><br>Political support and willingness to participate<br>Technical and institutional capacity sufficient<br>Field work possible due to safety considerations |
| 1.1 Participatory design of conservation zones | $0.68 million | | |
| 1.2 Establishment of new protected areas | $2.95 million | | |
| 1.3 Design and implementation of management plans<br>- Management Plans for national park and regional conservation areas | $8.9 million | | |
| Andean Region Use of Biodiversity in rural Landscapes | $8.97 million | | Production systems compatible with biodiversity are feasible<br>Willingness of producers to participate |
| 2.1 Assessment of biodiversity in rural landscapes | $0.75 million | | |
| 2.2 Development and implementation of management tools to maintain biodiversity in rural landscapes<br>- Landscape management<br>- Endangered and invasive species management<br>- Productive systems management | $4.265 million | | Existent markets for bio-trade exploitation<br>Public participation, interest |
| 2.3 Promotion of biodiversity-friendly resource use practices | $0.35 million | | |
| 2.4 Design of a replication strategy | $0.25 million | | |

| **Narrative Summary** | **Key performance Indicators** | **Monitoring and Evaluation** | **Critical Assumptions** |
|---|---|---|---|
| 2.5 Creation of systems of economic and/or institutional incentives | $0.35 million | | |
| 2.6 Promotion and development of markets for biodiversity-friendly goods and services | $1.505 million | | |
| - Establishment of a mechanism to promote biodiversity-friendly goods and services | | | |
| - Analysis of existing markets and ability of bio-trade goods to penetrate the market | | | |
| - Identification of products and services with potential commercialization | | | |
| 2.7 Creation of a fund to support promotion of biodiversity friendly goods and services and implementation of incentives | $1.0 million | | |
| Knowledge base for decision making, monitoring and evaluation | $5.6 million | | Violence<br>Decision makers interested in integrating biodiversity conservation into their plans |
| Expansion of knowledge base<br>Organization of information<br>Dissemination to stakeholders | $2.5 million | | Decision makers access and digest information presented |
| Implementation of a monitoring system of status-pressure-response biodiversity indicators in the Andes | $1.15 million | | |
| | $0.8 million | | |
| | $1.15 million | | |
| Sectoral Integration | $ 0.86 million | | Sectoral agencies amenable to change |
| Coordination with Colombian ministries | $0.35 million | | Government willing to participate |
| Coordination with producer associations and economic conglomerates | $0.28 million | | |
| Access to other financial resources/incentives<br>Development of a system to monitor environmental licenses for mega-projects | $0.13 million<br>$0.1 million | | |
| Project management | $2.54 million | | |

**Annex 1**

| Narrative Summary | Key performance Indicators | Monitoring and Evaluation | Critical Assumptions |
|---|---|---|---|
| Project administration<br>– national<br>- regional<br>Audits | | | |

## ANNEX 1-A: PROJECT TARGETS FOR END OF PHASE 1

| **Project Outcome** | **Targets for end of Phase 1** |
|---|---|
| Andean Protected Area System more representative, viable and effective | 3 regional active networks of protected areas functioning in project conservation zones<br><br>2 regional protected areas established<br><br>20 new private reserves established<br><br>15 annual workshops held for dissemination and stakeholder involvement in the establishment of regional networks of protected areas<br><br>8 workshops for dissemination and stakeholders involvement in the design and implementation of the management plans of project protected areas |
| Incorporation of biodiversity considerations in rural landscape strategies. | 4 biodiversity and socioeconomic surveys of different representative rural landscapes for the identification of conservation opportunities completed<br><br>2 management tools for biodiversity conservation in rural landscapes evaluated for biological effectiveness and economic viability (e.g. corridors)<br><br>2 main productive system types evaluated to be considered as management tools to increase biodiversity conservation<br><br>Fund to promote conservation incentives designed<br><br>Green market promotion program initiated |
| Knowledge base of biodiversity expanded, organized for decision making, evaluation of impacts and disseminated to stakeholders. | Biodiversity baseline for the Andes region built upon available information<br><br>Replicable methodological scheme for biodiversity assessment and monitoring designed<br><br>4 comprehensive biodiversity assessments completed, filling major knowledge gaps in the Andes |
| Inclusion of biodiversity considerations in sectoral development programs. | 4 biodiversity training workshops for ministries and sector associations employees held<br><br>4 biodiversity workshops on sectoral biodiversity impacts for ministries and sector associations held |

## ANNEX 2: PROJECT DESCRIPTION

A. Project Components

### Component 1: Project Conservation Areas and Protected Areas

This component will promote the consolidation of Colombia' s National Protected Areas System (NPAS) within the Andean region. The NPAS, constituted by the "Sistema de Parques Nacionales Naturales" (SPNN, National Parks) and protected areas of regional and local character including private reserves has currently established an overall system of coordination and policy guidelines. This component will support this government system by testing some of its elements in key protected areas. Because all the existing protected areas of Colombia cannot be supported under the current project, priorities have been established. During preparation, priorities were established by first selecting the project conservation priority zones (see previous section on Strategic Choices) and then by selecting which protected areas within each conservation zone would be supported under this component. Selection criteria for the conservation zones included: representativity of ecosystem types within the NPAS, potential effectiveness, as well as social and institutional viability for working in this zone. Eleven candidate zones have been identified, although only 8 to 10 will actually be implemented. The reasons for choosing more candidate zones than the actual zones is to have some back-up zones available in case the socio-political characteristics of the zones change with time. From these eleven, five have been selected for Phase 1: the Northeastern Paramos and Moist Forests, the Alto Putumayo, the Dagua-Calima-Paraguas Corridor, the Altiplano Cundiboyacence, and los Nevados Parks and neighboring coffee area. During project preparation, the identification of which existing protected areas will be supported has been done for Phase 1. The criteria used included: significance of the protected area within the NPAS, biodiversity and ecological representativeness, institutional capability and social and political climate. Specifically, protected areas to be supported under Phase 1 include: Cocuy, Tamá, Pisba, Los Nevados, Otun-Quimbaya and Isla de la Corota (for more details see Table 1 in Annex 11).

This component will support activities at two levels, one is at the protected areas level and the other is at the conservation zones level. Both levels of work are needed since lessons from protected areas management have clearly shown that protected areas cannot be seen as isolated units within the landscape, but need to be addressed within a larger biogeographical and social context. The current project will address both levels in parallel and each level will be providing constant feedback to each other on the results attained.

In the following sections, the general activities to be supported under this component are described. The biodiversity threats and the underlying causes of biodiversity loss for each conservation zone have been identified and are summarized in Table 1 of Annex 11. This threat analysis has allowed the preparation team to preliminarily identify which specific activities would be supported for each zone and protected area. For a detailed list of activities for each zone and park, refer to Table 1 of Annex 11. The specific

activities will be finalized once the plans for the protected areas and for the conservation zones are concluded.

1) Strengthening Existing Protected Areas: Based on the threat analysis described above, a summary of the most critical investment needs for the following Phase 1 protected areas has been prepared: Cocuy, Tamá, Pisba, Los Nevados, Otun-Quimbaya and Isla de la Corota (see Table 1 – Annex 11). For the Phase 2 protected areas or for new protected areas that would be identified in the next section, a common framework that includes the following guidelines will be used:

- Needs for more assessments and inventories.
- Needs for stakeholders consultation.
- Demarcation – identify and evaluate demarcation needs.
- Zoning schemes and use categories proposals.
- Personnel - Description of personnel needs assessments, review of current personnel - and staffing levels as well as requirements to properly manage and carry out enforcement activities, training assessment and plans for training current staffing levels, etc..
- Infrastructure improvements: description of current situation, estimates of what is needed; methodology for assessment (WWF, IUCN, TNC parks in peril, Consolidation Scorecard, forest innovations, etc.)
- Identification of surveillance, community outreach and educational programs.
- densification of monitoring programs.
- Buffer Zone management issues and proposed activities.
- Social Assessments. The need for social assessments with a brief description of -the current social situation; proposed activities, possibilities for co-management or involvement of social groups in or around the areas.
- Identification of potential partners and the basis for their participation.
- Risks: an assessments of the factors that could put the project at risk or jeopardize its sustainability.

Every year, the IAvH will submit to the Bank an Annual Operating Plan describing in details the activities that will be carried out through grants. Once approved by the Bank, the IAvH will seek grant proposals to carry out the plans and investments in each Park. The National Parks Administrative Unit (UAESPNN), the Regional Autonomous Corporations (CARs), the Civil Society Reserves Network, NGOs and local community organizations will apply for these grants.. The selection criteria to select the organizations to carry out these grants are: a) that there are no land tenure or land use conflicts; b) established presence in the local area; c) technical expertise for the activity proposed; d) proven track record in successful conservation work; e) counterpart funds; f) administrative capacity; and g) proven experience in participatory processes. All procedures for calling the grants and selecting the grantees are spelled out in the

Operational Manual. For Phase 2 protected areas, before carrying out any investments in existing protected areas, the IaVH will submit to the Bank a detailed management and investment plan. GEF support would only be for incremental expenditures beyond baseline in existing protected areas.

2) Participatory Design and Implementation of *Conservation Zone* Plans**:** The design of the conservation zones will involve a highly participatory process including different stakeholders within each zone. This process already started during project preparation for some of the conservation zones. This participatory process will contribute to build a new relationship between traditional managers of protected areas and local communities (campesinos, indigenous, and afrocolombians among others). Workshops and meetings will be organized to unify conservation criteria and develop a participatory conservation plan for each zone. A flexible participatory strategy will be applied according to each zone, based on lessons learned in similar processes seeking to integrate the interests and goals of communities, governmental institutions and private initiatives. Technical studies for each conservation zone will be carried out to improve the quality of the information available for conservation plans. The major aspects of these plans will include: a) identification of conservation gaps within the zones and of conservation opportunities to fill them, b) identification of the social and institutional strengthening needs to carry out biodiversity conservation; c) design of a protected areas system; d) identification of key actions to ensure the implementation of the system and promote inter-institutional integration; e) identification of partners to implement project activities and f) cooperation in biodiversity conservation and management information flow to stakeholders will assure well-informed decision making throughout the participatory processes to prepare the plans. A promotional program in local media and written materials will be implemented in each area to disseminate to the local general public the objectives and evolution of the conservation zone plans.

The plans will be submitted to the Bank before investments are carried out. In particular, if the plans identify the need to create a new protected area, a plan for creating the new area will be submitted to the Bank to ensure that the social safeguards in Annexes 11, 12 and 13 are being followed. The only new National park foreseen to be created is in the Alto Putumayo. The plans to create new areas will include: a) detailed characterizations of the areas from a biological and a socioeconomic perspective, b) proof that land tenure and use are resolved, c) consultation, d) legal definition of the area and e) proposal submitted to the government authority. Execution of this activity will be carried out by IAvH through grants to the National Parks Administrative Unit (UAESPNN), the Regional Autonomous Corporations (CARs), the Civil Society Reserves Network, the IAvH and other NGOs. The procedures for selecting the grantees have been agreed and are spelled out in the Operational Manual which is a condition of Grant Effectiveness. Once new protected areas are created, they can become eligible to be supported under the activity above (Strengthening existing protected areas).

**Component 2: Andean Region Use of Biodiversity in Rural Landscapes**[9]

The Andean Region use of biodiversity in rural landscapes is a crucial component for an integral biodiversity conservation strategy for the whole Andean region. This is important because some ecosystem types and threatened species are exclusively found in landscapes modified by agricultural practices. In addition, these rural landscapes harbor wild relatives of commercial crops and traditional cultivars. This component lays the groundwork to promote long-term conservation of biodiversity in transformed landscapes that still maintain biodiversity through provision of habitats and/or corridors, which include both production systems and natural habitat remnants. This component will be implemented mainly in the same conservation zones indicated in Component 1. Within this component the targeted regions are those covered by transformed landscapes. These regions are inter-Andean valleys, the coffee-growing belt, sub-Andean slopes, and the Eastern Andes plateau.

This field oriented component will specifically support:

1) *Assessments of conservation opportunities in transformed landscapes.* These assessments will evaluate biodiversity associated to different rural landscapes but absent from more pristine areas, as well as socioeconomic conditions. Special attention will be paid so that areas selected for further interventions harbor significant biodiversity (i.e., unique ecosystem remnants, and threatened species), and that areas with biodiversity values too low will be avoided. This information is fundamental to guide the design of landscape management tools and to provide the development of the Regional Systems of Protected Areas (SIRAPS) with field data from transformed landscapes. This subcomponent will be coordinated by the IAvH in close collaboration with scientific, governmental and non-governmental institutions, and autonomous regional corporations with expertise in biodiversity assessments. The type of assessments that will be supported under this component include: a) remote sensing-based identification of study areas; b) rapid assessments of biodiversity elements associated with elements of rural landscapes under different regimes of production; c) surveys of socioeconomic conditions associated with different production systems; d) identification of threatened species that depend upon transformed landscapes; and, e) identification of invasive species that may represent a threat to biodiversity. The criteria to select the executing institutions for these assessments include: a) previous experience in carrying out assessments; b) qualified professional and technical staff; c) use of state-of-the art methodologies to carry out the assessments; d) expertise in participatory data collection; and e) proven ability to present results in a user-friendly format. These criteria are part of the Operational Manual.

*2) Development of management tools for biodiversity conservation in rural landscapes.* Long-term sustainability of biodiversity in rural landscapes requires suitable habitats as well as connectivity among habitat patches. Habitats with significant biodiversity may include remnants of the original ecosystems and some production

[9] Components 2 and 4 will be closely coordinated. However, given the very strong impact of land use in agriculture on biodiversity, component 2 is solely dedicated to this issue. The inter-sectoral coordination supported through component 4 focuses on the planning aspects of development in the Andes.

systems. Connectivity could be achieved through different landscape management tools such as corridors of natural habitat and some production systems. Management tools to be evaluated and supported under this activity involve: a) habitat corridors, b) enrichment of grassland in dry environments, c) structurally complex production systems such as shade coffee, d) live fencerows and, e) management of threatened species. The threatened species will be selected after the biodirsity assessment have been carried and have identified the critical species to carry out management tools. Also, traditional and modern resource use practices will be evaluated as potential landscape management tools, including comparative analyses from societal and economic points of view. Further, biodiversity based goods and services will be evaluated as means to increase economic interests to sustain biodiversity in rural landscapes.

Significant field experiments to develop rural landscape management tools that promote biodiversity conservation have been carried out during the past and current decade in the Western, Central, and Eastern Colombian Andes by NGOs, universities, and individuals. However, no evaluation on the effectiveness of those already established experiments has taken place or is planned by these institutions. This subcomponent will measure the effectiveness of tools created by natural experiments where management practices have created some desirable landscape configurations. It will measure the effectiveness of the on-going efforts described above, and it will support establishment of new management tools in the field.

Field establishment of new tools (e.g., corridors) will be conducted in places where they could significantly contribute to local conservation efforts, such as the linkage of important habitat remnants. Therefore they will offer experimental information along with actual conservation achievements. They will also contribute data on field implementation costs. Selected rural landscapes types include those dominated by cattle ranching on slopes, coffee production systems, mixed production systems (campesino), timber plantations, and landscapes with Andean wetlands.

This subcomponent will be coordinated by the IAvH and parallel activities will be conducted in different regions by the IAvH, as well as by associated organizations and the CARs. The criteria to select the institutions that will carry out the analysis of the management tools for each topic will be spelled out in the Operational Manual and include: a) analytical skills; b) technical expertise in the topic of the management tool; c) demonstrated on the ground experience in the area of agriculture, agroforestry and related farming practices; d) strong economic background; e) wide knowledge of innovative approached to rural landscape management (if possible, international).

*3) <u>Dissemination of management tools developed during the project</u>*. It is crucial for the success of this project that a dissemination strategy be implemented to promote biodiversity friendly resource use practices. This dissemination strategy will be done through local workshops, specialized workshops for natural resource managers and agricultural technical manuals, publications, videos, etc. This subcomponent will be coordinated by the IAvH. Dissemination activities will be undertaken at the regional level by associated institutions, such as autonomous regional corporations, and NGOs. This strategy is intended to bring together existing institutional and funding resources from the agricultural sector, regional autonomous corporations, and NGOs, so that the management practices will be sustainable on the long-term. The overarching goal is the

inclusion of biodiversity considerations in agricultural practices, as well as in the design and management of private and regional systems of protected areas.

4) *Development of a system of institutional and economic incentives* that would allow sustainable implementation of the management tools developed during this project beyond the period of the project. This strategy acknowledges the fact than conservation may imply costs than the producer of the rural sector should not assume for the benefit of the whole society. This subcomponent will bring together institutions that offer or may offer in the future incentives for Andean Region production. The Colombian government has currently incentives that if correctly applied can contribute to conservation, yet these incentives not always have the desired impact. The project will act as a facilitator to bring together different sources of incentives, within the areas of action of the project, in order to analyze their impact and to propose more effective applications. The aim is the creation of regional systems of incentives, through a participatory process involving local, regional and national incentive sources. At the local level, the project will work at the sites were landscape management tools will be tested to develop a system of incentives to encourage a more generalized implementation. The project itself will not implement a system of incentives, that will be taken on by institutions that constitute the source of incentives.

As a part of this sub-component, the IAvH will design a funding mechanism to promote markets for sustainable biodiversity goods and services. This fund would support biodiversity-friendly resource use projects that would be selected following transparent criteria. The criteria would include: 1) in eligible areas; 2) is economically viable; 3) is technically, institutionally and socially feasible; 4) has no negative environmental impacts; 5) beneficiaries are organized groups; 6) favors directly or indirectly the conservation of biodiversity. The rules for funding sub-projects will be finalized during Phase I. A consultancy will be supported to determine the administrative structure, requirements for beneficiaries matching contributions, monitoring and evaluation and operational manual. This initial consultancy will be validated through a series of consultative workshops with key social stakeholders. To ensure compliance with GEF principles, the design will take into account the GEF guidelines on best practices and experiences of investment funds designs (1998). This fund will only be invested in the globally significant areas that have already been identified in the project (Annex 18). The manual of the fund to be developed will ensure that GEF will only finance incremental costs. This will require that sources of funds to pay for the baseline be identified and secured before implementing the fund. During the design phase, the following sources will be approached as matching possibilities: Iniciativa de las Americas, ECOFONDO, Iniciativa de Bosques and, Biodiversity Venture Capital Fund. The final design of the fund will also take into account the social participatory processes and Bank environmental guidelines. The participatory processes to be implemented during Phase I will ensure a sufficient degree of participation in the design of the fund. This will ensure that some of the key design issues are maximizing existing mechanisms and that there are no duplication of efforts. Before Phase II, the full design of this incentive funding mechanism will be approved by the Bank before funds are disbursed.

**Component 3: Knowledge Base for Decision Making, Monitoring and Evaluation**

Within the project area, this component would support and expand existing efforts to improve knowledge and monitoring on the different aspects of the regions' biodiversity, its species, ecosystems' fragility and needs for protection. This component would also address the current lack of sufficient knowledge and deficient scientific information of Andean biodiversity to set biodiversity conservation priorities as well as to make decision at national and regional scale. The available and generated information will be organized and disseminated to different audiences: Scientific community, decision-makers, school students and general public. To achieve this, the following activities will be implemented by IAvH:

*1) Biodiversity assessments*: The project will strengthen regional capacity in taxonomy and collections management to improve the Country' s capacity to generate a biodiversity inventory of the Andes. This will be done by strengthening IAvH' s training efforts in taxonomy and unification of a biodiversity inventory collection and a monitoring protocols towards regional universities, UAESPNN and CARs. In the same line, the project will undertake and promote field biodiversity assessments to fill major knowledge gaps in the Andes, mainly western slopes of the Cordillera Occidental, Paramillo, San Lucas, Perijá, eastern slopes of Cordillera Central. Field information together with satellite imagery and geographical information systems will be used to generate a biodiversity baseline of the Andes and to monitor it throughout the project and beyond. Basic information of this baseline will be a 1:500.000 natural ecosystems and remnants as a result of coordinating and supporting CARs isolated mapping efforts. Additionally, species distributions in the Andes will be verified and updated for all bird species and for other groups such as *Rubiaceae* and *Melastomataceae* This will contribute to recognize the importance of endemic, sensible and threatened taxonomic groups in the Andes as well as to identify biological groups of economical importance

*2) Building of a Decentralized Biodiversity Information System*: A biodiversity information system for the Andean region of Colombia will be developed in order to facilitate access to existing and new information to decision-makers, scientists, and the general public, among others. IAvH is designing this system as a decentralized network of institutional databases. Institutions and individuals providing and using information will access data from all databases of the network through a standardized protocol, such as the Kansas University Z3950 protocol. This kind of protocols allow access to on-line databases in any kind of software platform provided a description of the database is available. Databases in the network will share a minimum number of information fields so that a standard view can be defined for each database type so the user will receive the same view regardless of the platform on which the consulted databases are stored. A web site for this decentralized Biodiversity Information System will be created. As well as offering access to the networked databases, the site will offer processed information products such as species distributions, endemism spots and threatened species concentration spots according to identification of needs by users bringing together information providers and users. Key information providers include research institutions, universities, relevant government agencies, non-government organizations, botanical gardens and other ex situ conservation centers, among others. These institutions have

significant amounts of information available, gathered over many years, in the form of biological collections, reports, and publications. In a few cases the information is organized in a manner that is readily available and easily accessible for users, but in general this is not the case. Therefore a special effort will be made to build the capacity to establish this network, through training, technology transfer and promotion of cooperation on taxonomy, databases, and geographical information systems. Work has already started and collaborative agreements are already signed for institutional strengthening and systematizing information of biological collections and biodiversity in general with the main botanic gardens of the Andes (7) and biological collections and universities such as Javeriana, Antioquia, del Valle, del Cauca and Nacional.

*3) Implement a Dissemination and Public Awareness Program*: The program includes activities designed to disseminate information on biodiversity in the Andes to different audiences: decision-makers, scientists, school students and the beneral public, according to their different information requirements and using different communication strategies. Workshops and publications addressed to decision-makers will be coordinated with Component 4. An Internet site for the biodiversity information system built with newsletters and electronic publications will be established. School students in project zones will be addressed by replicating IAvH' s experience in Villa de Leyva in training teachers and producing material to include biodiversity in school PRAES (environmental school projects demanded by the Colombian legislation). Field guides on specific groups such as birds, amphibians and reptiles will be produced to reach researchers and amateurs and increase national and international awareness of Andean biodiversity. Materials will also be prepared for broadcasting through national and regional media.

*4) Implement an Indicator System Of Biodiversity State-Pressure-Response*: This Indicator system will include biological and socioeconomic information to monitor the current status of biodiversity in the Andes, the evolution of the pressure on it and its response to national policy and project measures. The system and its implementation strategy has already been designed (document in project files).

**Component 4: Intersectoral Coordination**

Under this component, studies and training would be provided to relevant government agencies, and third parties (private sector) to promote the inclusion of biodiversity goals in sector development plans for the Andes. The IAvH will be implementing this component. This would be accomplished through:

*1) Coordination with Colombian Ministries and with sector associations and economic conglomerates:* Workshops on biodiversity, sectoral biodiversity impacts and intersectoral planning for ministries and sector associations will be organized to strengthen the concept of biodiversity amongst different sectors and institutions. These workshops will also serve to disseminate the information collected and systematized in Component 3 and the results attained under Components 1 and 2 that will be presented in the most appropriate format to ensure the effective inclusion of biodiversity concerns in

decision making. In addition, the project will support the inclusion of environmental licensing procedures at the Ministry of Environment level to introduce relevant biodiversity variables in the licensed terms of reference and on the environmental guidelines of infrastructure, mining, energy and agricultural projects. This would be a consultative process with the relevant ministries, associations, economic conglomerates and other key stakeholders.

*2) Monitoring biodiversity trends in large-scale development projects*. Besides reinforcing sector coordination and planning, it is necessary to follow-up effects on biodiversity arising from mega projects. In particular those that may have a negative effect on the Andes biodiversity and on the project zones. This will be achieved by monitoring biodiversity impact of selected projects and using the collected information to improve sector coordination and planning as well as the environmental licensing procedures. This will also serve to create an alert system to identify possible threats to the current project. Significant development projects with major impacts on biodiversity in the project zones will be selected. This will be done by keeping track of development projects in the project zones and evaluating their development stage and environmental requirements in the licensing process. These projects will then be ranked and prioritized depending on their potential negative impact on biodiversity. The project will not finance Environmental Impact Assessments, but will track cumulative impacts and threats in the areas.

**Component 5: Project Management and Project Monitoring**

The project would support the needed administrative team, including one national coordinator, four technical coordinators for components 1, 2, 3 and 4, and three regional project coordinators in addition to the administrative staff. The project will support:

i) the above-mentioned project administration and coordination staff, their assistants, office costs, facilities rental, administrative costs and transport;

ii) annual audits of the project; and,

iii) developing and implementing a monitoring system of the implementation of the project.

A more detailed description of the administrative structure is presented under institutional arrangements.

## ANNEX 3: PROJECT COSTS

| | Components/ activities | TOTAL | GEF | Dutch | CARS | laVH | Other |
|---|---|---|---|---|---|---|---|
| 1 | Project Conservation Areas | 12530000 | 5840000 | | 5840000 | 200000 | 650000 |
| | Component Coordination Monitoring and evaluetion | 300000 | 300000 | | | | |
| 1.1 | Design of Conservation Areas | 680000 | 340000 | | 340000 | | |
| | 1.1A Participatory Design of Conservation Areas | 340000 | 340000 | | | | |
| | 1.1B Consolidation of Participatory Design of Conservation Areas | 340000 | | | 340000 | | |
| 1.2 | Establishment of new protected areas | 4050000 | 1200000 | | 2000000 | 200000 | 650000 |
| | 1.2.1A One New National Conservation Area | 550000 | 550000 | | | | |
| | 1.2.1B Detailed biológical characterization of final new area | 200000 | | | | 200000 | |
| | 1.2.2. Regional Protection areas design and declaration (10) | 2000000 | | | 2000000 | | |
| | 1.2.3A. 25 new private reserves established | 650000 | 650000 | | | | |
| | 1.2.3B. 25 new private reserves established | 650000 | | | | | 650000 |
| 1.3 | Design and Implementation of Management Plans of 6 protected areas | 7500000 | 4000000 | | 350000 | | |
| | 1.3A Design and Implementation of Management Plans of 6 protected areas | 4000000 | 4000000 | | | | |
| | 1.3B Design and Implementation of Management Plans of regional protected areas | 3500000 | | | 3500000 | | |
| 2 | Conservación y uso sostenible de biodiversidad en paisajes rurales | 8470000 | 3967500 | 3032500 | 1402500 | 67500 | |
| | Component Coordination, Monitoring and Evaluation | 540000 | 540000 | | | | |
| 2.1 | Evaluación de biodiversidad en paisajes rurales | 795000 | | 552500 | 242500 | | |
| 2.2 | Desarrollo e implementación de herramientas de manejo para conservar biodiversidad en paisajes rurales | 3970000 | 510000 | 2300000 | 1160000 | | |
| | 2.2.1. Herramientas de manejo del paisaje de los recursos naturales y sistemas productivos | 3460000 | | 2300000 | 1160000 | | |
| | 2.2.2. Red books production support and threatened species | 410000 | 410000 | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | management plans | | | | | | |
| | 2.2.3 Fortalecimiento de capacidad humana in rural landscape management | 100000 | 100000 | | | | |
| 2.3 | Creation of systems of economic and/or institutional incentives | 355000 | 175000 | 180000 | | | |
| | 2.3.1A First Phase (3 años) of participative design of regional and local incentive systems | 180000 | | 180000 | | | |
| | 2.3.1B Second Phase (3 años) of participative design of regional and local incentive systems | 175000 | 175000 | | | | |
| 2.4 | Promotion and development of markets for biodiversity-friendly goods and services | 1390000 | 1322500 | | | 67500 | |
| 2.5 | Dissemination and replication strategy of 2.2 to 2.4 | 470000 | 470000 | | | | |
| 2.6 | Creation of a fund to promote biodiversity friendly goods and services and to implement incentives | 950000 | 950000 | | | | |
| 3 | Knowledge base for decision making, monitoring and evaluation | 5600000 | 3077500 | 1409000 | 735000 | 222500 | 156000 |
| | Component Coordination, Monitoring and Evaluation | 330000 | 330000 | | | | |
| 3.1 | Expansion - Construction and complementation of baselines | 2360000 | 845000 | 1000000 | 315000 | 200000 | |
| | 3.1.1A. 3 Field Characterizations | 495000 | 495000 | | | | |
| | 3.1.1B. 5 Field characterizations, data postprocesing and storing | 1515000 | | 1000000 | 315000 | 200000 | |
| | 3.1.2. Ecosystems map update | 250000 | 250000 | | | | |
| | 3.1.3. Training program to fortify national capacity to complete inventories and maintain collections | 100000 | 100000 | | | | |
| 3.2 | Descentralized Biodiversity Information System | 1290000 | 1081500 | | 195000 | 13500 | |
| | 3.2.1. Design and Implementation of an Information management strategy | 65000 | 65000 | | | | |
| | 3.2.2. System Management and development of information management and analysis tools | 650000 | 636500 | | | 13500 | |
| | 3.2.3. Training and capacity building in information management | 115000 | 115000 | | | | |
| | 3.2.4. Infrastructure development and data capture of 10-15 regional System | 265000 | 265000 | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Nodes | | | | | | |
| | 3.2.5 Strengthening of system nodes | 195000 | | | 195000 | | |
| 3.3 | Dissemination and Public Awareness | 790000 | | 409000 | 225000 | | 156000 |
| 3.4 | Biodiversity status-preassure-response indicators system | 830000 | 821000 | | | 9000 | |
| 4 | Inter-sectoral coordination | 860000 | 500000 | | | | 360000 |
| 4.1 | Impact Analysis of current policies, workshops, training of Colombian ministries, sector associations and economic conglomerates | 330000 | 330000 | | | | |
| 4.2 | Inclusion of biodiversity in sectoral policies | 360000 | | | | | 360000 |
| 4.3 | Monnitoring project threatening mega-projects | 170000 | 170000 | | | | |
| 5 | Project Management | 2540000 | 1615000 | 311000 | | 614000 | |
| 5.1 | Project administration | 2440000 | 1530000 | 296000 | | 614000 | |
| 5.2 | Audits | 100000 | 85000 | 15000 | | | |
| | | | | | | | |
| | TOTAL | 30000000 | 15000000 | 4752500 | 7977500 | 1104000 | 1166000 |
| | | | | | | | |

## ANNEX 4: INCREMENTAL COST ANALYSIS SUMMARY

Biodiversity conservation in the country as a whole, and in the Andes specifically, has taken on greater prominence in the last five years. The Government of Colombia (GoC) has adopted a National Biodiversity Policy which has led to a Biodiversity Strategy and Action Plan, both of which prominently feature the importance of the Andean region. Direct on-the-ground investments in biodiversity conservation have been less apparent, but the Ministry of the Environment created the Instituto Alexander von Humboldt five years ago and, through them, is financing a great variety of important activities in biodiversity conservation.

An estimate of the Baseline Scenario for such investments (what would have been spent in the absence of a GEF project) is presented below, together with the level of investments under the Alternative Scenario with a GEF project. The difference between the Baseline Scenario and the Alternative Scenario is thus conservatively estimated at $30.0 million which we feel could be argued are all global benefits because of the direct linkage with conservation in one of the world's hotspots of biodiversity. Nevertheless, only 50 % of these global benefits are to be covered by investments from the Global Environment Facility.

### Baseline Scenario

Without intervention of the GEF, the Andes would likely continue on the current path of unsustainable development. Past pressures from increased urbanization, cultivation, grazing, etc. have led to 63% of the area being intervened. There is a loss of natural habitat of an estimated 150,000 to 250,000 hectares per annum, despite recent initiatives to protect them. Biodiversity loss in the Andes is actually occurring; for example, 5% of all bird species in the Andes are vulnerable.

The "Plan Indicativo Cuatrienal 1998-2002" published by the Ministry of Environment (MMA) identifies 47 actions to i) conserve and restore priority areas in strategic ecosystems; ii) facilitate sustainable urban and regional development; and, iii) contribute to environmental sustainability in sectors. Most of the actions relate to water issues; but about 60% of the resources are applicable to the Andes, and many of these are supported by the international donor community. Including resources from the international donor community, the national budget and those from the Regional Autonomous Corporations (CARs), in total, it is estimated that there will be an investment of close to $130 million dollars over the next 6 years in the project area targeted to biodiversity conservation.

Project Conservation Areas

The protected areas of the Andes have never been well funded, in part because of insufficient government funding in general for protected areas and the high priority that has been accorded to parks in other regions such as the Chocó and the Amazon. We estimate that baseline government funding for the national park system – specifically targeted to biodiversity conservation - in the project area is equivalent to about $US 7.74 million over the lifetime of the project.

With the decentralization of many state conservation functions that has occurred as a result of the 1991 Constitution and the subsequent Law 99 in 1993 formally moving many functions to the CARs, significant funding for Andean protected areas is provided at the regional level. We estimate that this is currently equivalent to about $11 million/year for the project area.

International Cooperation has traditionally been an important source of funding in Colombia and over the lifetime of the project, it is estimated that support to the conservation zones of the project will be provided by Canada, international initiatives, and NGOs (including WWF, TNC, and IUCN) and will amount to about $15.0 million.

Finally, support for privately managed nature parks in Colombia is strong because of an innovative but incipient legislation and policy environment which supports incentives for landowners to protect their forest resources. We could measure this support by calculating the incentive payments that have been made by the government (this greatly underestimates the true level of financial support that private landowners provide by choosing to participate in this program but this would be very difficult to calculate).

Andean Region Use of Biodiversity in Rural Landscapes

It is considered extremely difficult to quantify the current levels of baseline financing in the area of promotion of biodiversity in rural landscapes. In effect, vast numbers of projects and rural investments in the area of watershed management, social forestry, etc. are already taking place in this area. Although extremely conservative and admittedly somewhat arbitrarily, we include here under the Baseline Scenario only those investments in the project area that very explicitly address issues of biodiversity conservation in rural landscapes using a similar approach to that of the agrobiodiversity component of the planned GEF Project. We estimate this at $34.8 over the lifetime of the project (see Table). These projects are funded by the GoC ($0.32), by the CARs through Biocomerce ($13.4), and by international co-financiers, including Spain ($20.1). Finally, we consider a somewhat arbitrary figure of $1.0 as the contribution from private landowners to maintain biodiversity in their rural productive landscapes.

Knowledge Base for Decision Making, Monitoring and Evaluation

Government funding for the IAvH over the first three years of its existence have amounted to about US$ 3.5 million/year. The primary function of the Institute is precisely the generation, organization, and dissemination of biodiversity knowledge. Of total government funding we estimate that about $1.57 million can be considered to be of direct importance to conservation of biodiversity in the regions that this project is being implemented.

Currently, there is only limited funding in the area of biodiversity knowledge management from the CARs ($0.2 million) or from the private sector ($0.06 million).

Sectoral Integration

A great many projects and investments are underway in Colombia which address root causes of loss and unsustainable use of biodiversity in the Andes. To the degree that poverty and rural violence are considered root causes, it could even be argued that billions of dollars will be invested over the lifetime of the project in this area.

This component of the project is concerned however with the investment being made to reorient existing sectoral programs to make them more compatible with the goals of the project. Of particular concern to the project are the programs or projects in sectors that can

have direct negative consequences on the project outcomes (transport policy, energy policy, agricultural programs, etc.) but also of interest is the possibility of more specifically introducing biodiversity concerns into more neutral programs (such as social violence initiatives).

It is very difficult to calculate what the Baseline Scenario might be for this component. Its true value might reflect some part of the investments in environmental impact assessments for virtually all projects in the Andes, the opportunity cost of program and project changes to reflect biodiversity concerns, the cost of extra studies being done on biodiversity, etc. We arguably estimate the value of this component under the Baseline Scenario as being about $3.54 million over the lifetime of the project.

**Baseline Costs.** Total expenditures under the baseline Scenario are estimated at US$ 128.93 million, including US$ 9.75 million from the Government of Colombia, US$ 80.06 million from the Regional Autonomous Corporations, US$ 35.52 million from international cooperation, and US$ 3.6 million from private donors.

**Baseline Benefits.** Implementation of the Baseline Scenario will result in limited protection of biodiversity in protected areas in the Andes Region of Colombia, and limited capacity to manage them sustainably. Due to the fiscal crisis in Colombia, the budget for national park management has been limited, and efforts for biodiversity conservation hindered. The CARs are currently not directly involved in conservation of biodiversity, except in limited cases of regional protected areas. The efforts of international and national NGOs will result in a marginal increase in environmental awareness, and activities of development agencies will result in a limited increase in sustainable natural resource management. International donors have invested limited resources in "biomarket" initiatives in short-term, very small-scale demonstration projects. These activities, however, are unlikely to ensure protection of globally significant biological resources, due to lack of an explicit focus on biodiversity values as well as institutional, financial, legal and socioeconomic constraints to their protection.

**Alternative Scenario**

**Scope.** The GEF Alternative will build on the Baseline Scenario by (a) supporting the development of a more representative, effective, and viable Andean protected area system; (b) identifying innovative conservation opportunities in rural landscapes, developing and promoting management tools for biodiversity conservation; (c) expanding, organizing, and disseminating the knowledge base on biodiversity in the Andes to a wide audience of stakeholders and policy makers, and implementing monitoring tools; and, (d) promoting inter-sectoral strategies to address some root causes of biodiversity loss in the Andes, ultimately influencing development scenarios in the Andes to better reflect the importance of conserving and sustainably using biodiversity. The GEF Alternative will make possible activities that are not possible in the Baseline Scenario, including national and regional capacity building, and an expanded scientific knowledge base, enabling prioritization of the needs for protected area interventions and replication of the experience gained at the project sites throughout the Andes region. Information will be disseminated in a format readily available to decision-makers. Furthermore, the experience of participatory design of

management plans – both for protected areas and production systems – will be disseminated through a website and a series of workshops, and the project will establish both national and community-based mechanisms to support conservation-friendly development. It will also build public awareness of the importance and need to conserve Andean biodiversity. Finally, the project will seek international sources of funding for sustainable financing of some of the activities that are of a long-term nature.

**Costs.** The total cost of the GEF Alternative is estimated at US$ 158.93 million, detailed as follows: (a) Conservation Areas – US$ 102.27 million (*GEF financing – US$ 6.06 million*); (b) Rural Landscapes – US$ 42.79 million (*GEF financing – US$ 4.30 million*); (c) Knowledge Base – US$ 7.93 million (*GEF financing – US$ 3.60 million*); (d) Sectoral Integration – US$ 4.40 million (*GEF financing – US$ 0.50 million*); and, (e) Project Management – US$ 1.54 million (*GEF financing – US$ 0.54 million*).

**Benefits.** Implementation of the GEF Alternative will protect the area of the globe with the highest concentration of biodiversity, through both demonstrated and innovative measures. Benefits generated from the project will include those classified as "national" (protection of local and regional environmental resources and increased public awareness of environmental issues), as well as those considered "global" (sustainable conservation of some of the last remaining natural habitats in the Andes, and conservation of threatened and vulnerable plants).

**Incremental Costs.** The difference between the costs of the Baseline Scenario (US$ 128.93 million) and the GEF Alternative (US$ 158.93 million) is estimated at US$ 30.0 million. This represents the incremental cost for achieving global environmental benefits. The Regional Autonomous Corporations have committed to financing US$ 88.06 million, including US$ 8.0 million towards incremental costs, complementing the GEF financing of a proposed grant of US$ 15.0 million. The Government of the Netherlands has confirmed their US$4.0 million pledge towards the project – and additional international resources are expected, which would total US$ 7.0 million. Private landowners and industry are expected to participate in both the Protected Areas component and the Rural Landscapes component, and it is estimated that at least an additional US$ 1.0 million will be leveraged by this project.

| | BASELINE SCENARIO | | | | | ALTERNATIVE SCENARIO | | | | | | TERNATIVE MINUS BASELINE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Government of Colombia** | **Regional Corporations** | **International Cooperation** | **Private Sector** | **Total Baseline** | **Government of Colombia** | **Regional Corporations** | **International Cooperation (non-GEF)** | **GEF** | **Private Sector** | **Total GEF Alt.** | **Incremental Cost** |
| Project Conservation Areas | 7.74 | 66.0 | 15.0 | 0.0 | 88.74 | 7.74 | 70.47 | 18.0 | 6.06 | 0.0 | 102.27 | 13.03 |
| Rural Landscapes | 0.32 | 13.4 | 20.1 | 1.0 | 34.82 | 0.32 | 16.43 | 20.11 | 4.30 | 1.63 | 42.79 | 8.97 |
| Knowledge Base | 1.57 | 0.2 | 0.06 | 0.0 | 1.83 | 1.57 | 0.2 | 2.19 | 3.60 | 0.37 | 7.93 | 5.60 |
| Sectoral Integration | 0.12 | 0.46 | 0.36 | 2.6 | 3.54 | 0.12 | 0.96 | 0.22 | 0.50 | 2.60 | 4.40 | 0.86 |
| Project Management | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.54 | 0.0 | 1.54 | 1.54 |
| | | | | | | | | | | | | |
| TOTAL | 9.75 | 80.06 | 35.52 | 3.6 | 128.93 | 9.75 | 88.06 | 41.52 | 15.0 | 4.60 | 158.93 | 30.0 |

| **Component** | **Cost Category** | **US$ million** | **Domestic Benefit** | **Global Benefit** |
|---|---|---|---|---|
| **Conservation Areas** | Baseline | 88.74 | Aesthetic value;<br>Increased capacity for sustainable management of biodiversity and natural resources | |
| | With GEF Alternative | 102.27 | | Conservation of globally-important biodiversity |
| | Incremental | 13.03 | | |
| **Rural Landscapes** | Baseline | 34.82 | Local economic gains, identification and emergence of previously untapped, sustainable markets | |
| | With GEF Alternative | 42.79 | | • Sustainable use of globally-important biodiversity |
| | Incremental | 8.97 | | |
| **Knowledge Base** | Baseline | 1.83 | Scientific knowledge base expansion regarding biodiversity;<br>Increased capacity for sustainable management of | |

| Component | Cost Category | US$ million | Domestic Benefit | Global Benefit |
|---|---|---|---|---|
| | | | biodiversity and natural resources | |
| | With GEF Alternative | 7.93 | | Increased decision-making capacity with impact on international scale;<br>Increased capacity to prioritize conservation area interventions and manage areas to incorporate conservation of biodiversity of global significance |
| | Incremental | 5.60 | | |
| **Sectoral Integration** | Baseline | 3.54 | Better planning, increased local capacity;<br>Demonstration of options for planning, establishment and long-term monitoring of sustainable natural resource management in Colombia;<br>Increased public awareness of environmental issues and the need for sustainable natural resource management in and around the project sites | |
| | With GEF Alternative | 4.40 | | Increased capacity to integrate biodiversity of global significance into sectoral policies;<br>Increased public awareness of the importance of conservation of globally significant biodiversity in Colombia, and of issues that need to be addressed in order to achieve the objective |
| | Incremental | 0.86 | | |
| **Project Management** | Baseline | 0.0 | Not applicable | |
| | With GEF Alternative | 1.54 | | Not applicable |
| | Incremental | 1.54 | | |
| **TOTAL** | **Baseline** | **128.93** | | |
| | **With GEF Alternative** | **158.93** | | |
| | **Incremental** | **30.0** | | |

## ANNEX 5: FINANCIAL SUMMARY

Project Years 1 to 5

(projections in US$ millions)

| **Project Costs** | **Implementation Period** | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
| TOTAL (US$M): | 3.9 | 4.5 | 6.0 | 6.0 | 4.0 | 3.4 | 2.2 |
| **Financing sources (US$M)** | | | | | | | |
| GEF | 1.5 | 2.0 | 3.0 | 3.0 | 2.5 | 2.0 | 1.0 |
| The Netherlands | 1.0 | 1.0 | 1.0 | 1.0 | 0.0 | 0.0 | 0.0 |
| Local Governments (CARs) | 1.0 | 1.0 | 1.5 | 1.5 | 1.0 | 1.0 | 1.0 |
| Other local | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.0 |
| Other donors | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 |

## ANNEX 6: PROCUREMENT AND DISBURSEMENT ARRANGEMENTS

### A. PROCUREMENT ARRANGEMENTS

There will be no works. All procurement of goods under the Project would be carried out in accordance with the *"Guidelines, Procurement under IBRD Loans and IDA Credits"* dated January 1995 and revised in January and August 1996, September 1997, and January 1999. Consultants would be employed in accordance with the "*Guidelines, Selection and Employment of Consultants by World Bank Borrowers"* dated January 1997 and revised in September 1997 and January 1999.

Procurement of goods and selection of consultants for Project coordination would be carried out by the *Instituto de Investigación de Recursos Biológicos Alexander Von Humboldt* (the Institute) as the recipient of the Grant funds. The Institute would have overall responsibility for enforcing that Bank requirements are adhered to by Subproject beneficiaries.

**Procurement Capacity**

An institutional capacity assessment of the Institute was carried out in June 2000, and its outcome discussed on August 31, 2000, with the Regional Procurement Adviser; a subsequent update was also discussed on November 3, 2000.

The Institute has an unusual legal set up; it is a public non-profit Civil Corporation created by Law in 1990. It is linked to the Ministry of Environment but has administrative and judicial autonomy and is guided by private law; thus, it is not bound by Ley 80 (Public Sector Procurement Law).

Although the Institute' s experience is mainly as provider of services to the Ministry of Environment, in recent years, it has also implemented programs financed by international donors such as GTZ, Darwing Initiative (U.K.), Smithsonian Institution, etc. The Institute is adequately staffed to handle current workload. Its administrative body is composed by a Director, an accountant, a financial analyst, a human resources staff, a Procurement Manager, a warehouse staff and two assistants. The staff seems well qualified and motivated.

The Institute follows commercial practices in procuring its goods and services which is based on price comparison. Its experience though is limited to acquisition of minor goods such as office equipment and contracting of individual consultants. No formal competitions, such as open bidding for goods or competitions of proposals for consulting assignments, have taken place since its creation. Typically, the Institute negotiates partnership agreements with other institutions for execution of parts of the programs entrusted to them.

In order to take over the new responsibilities that the Project would entail, the Institute would contract a Project Coordinator, a financial management specialist, a procurement officer and other technical professionals. Terms of reference and qualifications of the three identified posts would be subject to Banks prior review.

The overall risk for procurement is AVERAGE.

**Action Plan**

The following actions are required to be taken by the Institute:

1. Preparation of an Operational Manual specifying procedures and requirements on, among other areas, procurement of goods and selection of consultants, contract monitoring and controls, and accounting-financial procedures. The Manual will also spell out eligibility criteria, procurement procedures and other aspects related to Subproject Grants. In addition, standard documents such as Request for Proposals for consultants, tender documents for national public bidding, solicitation of proposals for shopping procedures, and templates for evaluation of proposals will be contained in the Manual. Submission by Grant Effectiveness.

2. Selection of a qualified Procurement Officer, to work with the Procurement Manager, with experience in procurement and contracting. TORs and selection will be subject to prior review by the Bank. Selection by Grant Effectiveness.

3. Designate staff from the Coordination Unit, admnistrative sections within the Institute, and from potential executing agencies to attend a training workshop on procurement that would be given by the Bank. Workshop to be done at Project initiation.

4. Acquisition of appropriate software, as part of the financial management package, to report procurement operations for PMR-based disbursements. This aspect to be agreed in conjunction with financial capacity assessment of the Institute.

**Procurement Plan**

There is a Global Procurement Plan for the life of the Project and a specific Plan for the first year of operation. The Bank will review and approve yearly Procurement Plans and a related Annual Operating Plan for Project implementation.

The methods described below are based on the capacity assessment and are summarized in Table A.

Goods

The Project would finance computers, and other small office equipment and furniture. Contracts estimated to cost over US$50,000 would be awarded through NCB operations using standard documents to be agreed with the Bank. Contracts estimated to cost under US$50,000, up to an aggregate of US$200,000 would be procured following shopping procedures. No ICB operations are contemplated.

Consultant Services and Training

Consultant services include environmental studies, technical assistance, promotional campaigns, consultation workshops and training. All contracts for complex assignments and those estimated to cost over US$80,000 would be awarded using QCBS procedures. Smaller consulting assignments would be selected through method Based on Consultants Qualifications, up to an

aggregate amount of US$2.6 m. Other services of a straightforward nature would be selected on the basis of Least Cost method, up to an aggregate amount of US$1 m.

Training services would include facilitator fees, training materials, rents, accommodation, meals and transportation expenditures for participants.

Individual consultants will be contracted for Project coordination. Recruitment would be made according to Paragraph 5.1 of the Consultant Guidelines.

Subproject Grants

The Project will finance two types of subproject grants: a) for carrying out conservation plans and investments in National Parks (average size US$110,000), and b) for promoting markets of biodiversity-friendly goods and services (average size US$20,000). Subproject grants would be awarded on a competitive basis to community groups, individual inhabitants or local entities; participants would be required to co-finance in cash or kind and to meet eligibility criteria outlined in the Operational Manual. Standard subproject agreements acceptable to the Bank would be used to transfer funds to the beneficiaries under conditions that would ensure adequate implementation.

Procurement of goods and non-consultant services under the subprojects would follow commercial practices which would include price comparison from three qualified suppliers. In the event that consultant contracts with firms are to be financed as part of a subproject, the selection method required would be "Consultants' Qualifications"; and in the event of individual consultants the procedures would be comparison of three candidates. The Project Coordination would grant exception, on a case by case basis, for direct contracting when it is the only practical option (e.g., remoteness of area, absence of expertise or suppliers, etc.). It would also ensure that requirements are complied with by beneficiaries. These procedures would be stated in the Operational Manual.

**Prior review thresholds**

The proposed thresholds are based on the procurement capacity assessment and are summarized in Table B. Other procurement would be subject to ex-post review which would be carried out one a year by the Bank.

## B. DISBURSEMENT ARRANGEMENTS

A Special Account (SA) shall be established in a commercial bank on terms and conditions acceptable to the Bank. The account will be managed by IAvH. The authorized allocation for the special account would be US$800,000, limited to US$400,000 until disbursement from the GEF trust fund reaches US$1.2 million Under PMR disbursement, the ceiling for the advance to the SA would go up to US$1.5 million. Under PMR based disbursement, withdrawal applications would be submitted quarterly. Until disbursement is made based on PMRs, the IAvH may submit monthly replenishment applications to the SA, supported by the appropriate documentation.. The GEF grant would be disbursed against eligible expenditures as shown in table C. Disbursements would be made on the basis of full documentation for all expenditures made under contracts requiring prior review by the Bank ( table B). For all other expenditures, disbursements would be made against SOEs for which supporting documents would be maintained by IAvH and the beneficiaries and would be made available to the Bank and to the independent auditors for review After the first year, it is anticipated that project financial monitoring mechanisms agreed with PCU will enable GEF funds to be disbursed on the basis of PMRs linked to expected project activities during such quarter. Retroactive financing will be authorized for an amount up to US$500,000. Taxes are not eligible and they will be paid from the counterpart funds. Operating costs include: reasonable expenditures incurred by IAvH for the management of the Project, such as salaries of non-consultant personnel employed by the PCU, travel costs, rentals, maintenance of facilities, consumable materials and supplies, and utilities. Expenditures under Category (5) of table 4 C would only be disbursed after the IAvH has issued a manual, satisfactory to the Bank (the Fund Operational Manual), setting forth detailed rules and procedures for the operation of the Fund, including, inter alia, the criteria for selection of Fund Subproject Implementing Entities and approval of Fund Subprojects, the model form of Fund Subgrant Agreements, and the environmental and social protection provisions applicable to Fund Subprojects.

Annex 6, Table A: Project Costs by Procurement Arrangements[10]

(in US$million equivalent)

| Expenditure Category | Procurement Method | | | | Total Cost (including Contingencies) |
|---|---|---|---|---|---|
| | ICB | LCB | Other | N.B.F | |
| | | | | | |
| **1. Goods** | -<br>- | 0.23<br>(0.22) | 0.12<br>(0.10) | 1.00 | 1.35<br>(0.32) |
| **2. Consulting Services & Training** | | | 5.00<br>(6.95) | 5.00 | 10.00<br>(6.95) |
| **3. Operating Costs 1/** | | | 0.90<br>(1.70) | 0.65 | 1.55<br>(1.70) |
| **4 & 5. Subproject and Fund Grants** | | | 5.50<br>(6.03) | 7.10 | 12.60<br>(6.03) |
| **Total** | ( ) | 0.23<br>(0.22) | 15.02<br>(14.78) | 14.75 | 30.00<br>(15.00) |

1/ Operating costs include office supplies, rents, fuel, utilities, travel expenses etc.

Note: N.B.F. = Not Bank-financed (includes elements procured under parallel cofinancing procedures, consultancies under trust funds, any reserved procurement, and any other miscellaneous items). The procurement arrangement for the items listed under "Other" and details of the items listed as "N.B.F." need to be explained in footnotes to the table or in the text.

Figures in parenthesis are the amounts to be financed by the Bank loan/IDA credit

[10] For details on presentation of Procurement Methods refer to OD11.02, "Procurement Arrangements for Investment Operations." Details on Consultant Services can be shown more easily in the Table A1 format (additional to Table A, where applicable).

**Annex 6, Table B: Thresholds for Procurement Methods and Prior Review[11]**

| Expenditure Category | Contract Value (Threshold) | Procurement (a) Method | Contracts Subject to Prior Review |
|---|---|---|---|
| | **US $ thousands** | | **US $ millions** |
| **1. Goods** | | | |
| | >50 | NCB | First Contract 0.08 |
| | <50 | Shopping | First contract 0.04 |
| **3. Services & Training** | | | |
| Firms | >80 | QCBS | All Contracts 1.60 |
| | <80 | Consultants' Qualification and Least Cost | First Contract, each method 0.11 |
| Individuals | >50 | Chapter V of Consultant Guidelines | None expected |
| | <50 | | |
| | >20 | | All TORs 1.80 |
| | | | |
| **Total value of contracts subject to prior review:** | | | 3.63 |

**Overall Procurement Risk Assessment:**

| | |
|---|---|
| **High** | |
| **Average** | **X** |
| **Low** | |

**Frequency of procurement supervision missions proposed:** One first mission after 6 months of Project initiation and every 12 months thereafter. It is recommended that one every 10 contracts be reviewed for each type of procurement.

[11] Thresholds generally differ by country and project. Consult OD 11.04 "Review of Procurement Documentation" and contact the Regional Procurement Adviser for guidance.

**Annex 6, Table C: Allocation of Loan Proceeds**

| Expenditure Category | Amount in US$million | Financing Percentage |
|---|---|---|
| | | |
| 1. Goods | 0.30 | 85% |
| | | |
| 2. Consultant and Training Services | 6.60 | 100% |
| | | |
| 3. Operating Costs | 1.60 | 85% |
| | | |
| 4. Subproject Grants Conservation in Project Zones | 4.70 | 100% of amounts disbursed |
| 5. Subproject Grants Fund for Biodiversity-Friendly programs | 0.80 | 100% of amounts disbursed |
| | | |
| 6. Unallocated | 1.00 | |
| | | |
| Total | 15.00 | |

**ANNEX 7: Project Processing Schedule**

| Project Schedule | Planned | Actual |
|---|---|---|
| First Bank Mission | 01/09/1999 | 01/09/1999 |
| Appraisal Departure | 11/01/1999 | 11/27/2000 |
| Negotiations | 11/15/2000 | 12/04/2000 |
| Board Date | 03/02/2000 | 01/22/2001 |
| Planned Date Effectiveness | | |
| | | |

Prepared by:
Instituto de Investigacion de Recursos Biologicos Alexander Von Humboldt

Preparation Assistance:
PDF Block B TF 021053

Bank Staff who worked on the project included:

| **Name** | **Specialty** |
|---|---|
| Claudia Sobrevila | Task Team Leader, Senior Biodiversity Specialist |
| Juan Pablo Ruiz | Co-Task Team Leader, Nat. Res. Mgmt. Specialist |
| Walter Vergara | Principal Chemical Engineer |
| Christine Kimes | GEF Regional Coordinator |
| Gonzalo Castro | Biodiversity Specialist |
| Phil Hazelton | Natural Resources Management Specialist |
| Carmen Palaco Nielsen | Procurement Specialist |
| Kirsten Oleson | Operations Analyst |
| Douglas Graham | Biodiversity Specialist |
| Luis Carlos Guerrero | Audit Fellow |
| Maria Elena Castro | Social Scientist |
| Ramón Anria | Program Assistant |

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# Annex 9: STAtement of loans

| Project ID | FY | Borrower | Purpose | Original Amount in US$ Millions | | | | Difference between expected and actual disbursements[a] | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | IBRD | IDA | Cancel. | Undisb. | Orig | Frm Rev'd |
| P006880 | 1995 | Colombia | AGRICULTURE TECHNOLO | 51.00 | 0.00 | 0.00 | 17.47 | 12.37 | -5.23 |
| P044140 | 2000 | Colombia | CARTAGENA WATER SUPPLY & SEWERAGE | 85.00 | 0.00 | 0.00 | 75.75 | 2.05 | 0.00 |
| P006891 | 1998 | Colombia | CO ANTIOQUIA EDUCATION | 40.00 | 0.00 | 0.00 | 35.87 | 12.12 | 0.00 |
| P068762 | 2000 | Colombia | CO COMMUNITY WORKS (MANOS A LA | 100.00 | 0.00 | 0.00 | 100.00 | 3.33 | 0.00 |
| P006854 | 1993 | Colombia | OBRA) | 50.00 | 0.00 | 0.00 | 2.12 | 1.12 | 1.46 |
| P046112 | 1998 | Colombia | CO MUNICIPAL HEALTH SERVICES | 7.20 | 0.00 | 0.00 | 4.84 | 2.51 | 0.00 |
| P050578 | 2000 | Colombia | CO PASTO EDUCATION | 20.00 | 0.00 | 0.00 | 20.00 | 0.70 | 0.00 |
| P006866 | 1994 | Colombia | CO RURAL EDUCATION | 90.00 | 0.00 | 0.12 | 0.06 | -1.62 | -12.42 |
| P050576 | 1999 | Colombia | CO SECONDARY EDUCATION | 5.00 | 0.00 | 0.00 | 3.79 | 2.13 | 0.00 |
| P063643 | 2000 | Colombia | CO YOUTH DEVELOPMENT | 506.00 | 0.00 | 0.00 | 212.99 | 0.00 | 0.00 |
| P065263 | 2000 | Colombia | CO-FSAL | 225.00 | 0.00 | 0.00 | 154.93 | 6.59 | 0.00 |
| P006893 | 1995 | Colombia | EARTHQUAKE RECOVERY | 11.00 | 0.00 | 0.00 | 1.10 | 1.10 | 0.00 |
| P006884 | 1997 | Colombia | ENERGY TA | 15.00 | 0.00 | 0.00 | 11.49 | 9.67 | 0.00 |
| P046031 | 1998 | Colombia | FINANCIAL MARKETS DEVELOPMENT | 5.00 | 0.00 | 0.00 | 0.61 | 0.20 | 0.00 |
| P006852 | 1991 | Colombia | MAGDALENA MEDIO | 60.00 | 0.00 | 0.00 | 2.14 | 2.14 | 0.00 |
| P006868 | 1994 | Colombia | MUNIC DEVT | 39.00 | 0.00 | 0.00 | 15.40 | 13.48 | 15.40 |
| P053243 | 1998 | Colombia | NATURAL RESOURCE MAN | 5.00 | 0.00 | 0.00 | 3.98 | 1.35 | 0.00 |
| P006887 | 1996 | Colombia | PEASANT ENTERPRISE Z | 249.30 | 0.00 | 0.00 | 23.03 | 18.03 | 5.57 |
| P006889 | 1994 | Colombia | POWER MARKET DEVELOPMENT & ENERGY | 30.00 | 0.00 | 0.00 | 1.94 | 1.94 | 0.00 |
| P040102 | 1997 | Colombia | (TA) | 12.50 | 0.00 | 0.00 | 8.82 | 4.82 | 0.00 |
| P006894 | 1996 | Colombia | PUBLIC FINANCIAL MAN | 145.00 | 0.00 | 0.00 | 64.93 | 62.07 | 0.00 |
| P057326 | 2000 | Colombia | REG.REF.TA | 5.00 | 0.00 | 0.00 | 5.00 | 0.00 | 0.00 |
| P039082 | 1999 | Colombia | SANTAFE I (Water/Supply) | 137.10 | 0.00 | 0.00 | 100.00 | 100.00 | 0.00 |
| P039291 | 1996 | Colombia | SIERRA NEVADA SUSTAINABLE | 20.00 | 0.00 | 0.00 | 5.41 | 5.41 | -0.43 |
| P006861 | 1998 | Colombia | DEVELOPMENT | 75.00 | 0.00 | 0.00 | 59.82 | 8.66 | 0.00 |
| P006872 | 1996 | Colombia | TOLL ROAD CONCESSION | 65.00 | 0.00 | 0.00 | 19.55 | 16.39 | 8.39 |
| | | | URBAN ENVIRONMENT TA | | | | | | |
| | | | URBAN INFRASTRUCTURE | | | | | | |
| | | | URBAN TRNSPRT | | | | | | |
| | | | Total: | 2053.10 | 0.00 | 0.12 | 951.04 | 286.56 | 12.74 |

**Annex 9**

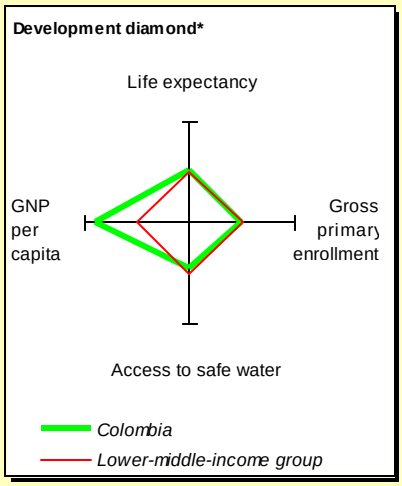
# COLOMBIA
## STATEMENT OF IFC's
## Held and Disbursed Portfolio
## In Millions US Dollars

| | | Committed | | | | Disbursed | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | IFC | | | | IFC | | | |
| FY Approval | Company | Loan | Equity | Quasi | Partic | Loan | Equity | Quasi | Partic |
| 1969/85/88/93/95 | CF del Valle | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1963/90 | Coltejer | 6.02 | 0.00 | 0.00 | 0.00 | 6.02 | 0.00 | 0.00 | 0.00 |
| 1995/99 | Corfinsura | 25.00 | 0.00 | 25.00 | 0.00 | 0.00 | 0.00 | 25.00 | 0.00 |
| 1999 | Harken | 20.00 | 0.00 | 0.00 | 25.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1987 | PRODESAL | 0.00 | 0.59 | 0.00 | 0.00 | 0.00 | 0.59 | 0.00 | 0.00 |
| 1977/89/92/94/96 | Promigas | 7.50 | 0.00 | 0.00 | 16.67 | 7.50 | 0.00 | 0.00 | 16.67 |
| 1994/95 | Promisan | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.23 | 0.00 | 0.00 |
| 1996 | Projectos | 0.00 | 5.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 | 0.00 |
| 1997 | Suleasing | 24.82 | 0.00 | 0.00 | 0.00 | 2.25 | 0.00 | 0.00 | 0.00 |
| 1999 | Surenting | 0.00 | 5.10 | 0.00 | 0.00 | 0.00 | 2.50 | 0.00 | 0.00 |
| | Total Portfolio: | 83.34 | 10.92 | 25.00 | 41.67 | 15.77 | 8.32 | 25.00 | 16.67 |

| | | Approvals Pending Commitment | | | |
|---|---|---|---|---|---|
| FY Approval | Company | Loan | Equity | Quasi | Partic |
| 2001 | Cementos Caribe | 4047.62 | 0.00 | 10000.00 | 12952.38 |
| 1999 | Harken | 0.00 | 10000.00 | 0.00 | 0.00 |
| 2001 | Tolcemento | 3333.33 | 0.00 | 0.00 | 10666.67 |
| | Total Pending Commitment: | 7380.95 | 10000.00 | 10000.00 | 23619.05 |

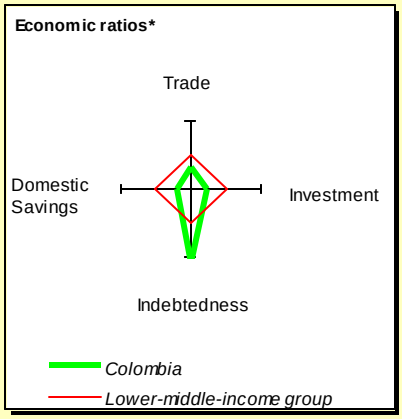
# ANNEX 10: COUNTRY AT A GLANCE

| POVERTY and SOCIAL | Colombia | Latin America & Carib. | Lower-middle-income |
|---|---|---|---|
| **1999** | | | |
| Population, mid-year *(millions)* | 41.5 | 509 | 2,094 |
| GNP per capita *(Atlas method, US$)* | 2.170 | 3.840 | 1.200 |
| GNP *(Atlas method, US$ billions)* | 90.0 | 1.955 | 2.513 |
| **Average annual growth, 1993-99** | | | |
| Population *(%)* | 1.9 | 1.6 | 1.1 |
| Labor force *(%)* | 2.7 | 2.5 | 1.2 |
| **Most recent estimate (latest year available, 1993-99)** | | | |
| Poverty *(% of population below national poverty line)* | 21 | .. | .. |
| Urban population *(% of total population)* | 73 | 75 | 43 |
| Life expectancy at birth *(years)* | 70 | 70 | 69 |
| Infant mortality *(per 1,000 live births)* | 23 | 31 | 33 |
| Child malnutrition *(% of children under 5)* | 8 | 8 | 15 |
| Access to improved water source *(% of population)* | 78 | 75 | 86 |
| Illiteracy *(% of population age 15+)* | 9 | 12 | 16 |
| Gross primary enrollment *(% of school-age population)* | 113 | 113 | 114 |
| Male | 113 | .. | 114 |
| Female | 112 | .. | 116 |

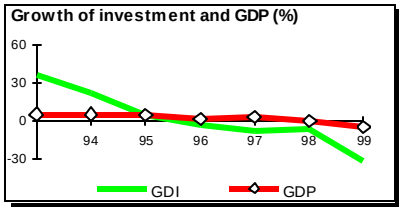



| KEY ECONOMIC RATIOS and LONG-TERM TRENDS | 1979 | 1989 | 1998 | 1999 |
|---|---|---|---|---|
| GDP *(US$ billions)* | 27.9 | 39.5 | 99.1 | 86.6 |
| Gross domestic investment/GDP | 18.2 | 18.5 | 19.5 | 13.0 |
| Exports of goods and services/GDP | 15.2 | 18.0 | 15.0 | 17.8 |
| Gross domestic savings/GDP | 19.9 | 22.7 | 13.6 | 11.0 |
| Gross national savings/GDP | 19.2 | 19.8 | 12.3 | 9.0 |
| Current account balance/GDP | 1.4 | -0.5 | -5.3 | -1.1 |
| Interest payments/GDP | 0.9 | 4.0 | 1.6 | 2.1 |
| Total debt/GDP | 21.0 | 42.7 | 33.6 | 39.9 |
| Total debt service/exports | 14.3 | 48.4 | 30.5 | 43.2 |
| Present value of debt/GDP | .. | .. | 32.7 | 45.1 |
| Present value of debt/exports | .. | .. | 216.5 | 255.6 |

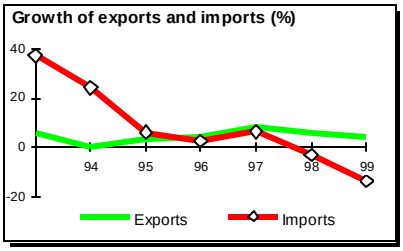
| | 1979-89 | 1989-99 | 1998 | 1999 | 1999-03 |
|---|---|---|---|---|---|
| *(average annual growth)* | | | | | |
| GDP | 3.4 | 3.4 | 0.5 | -4.3 | 2.6 |
| GNP per capita | 0.8 | 1.6 | -0.9 | -7.1 | 1.0 |
| Exports of goods and services | 5.8 | 5.8 | 5.9 | 4.7 | 3.6 |




| STRUCTURE of the ECONOMY | 1979 | 1989 | 1998 | 1999 |
|---|---|---|---|---|
| *(% of GDP)* | | | | |
| Agriculture | 22.0 | 16.6 | 13.3 | 12.2 |
| Industry | 30.3 | 38.2 | 25.7 | 24.8 |
| Manufacturing | 23.0 | 21.6 | 14.2 | 12.9 |
| Services | 47.7 | 45.1 | 61.0 | 62.9 |
| Private consumption | 70.7 | 68.1 | 67.5 | 67.9 |
| General government consumption | 9.3 | 9.2 | 18.9 | 21.1 |
| Imports of goods and services | 13.5 | 13.8 | 20.9 | 19.5 |




| | 1979-89 | 1989-99 | 1998 | 1999 |
|---|---|---|---|---|
| *(average annual growth)* | | | | |
| Agriculture | 2.5 | -2.1 | 0.6 | -0.2 |
| Industry | 4.7 | 1.9 | -1.8 | -11.0 |
| Manufacturing | 2.8 | -1.7 | -0.3 | -12.4 |
| Services | 3.0 | 5.3 | -5.5 | -0.7 |
| Private consumption | 2.6 | 3.5 | 0.8 | -5.1 |
| General government consumption | 4.3 | 8.4 | 0.9 | 4.3 |
| Gross domestic investment | 2.3 | 5.7 | -5.7 | -30.1 |
| Imports of goods and services | 0.8 | 13.2 | -2.8 | -13.5 |
| Gross national product | 2.9 | 3.6 | 1.0 | -5.5 |




Note: 1999 data are preliminary estimates.

* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

## ANNEX 11: SOCIAL ASSESSMENT & PARTICIPATORY PROCESS

A social assessment (SA) and participatory consultations have been completed for the project. Spanish versions of the full SA are available in the project files. In this annex we provide a summary of the socio-economic profile of the Andes Region, identification of the main social issues, a description of the institutional context, description of the consultations, how social issues have been addressed in project design and the action plans, including a framework of social participation. The project, pay special attention to the Indigenous People, carried out consultations with the Indigenous People in the project zones and has completed an Indigenous Peoples Development Plan (IPDP) (see Annex 12). The project will not include any population resettlement as indicated in Annex 13.

### 1. SOCIAL ANALYSIS

Geographical Characteristics Relevant to the Social Context. The Colombian Andes occupy 305.000 km2 representing 31% of the country' s land surface. The Andes Region comprises a complex landscape of valleys; large rivers, the Cauca and Magdalena; high mountain plateaus such as those in Cundinamarca, Boyacá and Nariño, high snow cap peaks such as the Cocuy, active volcanoes such as the Galeras and deep and abrupt depression such as the Catatumbo. All this heterogeneity can be present at very short distances, creating a variety of microclimates and soil types. This diversity of climates and soils had a major impact on human settlements in the region.

Population History. During the 15$^{th}$ Century, when the Europeans colonized America, the largest population settlements were on the Caribbean Coast, the Magdalena River, and a few flanks of the Central and Oriental Cordilleras. These Spanish cities followed exactly the geographical location of the pre-columbian indigenous groups. The Amazonian and Orinoquian region were not colonized. The concentration of population in the valleys and mountain areas created a strong pressure since then on the tropical mountain ecosystems and paramos

At the end of the 18$^{th}$ Century, the agricultural colonization developed rapidly in Antioquia, Caldas, Risaralda, Quindio, Tolima and Cauca. During the 19$^{th}$ century, the main crop was coffee and small –scale farming and small land-holdings predominated at that time. While coffee farming incorporated the small colonists and his family into the production system, cattle farming was based on buying land and getting as many titles as possible. This colonization process let little by little to the exclusion of small land-holders in the best soils of the country, resulting in the small farmers being pushed to always be a the agricultural frontier. The same is true for the sugar cane industry in the Cauca Valle, which was initiated in the 19$^{th}$ Century.

In 1936, through the Law 200, the government provided land titles to productive farms, taking away unproductive lands from people and forcing land owners to produce crops continuously for at least 10 years. In 1944, the landowners' interest were manifested in the passing of a new Law 100, which allowed the large land holders to transform their farms in capitalistic enterprises, foregoing the previous law. In 1947, Jorge Eliecer

Gaitan led the small farmers' defense, by requesting Congress to revise Law 100. His murder in 1948, set off a period of political violence, that resulted in the continued loss of the most fertile lands by the small farmers who were pushed further away from the developed centers into the last remaining natural forests. Between 1948-1966, more than 98.400 land parcels were abandoned or sold in the Cauca Valley. This process of lack of land access by small farmers and the inequality in the living conditions, partially explains the origin of the current armed conflict that has been going on for the last 50 years.

Population: The majority of the population in the Andes is settled in the inter-Andean valleys and in the internal flanks of the cordilleras, with lower population densities in the paramos and the external flanks of the cordilleras, where ecosystems are better preserved. The Colombian Andes host 72% of the country' s population. Of these, 71% is considered urban, 27% rural and 2% indigenous. Most of the population is concentrated in a triangle formed by Bogota, Cali and Medellin and a significant number of large and medium size cities are located in this region. The economic and political power is also concentrated here. (see Map 2: Population density in the Andean Region, departments and capitals). Regarding the indigenous population, 43.9% lives in the Andes (17.6% of the ethnic groups) confined to mountainous forests, lowlands and in marginal areas of the inter-Andean valleys. They live in their ancestral territories located in the departments of Nariño, Cauca, Valle, Risaralda, Caldas, Antioquia, Córdoba y Putumayo. (Greater details of the indigenous issues are presented in Annex 12).

Poverty: The poverty indicators point out that 33 % of the Andean Region population do not have their primary needs fullfilled. The poor population, with an index of approximately 60%, is found principally in the Andean zones of Nariño, Cauca, south of Tolima, north of Cundinamarca, most of Boyacá and Santander, Norte de Santander and north west and north of Antioquia. In the coffee zone around the Cordillera Central, in the Huila region, south of Cundinamarca and north of Santander, the index is between 10 to 40%.

Poverty is a permanent characteristic of the rural sector in Colombia. The crisis of the agricultural sector is related to many factor among others: i) protectionism by the developed countries; ii) the simultaneous growth of many developing countries competing among each other; iii) variable climate with strong droughts alternated with flooding; iv) diseases and plagues and; v) the political unrest and violence. Regarding basic education, illiteracy in the Andean Region reaches 12.4% which is lower than the national average (14.2%), the same is true for secondary education.

Involuntary Displacement. According to the Conferencia Episcopal Colombiana and SISDES (Sistema de Información sobre Hogares Desplazados y Derechos Humanos), between 1985 and 1995, 748.000 people were forced to abandon their homes and economic activities due to rural violence. This statistic grew in the last four years up to 1.719.869 Colombians affected by rural violence in the last 14 years. According to CODHES, in 1999, the most affected region was northwestern Colombia including Antioquia, Bolivar, Cordoba, Magdalena, Chocó, Atlántico, Cesar, Sucre and Guajira with a 75% increment in displaced people. The next affected region was central

Colombia, including Santander, Cundinamarca, Valle, Tolima, Norte de Santander, Boyacá, Cauca, Nariño, Caldas, Huila, Risaralda and Quindío with a 56% increment. And Finally South-East Colombia including Amazonas, Caquetá, Casanare, Putumayo, Arauca, Guaviare, Meta, Guainía y Vaupés with a 43% increment. 86% of displaced people, after trying first to settle close to their origin, end up moving into cities, mainly Bogotá, Medellín, Turbo, Montería, Apartadó, Barranquilla, Necoclí, Barrancabermeja, Cali, Bucaramanga, Girón, Sogamoso and Popayán.

Land use. The small land owner, the medium land owner and the commercial agriculture scale are the three predominant types of land possession and exploitation in the Andean Region. While the first type predominates in the southern part of the country, the medium and commercial agriculture are found in the central part.

The agrarian structure present nowadays is characterized by the coexistence of cattle ranching with coffee farming and commercial agriculture. The major land use in the Andes are agroecosystems dedicated to agriculture and ranching. They represent 15% of the land surface of the country and are usually found above 1.000 m elevation. Most of the cultivated land of the country is in the Andean region (60%). In the Andes, the country produces 80% of its vegetables and 73% of its fruit. Agricultural production in the Andean region varies greatly with the altitudinal variation. Table 1 shows the different agricultural types corresponding to each elevation type.

| Elevation | Microregion | Productive Systems |
|---|---|---|
| Cold<br><br>More than 2.000 m.a.s.l | Altiplanos cundiboyacense, Nariño and Antioquia and Region of Sumapaz | Perennial crops 96%<br>Annual crops 43%<br><br>Potatoes, vegetables, fruits (berries, tamarillo, lulo, grenade), beans, wheat, barley, corn, milk cattle. |
| Temperate<br><br>Up to 2.000 m.a.s.l. | Coffee belt<br>Hoya of River Suárez<br>Provinces of Gualivá and Rionegro<br>Tolima and Huila<br>Cauca<br>Santanderes | Perennial crops 4%<br>Annual crops 57%<br><br>Coffee, citrics, bananas<br>Sugar cane, guava<br>Beans, sugar cane, citrics<br>Beans, vegetables, bananas, corn, meat cattle,<br>Vegetables<br>Bean, banana, onion, corn |
| Hot | Fosa of Patía, Estribaciones of the cordilleras in Huila,<br>Tolima, Santander and Valle del Cauca. | Figs, corn, yuca, cacao<br>Pineapple, sugar cane<br>Meat Cattle ranching |

Source: CORPOICA 1999.

The land surface planted with sugar cane and potatoes in 1995 was 214.446 ha and got reduced in 1998 to 210.859 ha. Ranching is mainly distributed as follows: 1) Double purpose cattle, milk cattle, chicken, pork, meat cattle. 82.2% of the agricultural surface

of in the Andes is used for cattle ranching (12.028.880 ha). Ranchers use rotation techniques to control erosion. Cattle ranching continues to expand in the soft slopes of the Andes, producing erosion problems. According to CORPOICA 1999, 340 tons of soil is lost every year due to erosion. The land surface used for cultivated pasture is 2.27% of the Andes. The land surface under natural grasslands corresponds to 43.8% of the total. In these types of grasslands the farmers use extensive cattle grazing.

The government gave 3274 permits for timber concession in 1995 equivalent to 43.812 hectares, corresponding to 1.169.663 cubic meters. Corantioquia gave 22% of the permits, while CAS y CVC 7%, Corponariño 11%. Of the total timber volume, raw plancks represented 72% while improved stands were 11%. Carbon, pulp and other by-products of the timber industry were 17%. Regarding forest plantations, of 11.787 ha planted in 1995, CARDER and CAR represented the largest share 1.781ha and 1.701ha respectively, while CVC represented 1.665 ha. (IDEAM, 1999).

72% of the Andean population has access to aqueduct and 67% to sewage collection. The road system has 72.620 km. 11.7% is paved with an average density of 284m/km2 which is higher than the national standard (120m/km2).

Industrial infrastructure is also centered in the Andean region. Three of the largest cities are found there (Bogotá, Medellín and Cali). 3156 industrial settlements are reported in the andean region. 2350 in Antioquia and 1500 in Valle. The main corridor roads connect these settlements (see map) and electrical and water infrastructure has also focussed there. The andean region has the highest concentration of train lines, gas ducts and several commercial airports.

## 2. MAIN SOCIAL ISSUES

Colonization Frontier. Although the colonization process has slowed down in the last ten years and in some areas it is actually receding, there are still some colonization fronts worth of mention. South of Cauca toward the Bota Caucana, south of Tolima, Mid-Magdalena river valley, region between the coffee corridor and the Choco; north of Santander towards the Catatumbo, north and west of Antioquia, a few municipalities in Boyacá, Casanare and Arauca. These colonization fronts have caused a large damage to natural forests.

Land use Conflicts. 63.8 % of annual crops, 60% of perennial crops and 74% of cattle ranching overexploit land use capacity. Poor land management occurs along all the altitudinal gradient, but since soil are more fragile at higher elevation, the impact is more pronounced at higher altitudes.

One of the major problems causing loss of ecological integrity of soils and land is the increased use of monocultures and pesticides causing, in addition, river pollution.
In the last decade there has been an increase in perennial crops in the Andean region. In 1990 and 97, annual crops lost 220.000 ha while perennial increased to 80.000ha. In the oriental region of Boyacá, Cundinamarca, Huila, Norte de Santander, Santander and

Tolima, 60% of the land is under annual crops while 40% is under perennial. In the occidental region, annual crops were reduced in 270.000ha and perennial increased by 60.000ha reaching 576.000ha.

Coffee Production. Several coffee varieties are produced in the Andean Region (ie. Arabiga, Caturra and Variedad Colombia). Coffee dominated rural landscapes use to host a diversity of other products including plantain, sugar cane, cocoa, row crops, extensive cattle, intensive pig farming and self-consume products. Small patches of natural forests also cover the tops of these mountainous landscapes. Coffee has lost importance in the national economy during the last decade since the breakage on the international coffee agreement in 1989.

Coffee has been the most important crop in Colombia since the beginning of the century. Coffee is grown between 1.300 and 2.000m. 890.000 ha are cultivated and 12 million bags are produced annually. The most important departments producing coffee are Antioquia, Valle del Cauca, Tolima, Caldas, Risaralda, Quindío and Cundinamarca. 583 municipalities produce coffee. The total population of people living in coffee farms is 2 million, which corresponds to 423.000 families. Coffee production in 1998/99 was based on 10.9 million bags, while exports were 10.3 million. The number of coffee producers during that period of time was 566.000 which generated 37% of the agricultural employment in the country. Coffee participation in the national GDP is 3,5% (Federación Nacional de Cafeteros, 2000).

Armed groups. The origin of guerilla groups in Colombia is explained by land tenure inequity whilst the weak state presence in rural areas strengthened rural conflict. Once economical support from communist nations ended, guerilla groups moved on to narcotrafic and extortion. This means to many the loss of an ideological framework. In the early eighties, paramilitary groups appear to satisfy the need of rural sectors (mainly cattle farmers) to be protected from the extortive guerrilla practice.

Land Use Challenges. Land use management can be grossly grouped in three types in the Andes; 1) mechanization and agrochemical use for potato, onion and vegetables production; 2) medium mechanization and agrochemical use for coffee, cane, wheat, rye, tamarillo, granadilla, blackberry, passion fruit, pineapple, tree fruits, citrics and peanut production and 3) low or none mechanization and agrochemical use (campesino economy systems) for yuca, cocoa, plantain, guava and corn production. Environmental and biodiversity conservation impacts of mechanization and agrochemical use have been little studied whilst recently campesino economy has changed intensifying crop density adopting agrochemical use, new productive practices and genetic material.

Illicit Crops. Cocaine production started in 1980 in the amazonic area of the Departments of Guaviare and Putumayo, lowly populated areas that had experienced successive previous booms such as rubber, animal skins, oil and wood. Cocaine was the only product that generated utilities in addition to being non perishable. From 1985 to 1995 cocaine production grew along the Guaviare, Caguán and Putumayo Rivers (C. Ramírez,

1998). Although cocaine mostly grows below 500m it can be found in some parts of the Andes. According to PLANTE (Plan Nacional de Desarrollo Alternativo), in 1999 6% of the national production came from the Andes: 3.639ha in Cauca, 2.107 ha in Nariño, 780ha in Tolima and 3.000ha in Norte de Santander.

Poppy production begun in 1990 in the páramos of Huila, Tolima and Cauca coinciding with the strong price drop of cocaine *pasta* from one million pesos per kilogram in 1980 to 80,000 in 1983. By 1995 there were 20.000 poppy hectares in the paramos of the *Macizo Colombiano*, or south of Colombian Andes and some in Cundinamarca and Boyacá (Ramírez, 1998), 60% was of campesino production and 40% was commercial production. According to PLANTE, by 1999 the production decreased to 5.500ha. Poppy is grown on high elevation areas because of its temperature requirements, causing a strong impact on these ecosystems.

Eradication measures such as fumigation and substitution programs have been undertaken in the Andes. Fumigation forces migration towards remote areas pushing the agricultural frontier whilst fumigated land becomes unfertile and consequently inhospitable for the natural vegetation and fauna. (Ramírez. 1998).

Productive alternatives offered so far can not compete with illicit crops in terms of economic return. In addition, product perishability is usually a limitation since ilicit crops are always in remote areas. Cattle and monocultures may be suitable options from the economical point of view but cause strong environmental impact on the fragile soils on which illegal crops are produced.

Sustainable Development. Technological change is a generalized process in the andean rural economy in Colombia. Its impact, however, is not consistent due to the variety of ecological, social and economic conditions and to the accessibility to resources resulting in a variety of production rates, technology adopted, and changes in the structure of the rural family economy. The main factors behind productive systems change in the Andes are the growing demand for food in urban centers, technological offer from the "green revolution", roads construction, credit availability and, above all, the great transformation capacity of rural family enterprises. There is an urgent need for the consolidation of the sustainable development concept within state institutions and NGOs leading the subject.

## 3. INSTITUTIONAL CONTEXT

Political and Administrative Institutional Framework. For administrative and political purposes Colombia is divided into *Departamentos* and the *Departamentos* into municipalities. The Andes hosts 15 *Departamentos* and over 700 municipalities. The *Gobernaciones* are in charge of Departamental administration and *Gobernadores* are democratically elected every 4 years. Similarly, municipal administration is lead by Mayors democratically elected every 3 years. Since 1993, environment and natural resources management is in the hands of the Corporaciones Autónomas Regionales (CARs) responsible for implementing the policies of the Ministry of the Enviroment.

CARs' jurisdiction areas tend to coincide with *Departamentos* although some *Departamentos* are split in few CARs so the Andes hosts 17 CARs. CARs are independent legal entities with administrative and financial autonomy.

Public administration in Colombia, conscious of its centralism, bureaucracy and hierarchical structure has started a political, administrative and fiscal decentralization process in search of efficiency and higher levels of participation

Non Governmental Organizations. NGOs have a strong presence in the Andes and have played an important role in rural development and more recently in biodiversity conservation. They have taken on the state decentralization process and the opportunities for civil society to participate in the execution of projects with state resources. In 1993 70.000 NGOs were estimated in Colombia of which about 3.000 were directly related to rural development offering support on rural technology, agroindustry, rural housing, transport network as well as credit, training, basic health and leaders formation. In the last decade NGO' s participation increased in subjects such as gender, environment and conservation, by 1995 ECOFONDO surveyed 567 working on these subjects (Pérez et al., 2000).

Civil Society Conservation Initiatives. Currently in the Andes there are more than 200 private reserves where owners have reserved a part or the totality of their land for conservation. A large proportion of these reserves combines conservation with sustainable use as well as biodiversity friendly production. As time goes by, civil society awareness and concern increases due amongst other reasons to the high degree of transformation in most areas of the Andes and the evident environmental effect of this transformation.

## 4. CONSULTATIONS DURING PROJECT PREPARATION

A participatory process was undertaken during project preparation to complement the socioeconomic evaluation for the inclusion of socioeconomic considerations in the project design. This helped verification of project implementation viability and stakeholders support as well as the inclusion of stakeholders priorities as described next. This section summarizes the participation that took place to design project components. Participation at regional and local level to integrate regional priorities of the selected project zones, local community views and ongoing Andean Region use processes in project design are presented in a later section.

The project was conceived to launch in the Andes the National Biodiversity Strategy and Action Plan published in 1998. This strategy contemplates action plans for a long (25 years), medium (10 years) and short (4 years) term aiming at implementing the National Biodiversity Policy at a national level. This strategy is in itself the result of a participatory process that integrated the work and views of approximately 100 individuals from different disciplines and interest groups such as universities, environmental and social NGOs, indigenous and afrocolombian communities, CARs, research institutes, the

National Planing Department and the MoE and other ministries such as agriculture, mining and energy and foreign trade, amongst others.

In order to adapt The National Strategy and Action Plan to a six years project specifically for the Andes, actions and work zones had to be prioritized according to the financial resources availability, the Andes particularities, ongoing conservation initiatives and previous experiences. Since the project is in it self conceived as a participatory process, this was done in stages with the participation of relevant actors at each stage. Since all stakeholders were not present at each stage, actors with experience, knowledge and current involvement with local communities and local conservation initiatives were considered key elements in the process to validate the viability of proposed actions.

Project Design Team. The process started with an objective planning (POP) and logic framework workshop that lasted a week with the participation of IAvH, UAESPNN, MMA and WB as the key actors to take responsibility in the definition of project objectives and in its implementation. The preliminary log-frame produced was used to refine the work plan for project preparation. IAvH assumed the responsibilities directly related with its expertise and, to assure plurality, a diverse pool of partners were selected to help with project design. The project design team involved National NGOs: Fundación Natura, CEGA, Fundacion FES and Penca de Sábila; Universities: Universidad Javeriana; Government Related Institutions: CORPOICA and Misión Social; International NGOs: WWF, TNC and CI; private companies and well known consultants. Key criteria for the selection of project design partners was an established record and ongoing community work in the Andes such as the work of Universidad Javeriana and Fundación Natura in Santander, the work FES in Nariño, the work of Penca de Sábila in Antioquia and the work of WWF, TNC and CI in all the Andes.

Participatory Design of the Protected areas Component. Colombia is now structuring a national system of protected areas, open to many more conservation categories than those found in national parks. UAESPNN as leader of this process has organized national and regional workshops on the topic to help design the system and its implementing strategy. In addition, a few CARs such as CARDER and CVC have taken the lead in designing, through participatory processes, their own regional systems which in time will become nodes of the national system. IAvH has participated in these processes by providing information and strengthening technical conception. As a result of this, IAvH has strengthen the concepts of ecosystem' s representativity and ecoregional approaches in the process and has adapted the project' s protected areas strategy to make it consistent with the processes already under way.

Rural Landscapes. As part of project preparation, CORPOICA, benefiting from its local presence through its regional offices, organized a series of regional workshops to identify methodologies and sustainable production systems and its acceptance by local communities for the 15 most typical products of the Andes. This information was important for the selection of the rural landscapes to be addressed by the project.

Incentive Systems Design. During the last two years IAvH promoted a national work group about current incentives for conservation and sustainable use of biodiversity. This

was done in collaboration with the National Planning Department (Departamento Nacional de Planeeación, DNP), RRSC, MoE, WWF and UAESPNN. Five incentives workshops and an international seminar were organized with the participation of 95 institutions including 10 universities, 18 CARs, 6 productive associations, 47 NGOs, 3 ministries and 10 research institutes. This process was used to evaluate current and potential impact of incentives in place. It was concluded that the incentives strategy of the project has to be designed in a regional basis. Key incentives identified were certification of products compatible with biodiversity conservation, tax exemption for the establishment of private reserves and land titling of indigenous territories.

Biodiversity Information System. To strengthen well informed decision making, the project aims to construct a decentralized biodiversity information system with the collaboration of research institutions, universities, relevant government agencies, non-governmental organizations, botanical gardens and other ex situ conservation centers, among others. Most of the information held in these institutions is not of public domain so a participatory process is in place to define information sharing protocols. Collaborative agreements are already signed for institutional strengthening and systematizing information of biological collections and biodiversity in general with the main botanic gardens of the Andes (7) and biological collections as well as with universities such as Javeriana, Antioquia, del Valle, del Cauca and Nacional.

International Cooperation. Two international workshops were organized by WWF and TNC as part of project preparation, building on their international contacts and their work programs for the Andes to identify international initiatives for the Andes to which the project can contribute as well as benefit from.

Inter-Sectoral Coordination Component. Formal meetings and permanent informal communication amongst IAvH, and MoE has strengthen the design of the inter-sectoral coordination project component. This has been complemented by view exchanges with other ministries and productive associations in the framework of current IAvH' s teamed work with ministries such as Education, Agriculture and Foreign Trade and productive associations such as Federación de Cafeteros. An agreement has been signed with the National Federation of Coffee Producers to promote conservation and sustainable use of biodiversity in coffee dominated rural landscapes during the project and beyond. Within the framework of this agreement an international seminar on coffee and biodiversity took place in august with the support of COLCIENCIAS.

Finally, coordination amongst the executing agencies of the projects of the National Strategy for the Andes has resulted in the refinement of the strategy and the relationship amongst GEF projects for the Andes.

## 5. HOW SOCIAL ISSUES HAVE BEEN TAKEN INTO ACCOUNT IN THE SELECTION OF PROJECT ZONES

For project purposes the Colombian Andes is defined as the area of the three continuous mountain chains above 500m, excluding Sierra Nevada de Santa Marta and Serranía de la Macarena. As a result, project area ads up to 30% the Country' s continental surface. To

maximize project effectiveness, field project actions will be concentrated in specific zones to avoid atomizing of project resources. This section describes the process and socioeconomic variables taken into account for the selection of the project action zones.

The objective of this selection process was to identify zones that meet the following requirements:

- *Need of intervention*: Zones requiring intervention but not included in similar projects.
- *Project intervention viability*: Zones with socioeconomic conditions that allow project intervention and the implementation of its activities.
- *Project effectiveness*: Zones with biodiversity threats and loss processes that can be faced with project foreseen actions and that offer conditions for long term permanence of project actions.
- *Biodiversity Representativity*: When added up, the selected zones will host a representative sample of the Andean biodiversity in the minimum possible area, giving priority to those areas with biodiversity of global importance.
- *Presence of regional and local proceses compatible with project objectives*: It is considered a requirement to count on ongoing processes to be supported by the project as the best assurance for community and institutional support to project implementation.

The selection process begun with the elimination of areas not complying with any of the established requirements:

Elimination of areas without need of intervention. Due to the high level of transformation of the Andes (over 60%) all Andes was considered in need of intervention. Only areas with similar projects were discarded: Macizo Colombiano Project, Biomacarena Project and the Naya Corridor project.

Elimination of areas with low implementation viability. The main treath to project implementation is violence. A map was constructed identifying violent zones to be discarded. This map was constructed including guerrilla groups central command settlements, active conflict zones between different armed groups (FARC, ELN, the Army and AUC) and illicit crop areas under protection of armed groups. This map was constructed based on the study contracted with CEGA for project preparation, press and government reports, information collected in meetings and workshops throughout project preparation and on IAvH' s experience resulting from five years of intensive fieldwork.

Representativity and presence of regional and local processes compatible with project objectives. Having discarded so far more than 30% of the Colombian Andes for project purposes based on socioeconomic criteria, a process based on a combination of socioeconomic and biological criteria was used to refine project action zones selection:

1. Verification of the existence of ongoing processes compatible with project activities for all zones considered of outstanding biodiversity importance. This was done

throughout surveys and meetings during project preparation. As a result the first two zones were identified:

- The Cocuy paramo complex, the most biodiverse paramo complex in the world as stated in "Informe Nacional Sobre el Estado de la Biodiversidad en Colombia 1997" (IAvH, PNUMA, Ministerio del Medio Ambiente, 1998). Important regional processes identified include the conformation of the regional system of protected areas promoted by GENOR (a working group integrated by CARs, gobernaciones, regional universities, NGOs, UAESPNN and now IAvH).
- The Alto Putumayo Zone, or the Andean Putumayo, identified as the most biodiverse zone in Colombia according to the study *Caracterización de la Biodiversidad en Areas Prioritarias de la Vertiente Oriental de la Cordillera Oriental* (IAvH, 1999). The area was further refined after regional and local consultations to concentrate on the Cerro de Patascoy, taking into account that it is probably the only unpopulated area in the Andes of such extension and that there is an advanced process for its protection lead by the Cofán indigenous community with the support of UAESPN, WWF-Colombia, local NGOs and now IAvH. (See Annex 12 for more detail).

2. Identification of zones with: i) a wide variety of ecosystems complementary to those in the previously selected zones; ii) a wide variety of ecosystems concentrated in a relatively small area, and iii) ongoing conservation and sustainable use processes compatible with project objectives. Each new area was chosen within a new ecorregion according to the WWF/WB(Dinerstein, 1996) Latin-American ecoregions map. In case of similar alternatives, priority was given to zones with National Parks, higher institutional capacity and community organization towards conservation and sustainable use by considering municipal statistics about community organizations, concentration of registered private reserves and presence of productive systems recognized as biodiversity friendly such as shade coffee. As a result nine additional zones were identified as alternatives for the project. Whithin selected zones, priority was given according to biological complementarity to the previously selected pair.

As a result, the five zones were selected to work during the first phase of the project. They offer favorable conditions for project implementation as well as presenting ongoing conservation and sustainable use processes compatible with project objectives assuring project effectiveness and long term continuation of project supported activities.

## 6. SOCIOECONOMIC ISSUES AND PARTICIPATION IN KEY PROJECT ACTIVITIES

Having selected the project action zones, project preparation moved to define key activities and identify key actors. An analysis was undertaken for each zone to identify socioeconomic causes of biodiversity loss and potential socioeconomic biodiversity threats. Consultation, meetings and workshops were also organized to identify ongoing processes that could help the project in facing the identified biodiversity loss causes and threats. A summary of the conclusion reached is presented in tables 1 and 2. A short

description of the main key project partners, ongoing processes at a regional and local level and the process to identify them is presented next.

Many places in the Colombian Andes have a high degree of community organization together with a strong sense of belonging. As a result, a great number of community initiatives compatible with conservation can be found throughout the Andes such as municipal watershed protection, regional natural reserves, private natural reserves and diversity of production systems compatible with biodiversity conservation. The project intends to build from active initiatives to orient, develop and strengthen them whilst integrating them into regional strategies to multiply their impact.

In some particular cases IAvH has first hand knowledge about local processes due to direct involvement. This is the case in the xerofitic ecosystems of Villa de Leyva, in Iguaque national park and in shade coffee plantations at Quindío. For example, in project zone 2 it collaborates with the indigenous communities Siona and Cofán since 1997 in the characterization of their traditional territory, the cultural recuperation of medicinal plants and in ecological and cultural reconstruction through cultural recuperation workshops, botanic and ecological intercultural training and evaluation of environmental management practices. Most of the community, including its 4 shamans, has participated. It is already agreed with them to cooperate for i) the declaration as a reserve of a larger portion of their traditional territory (in public lands), ii) the marketing of medicinal plants and other non timber forest products and iii) the intercultural characterization of their territory. Neighboring indigenous communities are aware of the process and are interested in the establishment of similar cooperation agreements, the process has already started and involves 6 indigenous groups at the Fragua river.

In all project zones, however, regional actors such as CARs, UAESPNN, RRSC, NGOs and Universities have contributed to include the local perspective in the project. They successfully maintain participatory processes around biodiversity conservation and sustainable use making them aware and in many cases integral part of local initiatives. Participation at local level in project design has so far happened indirectly by interacting with these regional actors by respecting and learning from their participatory strategies since during project implementation they will play a key role in the coordination of local activities. As a result of this the project has identified a large number of potential sites where it can support and initiate conservation processes, rural landscapes work, conservation and sustainable use incentives design and implementation and promotion of green markets activities contemplated in project components 1 and 2.

The GENOR Process. A working group bringing together the CARs and Gobernaciones of Santander, Norte de Santander, Boyacá and Orinoquia started 3 years ago to design a common environmental plan for their area of jurisdiction which includes the project Zone 1. Later, this working group was extended to UAESPNN, IavH, regional universities and NGOs. Having a common agenda facilitates the implementation of projects across borders and the participatory approach in the conformation of GENOR facilitates inter-institutional alliances and increases viability and community support. Within the framework of GENOR three projects are starting aiming at the conservation and sustainable use of paramos in Cocuy, San Turbán and Rabanal. In addition to IAvH's

participation in regular GENOR activities, there were two meetings specifically about the project. GENOR' s priorities, which are the conservation and restoration of paramos ecosystems, economic incentives design, institutional strengthening and the construction of a regional biodiversity information system were highlighted in the project design.

The Eje Cafetero process. In the project zone 5 there is another regional process which brings together the CARs surrounding Los Nevados National Park (CARDER, CORPOCALDAS, CRQ and CORTOLIMA) and UAESPNN. They meet frequently to discuss issues related to Los Nevados Park and as a result have already designed and implemented as partners and with the local communities, a number of projects in Los Nevados and its buffer zone. Los Nevados Park has always been the priority of this regional process but recently the discussion turned towards the implementation of a regional protected areas system and have invited IAvH, WCS-Colombia and regional NGOs and universities to participate. An action plan is being prepared and will be refined in a workshop early December. The project has integrated this initiative in its design and has learned from this inter-institutional process and its experience with local communities. The project was received as an excellent opportunity to support their conservation efforts.

The Valle del Cauca Process. CVC as the only CAR of project zone 3 has initiated a process to establish a regional protected areas system building on their success on three regional protected areas with the support of local communities. It advances through a participatory approach that so far involves regional universities, local NGOs, WWF-Colombia, UAESPNN and IAvH. In summary, the process has expressed the need to increase the representativity of ecosystems under protection, in particular the protection of arid ecosystems and paramos and the restoration and protection of its wetlands as well as the need to develop rural landscapes management tools and design effective conservation incentives for the CAR to offer. This project is considered an attractive opportunity to accelerate the process of consolidating a protected areas system.

The Cerro de Patascoy Protection Process. The main conservation objective in project zone 2 is the Cerro de Patascoy. The Cofán indigenous community is leading a process to protect the area with the support of UAESPNN, ADC, WWF-Colombia and IAvH amongst others. The process was initiated two years ago and counts today with an action plan, a modest budget and a committee to execute it. Although the area of interest is not populated, the process is involves stakeholders in the buffer zone to define the borders, and the legal protection figure.

UAESPNN Process. UAESPNN has been leading a process for the consolidation if the National Protected Areas System and has important local presence in many areas. There are six national parks inside phase 1 project zones for which they lead participatory conservation processes. In addition UAESPNN is closely involved in community initiatives interested in the protection of areas on national importance such as the already mentioned Patascoy. This is an area of most importance for the project being in a highly diverse andean ecosystem currently not protected anywhere. The indigenous and campesino communities of the area with the support of UAESPNN, WWF and RRSC are interested in the declaration of the area under some protection category that

acknowledges indigenous rights over their traditional territory. Well in line with today' s UAESPNN policy and the project' s strategy, this initiative will count with strong support of the project.

CARs are also key partners in this respect due again to local presence and their support to sustainable development and conservation initiatives. Although CARs´ technical capacity and resources vary greatly, in many cases they manage regional reserves inside project zones and are in close contact with municipalities and communities and their conservation and sustainable use initiatives. A large number of potential project work sites have been identified through CARs contribution to project design including Páramo del Duende, Laguna de Sonso, Páramo de Rabanal and Laguna de Fúquene, Páramo de San Turbán, Bogotá wetlands, Bosque de Florencia, Ucumarí and Bremen amongst many others.

RRSC process. RRSC is a network comprisnig more than 200 reserves in the Andean Region. These areas have been set aside by local land owners with strong interest in conservation and sustainable use. Their involvement during the design and implementation of the project will contribute to strenghten local participatin and long term sustainability of project activities.

## Annex 11

**Table 1: Basic characteristics and key planned activities of phase 1 project zones**

| Project zone | Socio-economic considerations | Biodiversity loss causes | Biodiversity loss threats | Key planned Project Activities |
|---|---|---|---|---|
| **1**. Northeastern Paramos and moist forests | • Potato and bean campesino production<br>• Extensive cattle and sheep production<br><br>• Key Partners:<br>- CARs: Corpoboyacá Corponor, CDMB, Corpoorinoquía, CAS<br>- Universities: Javeriana, Industrial del Santander<br>- Cabildo Indígena U´wa<br>- Parks Unit | • Agricultural frontier expansion in the paramos from the western slopes and in the forests from Orinoquía upwards<br>• Heavy agricultural activities in the western slopes<br>• Wood extraction for commercial and domestic use<br>• Agrochemical contamination<br>• Rural poverty | • Oil exploration and exploitation in the lowlands towards Orinoquía<br>• Infrastructure Development (Cúcuta-Bucaramanga Road Construction) | • Redisign of Pisba Park<br>• Cocuy, Pisba and Tamá Parks Managenment Plans Design and key components implementation<br>• Strengthening of GENOR and support to the ecorregions' management plan<br>• Promotion of alternative land uses and green markets for substitution of cattle and potato production in paramos<br>• Support to current campesino ecotourism initiatives.<br>• Promotion of private reserves in PAs' buffer zones, water springs and forest remnants<br>• Effectiveness evaluation and promotion of management tools: Life fences, corridors, grassland enrichment with native trees. |
| **2**. Alto Putumayo | • 1000 Cofán and Siona Indigenous people: Forest products and medicinal plant extraction, subsistence hunting and agriculture.<br>• Large state owned unpopulated areas.<br>• Campesino production in the highlands<br>• Strong campesino private reserves network<br>• Key Partners:<br>- CARs: Corponariño, Corpoamazonia<br>- Fundación Zioai (Cofán and Siona communities)<br>- RRSC,WWF, UAESPNN<br>- Association for Campesino development (ADC) | • No loss yet | • Oil exploration and exploitation<br>• Infrastructure development (Transversal de la selva Road, Guamuez multipurpose project)<br>• Traditional knowledge loss<br>• Armed conflict arrival | • Creation of a National protected area in Patascoy<br>• Consolidation of indigenous territories and traditional practices<br>• Declaration of La Cocha as a RAMSAR site<br>• Current private reserves network strengthening<br>• Green markets promotion: ecoturism and handicrafts in La Cocha, medicinal plants in Cofán and Siona area. |

## Annex 11

| Project zone | Socio-economic considerations | Biodiversity loss causes | Biodiversity loss threats | Key planned Project Activities |
|---|---|---|---|---|
| | - UMIYAC: Indigenous doctors association | | | |
| **3**. Dagua-Calima-Paraguas corridor | • Campesino production in the hillside<br>• Commercial agriculture in the lowlands: sugar cane, forest plantations<br>• Key Partners:<br>- CARs: CVC<br>- NGOs: WWF, RRSC, FES, Herencia Verde, CIPAV<br>- ASOCAÑA: Sugar cane producers association<br>- EPSA: Pacific' s Energy Company | • Agricultural frontier expansion from the lowlands upwards<br>• Habitat fragmentation in the lowlands<br>• Agrochemical contamination<br>• Soil degradation from overexploitation<br>• Timber extraction<br>• Wetland drainage and degradation | • Illegal drugs processing in remote areas<br>• Infrastructure development: Calima-2 hydroelectric project | •Creation of the regional network of protected areas for the Valle del Cauca.<br>• Creation of two regional protected areas: one in a dry ecosystem and one in the Paramo del Duende<br>• Management and recuperation plan design and key components implementation for Laguna de Sonso<br>• Extension of the Yotoco regional protected area<br>• Promotion of private reserves in PA' s buffer zones and corridors<br>• Effectiveness evaluation and promotion of management tools: Life fences, corridors, dry environments grassland and shadowed coffee enrichment with native trees.<br>• Green production and markets promotion (Organic products, certified forest)<br>• Evaluation and adjustment of agricultural (Ministry of Agriculture) and conservation (CARs and MoE) incentives |
| **4.** Altiplano Cundiboyacence | • High concentration of population<br>• Large land owners<br>• Urban owners of country houses<br>• Campesino production of potatoes, beans, onions, vegetables,<br>• Intensive and extensive cattle farming for milk and meat.<br>•Key Partners:<br>- CARs: CAR, DAMA, Corpoboyacá<br>- Universities: Nacional, Javeriana, de los Andes, etc. | • Wetland drainage and degradation<br>• Agrochemical contamination<br>• Desertification from overexploitation<br>• Habitat fragmentation<br>• Extensive monoculture<br>• High population<br>• Absence of protected areas | • Population Growth<br>• Infrastructure Development | •Promotion of private reserves amongst contry house owners, arround wetlands and in dry ecosystems.<br>• Creation of a regional reserve in a dry ecosystem<br>• Management plan design and key components implementation for the lagunas de Fúquene y Tota<br>• Declaration of Fuquene or Tota as a RAMSAR site<br>• Effectiveness evaluation and promotion of |

## Annex 11

| Project zone | Socio-economic considerations | Biodiversity loss causes | Biodiversity loss threats | Key planned Project Activities |
|---|---|---|---|---|
| | - Fundación Natura<br>- Asociación de Municipios de la Sabana<br>- Corporación Humedal de la Conejera | • Lack of awareness<br>• Invasive species | | management tools: Life fences and corridors.<br>• Green production and markets promotion (Organic products, certified forest, weekend recreation)<br>• Evaluation and adjustment of agricultural (Ministry of Agriculture) and conservation (CARs and MMA) incentives |
| **5**. Los Nevados Park and neighbouring coffee growing area | • Highly populated area<br>• Small medium and large coffee farmers (Key stakeholder: Federación de Cafeteros)<br>• Cattle farming,<br>• agrochemical contamination<br>• Invasive species<br>• Key Partners:<br>- CARs: CRQ, CVC, CARDER, Corpocaldas, Cortolima.<br>- UAESPNN, RRSC,<br>- Coffee growers federation<br>NGOs: Herencia verde, Ecoandina amongst others<br>Universities: Tecnológica de Pereira, de Caldas, Nacional de Manizales, del Quindío | • Note: stable landsacpe structure<br>• Habitat fragmentation<br>• Natural resources extraction<br>• Agrochemical contamination<br>• Agricultural activities | • Industrializing and homogenization of agriculture and timer production<br>• Urban growth | • Update and implementation of key components of Los Nevados management plan<br>• Design and implementation of main components of key regional reserves and Otún Quimbaya<br>• Promotion of private reserves in PA' s bufferzones, forest relicts, corridors.<br>• Development and promotion of management tools for conservation in rural landscapes<br>• Incentives for environmental services and ecotourism<br>• Green production and markets promotion (Organic and biodiversity friendly coffee, certified forestry)<br>• Evaluation and adjustment of agricultural (Ministry of Agriculture) and conservation (CARs and MMA) incentives |

## Annex 11

**Table 1: Basic characteristics of alternative project zones for phase 2**

| No | Zone Name | Biodiversity considerations | Socio-economic considerations | Suggested Project Activities |
|---|---|---|---|---|
| 6 | Cuchilla de los Cobardes and Chicamocha Canyon | Area: 750.000 ha<br>Large and diverse dry forest ecosystem complex in the Ecoregion<br>Second largest forest remnant on the western slope of the eastern Andes Chain.<br>Broad Altitudinal range<br>Dry Habitats in regular state.<br>Principal Ecosystems: a1, a3, a4, aa1, aa2, aa3, aa4, v3, v4 | Extensive sheep production and campesino production of corn, tobacco, wheat and fruits in the highlands.<br>Cattle, sugar cane, corn, cassava and plantain in the lowlands<br>Campesino associations<br>CARs: CAS, CDMB, Corpoboyacá. | Creation of a regional network of protected areas<br>Creation of regional reserves<br>Incentives for environmental services<br>Promotion of private reserves<br>Green markets promotion, agroforestry in particular<br>Development and promotion of management tools for conservation in rural landscapes |
| 7 | La Rusia Paramo and Quercus Forest | Area: 620.000 ha<br>Largest Quercus Forest in the Colombian Andes<br>Highly diverse Paramos<br>Broad Altitudinal Range<br>Principal Ecosystems: a1, aa1, aa2, aa3, aa4, p1, p3<br>National Parks: Iguaque and Guanentá-Ato río Fonce. | Extensive cattle production<br>Campesino subsistence production.<br>CARs: CAS, Corpoboyacá | Creation of a regional network of protected areas.<br>Consolidation of existing National parks.<br>Development of Ecoturism.<br>Promotion of private reserves<br>Incentives for environmental services<br>Green markets promotion |
| 8 | Patía Valley and neighbor western Andes Chain mountain forests | Area: 700.000 ha<br>Large dry forest and xerophytic ecosystems complex conected to pluvial forest.<br>Includes most natural remnants of the Valle del Patía ecorregion<br>Degraded habitats<br>Transition from the Choco region up to the Andes and down to the Patía Valley.<br>Principal Ecosystems: a1, a3, aa1, aa2, sa1, sa2 | Extensive Cattle production<br>Coffee production<br>Campesino subsistence production.<br>CARs: CRC, Corponariño | Creation of a regional network of protected areas.<br>Creation of a regional protected area<br>Integration to a regional network of protected areas.<br>Promotion of private reserves<br>Green markets promotion<br>Development and promotion of management tools for conservation in rural landscapes<br>Incentives for environmental services |
| 9 | Carare-Opón | Area: 280.000 ha.<br>Largest remnant of mountain and foothill forests on the western slope of the eastern Andes<br>Only area with large tracts of natural | Recent Colonization<br>Strong agricultural frontier advance<br>Violence<br>Extensive cattle production<br>Campesino subsistence production | Creation of a regional protected area<br>Integration to a regional network of protected areas.<br>Incentives for environmental services<br>Green markets promotion |

## Annex 11

| No | Zone Name | Biodiversity considerations | Socio-economic considerations | Suggested Project Activities |
|---|---|---|---|---|
| | | vegetation in the transition between the Magdalena Valley wetlands and the Andes<br>Principal ecosystems: a1, aa1, sa1, sa2 | Extractive activities: wood extraction and hunting.<br>CARs: CAS, Corpoboyaca | |
| 10 | Tatacoa desert | Area: 350.000 ha.<br>Only large remnant of natural vegetation in the ecoregion<br>Large remnants of dry forest and xerofitic ecosystems<br>Principal ecosystems: v3, v4<br>National Parks: | Production of sorgo, soya beans and corn<br>Cattle farming<br>Uncontrolled tourism<br>Agrochemical contamination<br>CARs: CAM, Cortolima | Creation of a regional protected area<br>Integration to a regional network of protected areas.<br>Incentives for environmental services<br>Green markets promotion |
| 11 | Dry forests of the Cauca Canyon in Antioquia | Area: 150.000 ha.<br>Only large remnant of natural vegetation in the ecoregion<br>Large remnants of dry forest ecosystems<br>Principal ecosystems: v3, v4 | Steep slopes, very unproductive land.<br>Some land cleared for cattle grassing<br>Wood extraction<br>CARs: Corpoantioquia | Creation of a regional protected area<br>Integration to a regional network of protected areas.<br>Incentives for environmental services<br>Green markets promotion |

**Annex 11**

## 7. PARTICIPATION STRATEGY DURING PROJECT IMPLEMENTATION

Due to the scope of the project, participation must be integral, including participation of local communities, the private and the public sector as well as gender and age considerations. In fact, as showed previously, the project itself has been conceived as a participatory process both during its design and for its implementation. Key performance indicators in Annex 1 such as *active protected areas networks, # of institutions collaborating with project biodiversity monitoring and assessment* and *a network of biodiversity databases* seek to measure participation involvement.

On this ground, one of the main opportunities of the project that is to be exploited by this strategy is the fact that the environmental matters can easily bring to the table many stakeholders as has been the case during project preparation. However, stakeholders involvement and project ownership can only be achieved through appropriate participation. This strategy is built upon from the conviction that socializing is only one step towards participation, real participation leads to decision making.

Another clear opportunity of the project is the fact that there are many active participatory processes around conservation and sustainable use of biodiversity in the Andes. Most of these processes concerning phase 1 project zones have been identified and contacted during project preparation. As long as it is possible, the project intend to strengthen and build from existing participatory processes.

a) Key Aspects in Project Participation. Building on previous experiences and ongoing processes and according to project components the key aspects to foster participation in the project are:

*Information sharing*: Information flow to stakeholders will assure well-informed decision making throughout the participatory processes. To allow this, all the information generated by the project will be considered public. In addition, relevant available information will be distributed amongst stakeholders in all participation processes. A promotional program in local and national media and written material will be used to disseminate to the local general public the objectives and evolution of the project. In addition, an internet web-page and electronic publications and newsletters will be set up to address decision-makers, scientists and general public.

*Participatory Design of Conservation Zones*: A conservation strategy for each of the project zones will be designed through a highly participatory process involving CARs, Municipalities, campesinos, land owners, afrocolombian and indigenous communities, productive associations, NGOs and existing biodiversity conservation and sustainable use organized initiatives. This will contribute to build a new relationship between traditional managers of protected areas and local communities. Workshops and meetings will be organized to socialize and unify conservation criteria and develop a participatory conservation plan for each zone. A flexible participatory strategy will be applied according to each zone, based on ongoing processes in the zone and similar experiences seeking to identify common goals and interests of communities, governmental institutions and private initiatives. The process will be supported on information available and generated for the process. This process will lead to: a) identification of conservation gaps within the zones and of conservation opportunities to fill them, b) identification of the social and institutional strengthening needs to carry out biodiversity

conservation; c) Design of a protected areas system; d) identification of key actions to ensure the implementation of the system and promote inter-institutional integration and; e) Identification of key rural landscapes to promote biodiversity conservation and sustainable use; f) Identification of local productive practices compatible with biodiversity conservation g) Identification of partners to implement project activities and g) cooperation in biodiversity conservation and management

*Declaration of new protected areas*: Declaration of new national and regional protected areas will only take place when there is support from the majority of the stakeholders. Reaching this point can take a long time so this will mainly happen on places already identified during project preparation that count with advanced processes. As a result of a national territorial planning exercise at a municipal level, most municipalities have proposed municipal protected areas, the project will support those that fill conservation gaps and count with local support. A participatory process with RRSC and private land owners will be implemented to design a package of economic and institutional incentives for the declaration of private reserves.

*Participation in protected areas management*: The only way to garantee effective long term management of protected areas is by integrating them to their social context. This will be achieved in the project by promoting the new policy of UAESPNN published in 1999, "*Politica de Consolidación del Sistema Nacional de Areas Naturales Protegidas, con base en la Participación Social en la Conservación*". This policy is based in the participation of local communities and organizations in the management of the areas and is supported in the decentralization of the National Protected Areas System giving more autonomy to the regional nodes and the areas themselves.

*Participation of Indigenous communities*: So far the indigenous communities involved in the project are the Siona and CCofán in project zone 2 (Alto Putumayo). As mentioned earlier, IAvH currently collaborates with the indigenous communities Siona and Cofán since 1997 in the characterization of their traditional territory, the cultural recuperation of medicinal plants and in ecological and cultural reconstruction through cultural recuperation workshops, botanic and ecological intercultural training and evaluation of environmental management practices. It is already agreed with them to cooperate for i) the declaration as a reserve of a larger portion of their traditional territory (in land which currently belongs to the state), ii) the marketing of medicinal plants and other non timber forest products and iii) the intercultural characterization of their territory. As until now, the project will respect in all cases the indigenous communities' own participatory mechanisms. The project will follow ILO´s agreement 169 about previously informed consent. The project will respect the participation requirements specified by the Colombian law specifically for indigenous communities. The project will respect the cultural value given by the indigenous communities to the land will build on this to promote the declaration of conservation areas by the indigenous communities inside their reserves.

*Participatory characterization, monitoring and research*: Participation of local communities in characterization, monitoring and research will be promoted during project implementation. This in search of community appropriation of the information and to promote intercultural work methodologies.

*Participatory monitoring and evaluation of project strategies*: Periodical monitoring and evaluation of project strategies will include participation of the stakeholders targeted by the strategies to include their views in the permanent process of adjustment of the strategies.

*Decentralized Biodiversity Information System*: A participatory process has already started bringing together information owners, keepers and potential users to agree on: a) the design of the system: information content, software and hardware to be used b) management of information property c) users requirements

*Inter-sectoral coordination*: Lack of basic knowledge is one of the main causes behind sectoral policies inconsistent with biodiversity conservation and sustainable use. Biodiversity training for ministries and sector associations employees will be organized. Training will be followed by workshops for the sectors to evaluate the impact on biodiversity of current sectoral policies and to propose coherent policy modification. Additional workshops for ministries and sector associations will be organized to develop proposals for reduction of environmental impacts and maximizing policy effectiveness through intersectoral policy coordination.

b) Selection Criteria and Potential Project Beneficiaries

Table 2 shows the criteria that will be used in choosing the beneficiaries of the project. Table 3 indicates the potential project beneficiaries by conservation zone for Phase I. The potential beneficiaries for Phase II zones will be defined by the end of PhaseI.

Table 2: Selection Criteria for Participation

| **Type of Beneficiary or Partner** | **Administrative requirements** | **Technical Requirements** | **Specific criteria (in each TOR)** |
|---|---|---|---|
| Non-Governmental Organization | ♦ Legal status established<br>♦ More than 2 years old<br>♦ Demonstrated administrative and financial capacity<br>♦ Capacity to procure and contract<br>♦ Auditor's report with good assessment<br>♦ | ♦ Proven experience in the field of expertise<br>♦ Staff hired or contracted out with proven credentials<br>♦ Positive past record in taking environmental and social concerns into account | |
| Grass-root Organizations | | | |
| Universities | | | |
| Public Entity (national, regional or local) (UMATAS, Municipal councils, Communal Associations, CARS, etc.). | | | |
| Research Institutes | | | |

Table 3: Potential beneficiaries and partners.

| **Project Zone** | **Potential Beneficiaries and Partners** |
|---|---|
| **1**. Northeastern Paramos and moist forests | - NGOs: Fundación Natura, Censat-Agua Viva, Codeboy<br>- Universities: Universidad Javeriana, Universidad Industrial de Santander, Universidad de Málaga, UPTC.<br>- UAESPNN<br>- GENOR<br>- CARs: Corpoboyacá Corponor, CDMB, Corpoorinoquía, CAS |
| **2**. Alto Putumayo | - NGOs: Asociación Red de Reservas de la Sociedad Civil,WWF, Association for Campesino development (ADC)<br>- Indigenous Organizations: UMIYAC (Indigenous doctors association), Fundación Zioai (Cofán and Siona communities), OZIP (Organización indígena del Putumayo)<br>- UAESPNN<br>- CARs: Corponariño, Corpoamazonia |
| **3**. Dagua-Calima-Paraguas corridor | - NGOs: WWF, RRSC, FES, Herencia Verde, CIPAV, INCIVA, Corpocuencas<br>- Universities: Universidad del Valle<br>- UAESPNN<br>- ASOCAÑA: Sugar cane producers association<br>- CARs: CVC |
| **4.** Altiplano Cundiboyacence | - NGOs: Fundación Natura, Asociación de Municipios de la Sabana, Corporación Humedal de la Conejera<br>- Universities: Universidad Nacional, Universidad Javeriana, Universidad de los Andes.<br>- UAESPNN<br>- CARs: CAR, DAMA, Corpoboyacá |
| **5**. Los Nevados Park and neighbour coffee growing area | - NGOs: Orquidea, Herencia Verde, Ecoandina, Asociación Red de Reservas de la Sociedad Civil, Semillas de Agua<br>- Coffee growers federation, CENICAFE.<br>- Universities: Universidad Tecnológica de Pereira, Universidad de Caldas, Universidad Nacional de Manizales, Universidad del Quindío, Universidad Javeriana.<br>- UAESPNN<br>- CARs: CRQ, CARDER, Corpocaldas, Cortolima. |

# ANNEX 12: INDIGENOUS PEOPLES DEVELOPMENT PLAN

## 1. Background

The project "Conservation and Sustainable Use of Biodiversity in the Andean Region of Colombia" seeks to improve the ways conservation and use of biodiversity has been carried out in the past years. Indigenous communities and organizations are fundamental partners in this project. Traditional societies such as the indigenous people have conserved and used biodiversity sustainably, since their livelihood depend on it. They have stored a vast knowledge of how plants, animals and microorganisms can be used and how they need to be preserved for medicinal, nutritional, ritualistic and other purposes. The Andean Region contains 14 different ethnic indigenous communities. These indigenous people represent a diversity of culture, natural resources utilization and social organization. Currently, indigenous people have 25% of the country's land surface assigned to collective use. Most of these territories are in native forests with very high biological importance.

The project seeks to find current models and systems of biodiversity use that are sustainable. Economic development very often has led to over-exploitation of natural resources, leading to the loss of species or varieties. As native forests get exploited as is the case in the Andean Region, the extractive processes change from their native uses and the scale of utilization also changes, leading to threats to natural resources. In Colombia, over the past years, traditional communities and research and conservation organizations have approached each other to join in new unseen partnerships to overcome the crisis of over utilization of natural resources. As traditional communities get more and more marginalized due to other development pressures in their territories, the threat to their native forests is increasing. This partnership has consisted in supporting native communities with information and technical knowledge of the value of the forest, sustainable use techniques and conservation. So, the combination of the indigenous peoples' biodiversity knowledge and the new sustainable development models brought by researchers and conservationists has begun a strategic alliance of these groups. This is the basis of the Indigenous People Development Plan for the current project.

The analysis to prepare this annex included: 1) identification of which indigenous groups were present in which macro project zones; 2) consultations carried out during preparation; 3) indigenous people´s legal framework; 4) socio-economic profile in the project zones; 5) indigenous people´s action plan.

## 2. Project Zones with presence of Indigenous People.

Of the 5 areas where the project will operate, only 2 have the presence of indigenous people. Zone 1 (the Northeast Paramos and Humid Forests) is inhabited by the Uwa indigenous community. Zone 2 (Alto Putumayo) is inhabited by the Cofan community and some Inga and Kamsa community which occupy the Valley of Sibundoy. The Alto Putumayo project zone does not include the lower amazon region below 1,000 m elevation. Problems of violence recently featured in the press refer to lower elevations in the Putumayo outside project intervention areas.

In zone 1, the Uwa indigenous people are currently involved in a conflict with the oil company OXY, having opposed their presence in their territory. As a consequence of this conflict, they have expressed their interest of no external interventions of any sort. The project has respectfully, excluded their territory from the project design and no activities will be executed in their Resguardo without their prior informed concent.

One of the objective of the project in Zone 2 that is inter-connected with indigenous people is the conservation of the Cerro Patascoy which is uninhabited due to its difficult access and interrupted relief. The Patascoy presents very high biological diversity and has been considered as a potential candidate to create a reserve to ensure its protection. The lands where the Patascoy Mountain lies in public land. The Cofanes live nearby and use the Patascoy as a source of medicinal plants. During the last two years, IAvH and the Park´s Unit(UAESPNN) have initiated a consultation process with the Cofanes (see below for details) around the need to preserve the Patascoy and what would be the Cofanes role since they are the main users of this area. The Inga and Kamsa live in the Valley of Sibundoy which is an area 30 km away from the Cerro Patascoy. This valley is highly degraded and does not present an opportunity for biodiversity conservation. The Inga and Kamsa are not likely to be involved in the project as they are away from the project impact.

## 3. Consultation process with indigenous people

So far the indigenous communities involved in the project are the Cofanes in project zone 2 (Alto Putumayo). The IAvH currently collaborates with the indigenous communities Siona and Cofán since 1997 in the characterization of their traditional territory, the cultural recuperation of medicinal plants and in ecological and cultural reconstruction through cultural recuperation workshops, botanic and ecological intercultural training and evaluation of environmental management practices. There are already processes in place for i) the declaration as a reserve of a larger portion of their traditional territory (in land which currently belongs to the state), ii) the marketing of medicinal plants and other non timber forest products and iii) the intercultural characterization of their territory. As previously said, the project will respect in all cases the indigenous communities' own participatory mechanisms. The project will follow ILO´s agreement 169 about prior informed consent. The project will respect the participation requirements specified by the Colombian law for indigenous communities. The project will respect the cultural value given by the indigenous communities to the land and will build on this to promote the declaration of conservation areas by the indigenous communities inside their reserves.

## 4. Legal Framework for Indigenous People

The Colombian Constitution of 1991 (Articles 7 and 8) not only recognizes the cultural and ethnic diversity of Colombia, but establishes as a mandate the protection of the country' s cultural and natural richness through the following: (i) indigenous peoples languages are official within their territory; (ii) collective property rights over land in *resguardos*; (iii) rights over archeological heritage; (iv) the recognition of indigenous territories as public entities (*entidad territorial indigena)*; (v) the right to receive fiscal transfers from the central government; and (vi) the recognition of the right of indigenous authorities to function according to their own norms

and procedures. Colombia ratified, via Law 21 of 1994, the ILO' s Convention 169 on "Indigenous and Tribal People."

The 1991 Constitution reinforced rights of indigenous peoples over their territory as an essential element of their culture as previously recognized in other laws (for example, Article 2 of Decree 2001 of 1988). In Article 21, Decree 2164 of 1995, "*Resguardo Indigena*" is defined as: "a legal and socio-political institution with a special character, composed of one or more indigenous communities that with a collective land title enjoy the guarantees of private property, possess territory and control its management and the internal life of the community through an autonomous organization governed by the indigenous community' s own normative system." (*Reserva indigena* is a transitional stage prior to becoming a *resguardo*.) Property rights in the lands of the *resguardo* are permanent and cannot be mortgaged or sold (Constitution, Articles 63 and 329).

In Article 286, the Constitution incorporates the concept of "*Resguardo Indigena*" within the national territorial structure defined as a decentralized entity with political and administrative autonomy, therefore giving indigenous authorities the right to manage their territory. In article 357, the Constitution established the right of the indigenous *resguardo* to receive fiscal transfers from the central government, a practice initiated in 1994 with funds passing through municipalities in accord with Decree 1809 of 1993. Article 330 of the Constitution indicates that indigenous territories will be governed by councils (*consejos*) formed and regulated in accordance with the practices and customs of their communities. Decree 1088 of 1993 recognizes as a public entity the establishment of "*asociaciones de cabildos*".

Other regulations relevant to the project are: (i) Article 6 of the Constitution details the need for consultation of indigenous peoples any time actions are taken in their territories; (ii) Article 7 establishes that indigenous people have the right to determine their own priorities regarding their development and they have the right to participate in any plans or programs developed by the government that may affect them; (iii) Decree 2811 of 1974, the National Code for Renewable Natural Resources and Protection of the Environment that contains regulations concerning the national parks; (iv) Law 165 of 1994, Convention on Biological Diversity that relates indigenous comunities knowledge to conservation and sustainable use of biodiversity; (v) Decree 1320 of 1998 that requires that social assessment be carried out where indigenous groups might be affected; and (v) the Agrarian Reform Law 160 of 1994. According to Decree 2811 all productive activities are forbidden within national parks and protected areas. Later, Article 7 of Decree 622 of 1977 recognized that indigenous peoples' activities are compatible with protected areas and established a special management regimen.

## 5. Socio-Economic Profile of Indigenous People in Zone 2

The Alto Putumayo Zone contains two distinct geographical areas that will be characterized differently, the Sector A (Alto Putumayo) and Sector B (Valley of Sibundoy).

### a) Zone 2 - Sector A - The Alto Putumayo

The Cofanes are found in the Putumayo Department, along the River San Miguel, caño la Hormiga, River Guamuéz; Communities of Santa Rosa, Sucumbíos, Yarinal – Afiladores, Santa

Rosa of Guamuéz and vereda El Ají. Their territories are constituted by the Afilador Reserve (9.325 ha), the Santa Rosa of Sucumbíos (5.129ha), and Yarinal –San Marcelino (9.813ha). The population estimate for the Cofanes 1.457 inhabitants (DNP, 1997). They are organized in 11 communities that live in "resguardos" under the authority of "cabildos" and "taitas". The Cofanes are open to receive members from other ethic groups, through marriages, as long as the married couple remains in their community. The cultural tradition of the Cofanes is kept by the "elders" and is lead by the shaman or "taita", who has the knowledge of use of sacred and medicinal plants, particularly the Yagé. They have continue to speak their own traditional language which is Tucano.

In addition to the Cofanes, towards the south near the Ecuador border, the Sionas are found. They live in the river Putumayo and its affluent, in the Rivers Pinuna Blanco and Cuehembi. The principal territories of the Sionas are Buena Vista y Santa Cruz that amount to a land surface of 13.127 has. The Sionas are part of the Linguistic family: Tucano occidental and they have kept their language. The current population estimate is 475 persons (DNP, 1997). They are divided in groups: the Katucha-Pai, Yaiguaje (jaguar people), Maniguaje (mojarra people), Piaguate (aji people); Ocoguaje (water people); Payoguaje (monkey people) and Amoguaje (armadillo people).

Table 1 summarizes the different land tenure by ethnic groups in the Alto Putumayo region. The table can be summarized by characterizing three types of land tenure situations: (i) communities with sufficient land surface: Cofanes of Ukumari Kankhe; (ii) communities in fragmented territories and with insufficient land surface: majority of the Cofanes and the Inga and Siona communities; and (iii) agricultural communities with small private properties: some Ingas and Kamsa from the Valley of Sibundoy.

**Tabla 1. Indigenous Resguardos of the Putumayo y el Valle del Sibundoy.**

| Municipality | Resguardo/Reserva | Community | Date | ha |
|---|---|---|---|---|
| MOCOA | CONDAGUA | Inga | 21/09/1993 | 227 |
| MOCOA | PUERTO LIMON | Inga | 21/09/1993 | 251 |
| MOCOA | MOCOA | Inga- Kamsa | 21/09/1993 | 300 |
| MOCOA | LA AGUADITA | Páez | 21/06/1994 | 99 |
| MOCOA | YUNGUILLO | Inga | | 4.230 |
| ORITO | LA CRISTALINA | Awa | 9/09/1994 | 131 |
| PUERTO ASIS | AFILADOR | Cofán | 25/08/1976 | 9.325 |
| PUERTO ASIS | BUENAVISTA | Siona | 21/07/1983 | 4.500 |
| PUERTO ASIS | SANTA CRUZ DE PIÑUÑA BLANCO | Siona | 29/09/1992 | 1.990 |
| PUERTO ASIS | SANTA ROSA DE SUCUMBIOS | Cofán | 18/02/1976 | 5.129 |
| SIBUNDOY | SIBUNDOY PARTE ALTA | Kamsá | 28/11/1979 | 3.252 |
| SIBUNDOY,SANTIAGO,OT. | VALLE DE SIBUNDOY | Inga- Kamsá | | 1.150 |
| VALLE DEL GUAMUEZ | SANTA ROSA DEL GUAMUEZ | Cofán | 30/04/1973 | 3.750 |
| VALLE DEL GUAMUEZ | YARINAL-SAN MARCELINO | Inga | 30/04/1973 | 9.813 |
| IPIALES | UKUMARI – Kankhe ( EL OSO) | Cofán | | 21.140 |
| **TOTAL** | | | | **64.833** |

Issues: For the indigenous communities in the Alto Putumayo, it is vital for them to maintain their traditions and sustainable use of their natural resources. They also need a large area with natural habitats in order to continue their traditional lives, such as hunting, fishing, and forest products collection. The fragmentation of their territories and the over exploitation of resources is pressuring them to modify their traditional management techniques. The land tenure division among them due to political divisions, has brought social and cultural loss. In addition, the lower elevations of the Putumayo has suffered from the presence of illegal crops and the presence of armed groups.

Facing these threats, the Indigenous groups in the Alto Putumayo have organized themselves to address these problems: (i) they have organized themselves as the OZIP ( Zonal Organization of the Indigenous groups of the Putumayo); (ii) establishment of ethnical organizations around their shamans or "taitas", such as the ZIO - A'I (wisdom Union) and the UMIYAC (Union of the Indigenous "Yageceros" Doctors of Colombia) to strengthen their culture, rescue their native tongue; (iii) Strengthening of their "cabildos" and creation of new ones where needed (Puerto Legizamo); (iv) Political participation at the national level. The Inga tribe in particular has had a strong public presence, as it counts with one Senator and various representatives to other elected organizations.

Several of the indigenous groups in the Alto Putumayo have prepared "planes de vida" (the indigenous version of their development plan) and have send their proposal to participate in the Government plans to eliminate illegal crops.

**b) Zone 2 - Sector B - Pueblos del Valle del Sibundoy**

*i) The Ingas and other quechua-speakers*

The Inga population is estimated to be 2.988 individuals (DNP, 1997). They have small communal lands (see table above). They are organized in "cabildos", presided by governors. They have three cabildos. The Ingas have a direct connection with nature.. The vital cosmic force receives the name of sinchi. This force includes not only men and women, but also animals and plants, soil, water, rivers, rain, mountains, forests, etc.. The Ingas preserve their traditional languaje "quechua". "

*ii) Kamsá*

The Kamsa live in the higher part of the Valley of Sibundoy. They comprise 4.022 persons (DNP, 1997). Their native language is the Kamsa. They live in towns such as the Sibundoy and their house architecture is the same as the criollos. They are organized in "cabildos" lead by a governor which politically represents the group. In addition to having a subsistence agriculture, the Kamsas work on artcrafts and women make weavings , necklaces and commercialize them .

The Valley of Sibundoy presents the following issues:
- Small land tenure and the unequal distribution of land.

- They suffer environmental problems due to soil erosion in the mountain slopes and sedimentation of rivers due to heavy deforestation caused by cattle ranching in the nearby mountains.

.- They also suffer from plant pests in their agricultural plots and loss of food crops and medicinal plants.
- Poverty is another serious problem causing the indigenous groups to migrate towards the cities.

The Valley of Sibundoy has strong and consolidated "cabildos". There are juvenile organizations, especially the Inga with one professional group and political representatives that have had an important influence in the indigenous movement in the country.

## 6. Indigenous People Action Plan

### a) Current activities from which the plan is drawn.

The IAvH has been working with the Cofanes in the Putumayo foothills, in cooperation programs with their local organization the ZIO since 1997. With the Uwa community, the IavH and the Universidad Javeriana prepared a study entitled: Participation of the UWA in the management, restoration and conservation of the National Park El Cocuy. In addition, the table below summarizes all the activities that IAvH has carried out with indigenous communities and how the lessons learned have been incorporated in project design.

| COMMUNITY | PROJECT | LESSONS LEARNED |
|---|---|---|
| **Cofán** | • Life Plan (Plan de vida)<br>• Botanical inventories<br>• Expeditions<br>• Communications | • Importance for the indigenous communities to have autonomous decisions and community planning to aid the definition of their development perspective.<br>• Importance to include an institutional development plan in their Life Plans.<br>• Recognition of the importance of the ancestral knowledge about culture and their natural environment.<br>• Scientific technical assistance needs to be based in the recognition and respect of the autonomy about the decisions made by indigenous groups.<br>• Importance to have specific agreements and protocols were the rights of indigenous people are clearly spelled out. |
| **Uwa** | • Participation of the Uwa in the management, restoration and conservation of Cocuy Park | • In participatory projects, it is important to invite all the social actors interested in the project.<br>• Importance of recognizing the models and methods used traditionally by indigenous groups to conserve and manage biodiversity.<br>• It is necessary to ensure that adequate and transparent mechanisms are in place to resolve any trust conflicts and restore confidence. |

One of the main strategy to ensure the success of the project is to identify the initiatives and active processes lead by local and regional actors that are congruent with the project goals. These initiatives and processes will be supported by the project following the directives described below.

*i) Initiatives in the Alto Putumayo*

The Cofanes have proposed a series of activities in their Life Plans that are compatible with the project objectives.

| COMPONENTS | Strategies |
|---|---|
| Strengthen the organizational capacity of the indigenous communities to protect and maintain the integrity of their territory and initiate an environmental education program with the agricultural communities that live near the Cofanes. | Develop a continuous process of information, training, evaluation with the indigenous groups, the farmers and the conservation and scientific groups that work in the area |
| Prepare a social and environmental Plan of the Ukumari Kankhe reserve, Sucumbios Gardens, defining the territory in accordance with conservation priorities. | Training programs for the communities regarding the location of their territory, biological value and social pressure. Norms for using resources would be prepared and discussed with the communities and local authorities. |
| Carry out the characterization of the medicinal plants in the area around the Resguardo Oso and Jardines de Sucumbios, as well as surrounding areas with the participation of local indigenous experts and scientists. | Identify the populations of botanical species with traditional and medicinal use using native people knowledge. Build the necessary logistical support to store the collections and process the information. |
| Initiate a research process and experimental approach to use the medicinal plants in an intercultural context. | Develop an exchange program of knowledge between the taitas (or traditional doctors) and the scientists. |
| Strengthen the traditional medicine of the taitas as an internal method to pass to Cofanes future generations and preserve this knowledge of the natural world. | Promote the Cofanes traditional production system such as their home gardens. Build and improve small centers of medicinal and traditional knowledge and to assist patients and the preparation of traditional potions. Promote exchange programs with other communities in the Putumayo |

*ii) Initiatives in the Cerro Patasco*

The Cofanes are the main promoters of an inter-institutional process that encompasses the Park service (UAESPNN), the Association for Farmers Development (ADC), WWF and the IAvH. The process has been going on for two years with the objective of identifying the most effective way to protect the Patascoy Mountain. Currently, there is a very small budget designated by this group to carry out this process. A committee has been established with the major players to define the steps to reach this goal. The Cofanes have several reasons to want to protect this Mountain: 1) It has a traditional value that would be strengthened if it is protected; 2) It is a source of wild plants which are critical to the practice of their traditional medicine and ceremonies; 3) It is one of the main sources of pure water for their villages. The project will support this process as seen in the next section.

*iii) Initiative in the Uwa Territory*

In the 1997 study carried out by the UWA, Universidad Javeriana and the IAvH several goals were identified for the future.

Socialize and discuss the environmental problems of the area with the local actors and initiate an environmental education program.

Establish a dialogue between the different actors, identifying their roles, potentiality and perspectives to work together.

Recognize on the ground the conservation problems and production challenges, completing a participatory diagnosis of the current situation.

Identify the general guidelines to include new concrete programs that would address some of the main problems identified.

**b) Detailed Indigenous Action Plan**

As mentioned earlier, the IAvH has been working with the Cofanes since 1997 in the characterization of their territory, the recovery of medicinal plants, and the preservation of their cultural and ecological heritage. This has been done through training, workshops and evaluation of the current management tools been used. Most of the Cofanes communities have participated in these activities, including the four *taitas (shamanes).*

The relationship of the Cofanes to this project is based on a mutually trusting relationship and has been developed in the framework of projects that as we speak continue to be carried out by IAvH. There is a signed agreement between the Fundación Zio-AI and the IAvH to carry out activities in their territory. As a result, it has been agreed that the current project will be framed within the previous agreement. The main objective of the new project will be to support the protection of the Cerro Patascoy. The following activities will be part of the agreement.

**Annex 12**

| ACTIVITY | BUDGET |
|---|---|
| Declaration of the Patascoy Cerro. Definition of its limits, use categorization, and definition of the legal figure to be used through a participatory process already in place by the Cofan community and supported by the UAESPNN, WWF y IAvH. | US $ 100.000 |
| Conclusion of the biological assessment, including intercultural biological characterization of the Cerro Patascoy. Indigenous people will activelly participate as researchers for this activity | US $ 80.000 |
| Development of a zoning plan for the Patascoy Cerro and its surrounding areas. Training and support will be provided to the Cofanes to define their needs for zoning and planning in a participatory approach. This will help them define the land use categorization that they might apply to their own territory. | US $ 50.000 |
| Promotion of marketing of medicinal plants and other non-timber forest products from the forest to improve their livelihood and economic sustainability.. Training and studies will be carried out to assess the market potential, the carrying capacity of the products, the feasibility to commercialize these products. | US $ 100.000 |

## ANNEX 13: MEASURES TO AVOID RESETTLEMENT

**SUMMARY**: The Recipient has been informed about the Bank' s requirements to have a policy framework applicable to involuntary human resettlements arising from any other donation-financed subproject. The Recipient has responded by stating clearly that no resettlement will occur under the project. The Recipient has submitted as part of negotiations of the Grant Agreement clearly explaining the safeguards they have considered in the design of the project to avoid at all cost resettlement. A summary of this framework is included below. The Recipient will screen any activities of the project for potential resettlement issues and will decline financing activities that could present such cases. The project contemplates the creation of a National Park to protect the Cerro Patasco which is not been occupied by people; one reason why it has been preserved. The local people (Cofanes) living next to it have asked for the creation of this park. (see Annex 12 on IPDP). The rest of the areas contemplated in the project are conservation easements in private lands and regional reserves with legal rights for people to live in them. Furthermore, the new legislation of the National System for Protected Areas has developed a wide range of categories of protected areas enabling people to live and using resources to support their livelihood and therefore avoiding any needs for resettlement. The project has set as the main eligibility criteria for supporting project activities related to private conservation easements or regional reserves that they do not impact the land tenure nor land use situation of local people. These eligibility criteria are an integral part of the Operational Manual of the project. Proposals for these activities will be submitted to the IAvH coordination unit and will clearly describe the current situation around resettlement issues. IAvH will only select proposals with no resettlement issues and which prove to be solvent. The project was also designed to carry out activities in rural landscape with local people living around parks. These activities represent an incentive to improve the livelihood of people. So, in no way will project activities decrease people' s livelihood, totally on the contrary, it will improve.

**BACKGROUND**: Protected areas are the most important mechanism for the conservation of biodiversity. Today, biodiversity conservation strategy focuses more on ecoregional processes and in supporting a variety of protected area categories (parks, comunal reserves, indigenous reserves, etc.) and not as much in the strict conservation of small areas. The rationale for this trend is that it is more important to allow for the conservation of ecological processes on a greater spatial scale that surpass the limits of zones under strict protection. Effective systems of protected areas with connecting corridors can only be achieved today using conservation categories with diverse types of uses and with the support of local populations. This is particularly the case in the Colombian Andes, where the density and population distribution complicate strict conservation. In this context, the project aims to support the development of conservation practices in different types of reserves and private areas. To this end, the project will support the design of regional systems of protected areas, the design anf the implementation of management planes, the design and designation of new protected areas in order to fill important conservation gaps and promote and support private reserves.

This focus on protected areas systems is not necessarily exculsionary of human presence.Instead one of the priority tasks is the definition of levels of human intervention that influence the modes of use and occupation used today in rural areas and regions of crucial biodiversity. Additionally, national parks can comply with their function by interacting with the human population, as they conserve important uninhabited areas. This idea is clearly reflected in the National Policy of

Protected Areas[1] put forth by the Special Administrative Unit of the National Natural Parks (UAESPNN) and ratified by the National Environmental Council of Colombia.

In any case, in light of the high degree of transformation of the Colombian Andes and of the generalizations of this phenomenon, the areas of interest for conservation programs are precisely those scarce geographic areas with ample wildlife zones and with little population, at times inhabited by indigenous peoples or by peasants with ancestoral roots to the land - social groups to whom this policy principally refers, while at the same time providing guidelines for other social groups who could potentially be affected, such as the following:

Peasant settlers.
Propietors or rural owners with agrarian enterprise activities.
Propietors or rural institutional owners.
Propietors or owners with recreational farms.
Propietors or private owners with means of conserving nature.
Concessioners with mining activities.
Spontaneous miners.

Under the guidance of this policy, the project will achieve its goals without resettling any human population. This framework presents the fundamental guidelines of said policy and the strategy for its application.

## CONCEPTUAL FOUNDATIONS OF THE POLICY

The conservation of nature is carried out through different appraoches to protected area use, prior to the removal of any human influence, in which absolute isolation is each time less viable and in the long term idealistic. Given that it is required for management, the most cost effective form to do so is by exploring strategies that involve those social groups in the tasks of conservation. This principal aspect of the the objectives of conservation, those which involve cultural values, and finally the survival instincts of the human race have the valuation of biological diversity possible.

The economic costs of strict protection are not calculable. It is indispensable to use other mechanisms, particularly in situations of population occupancy, including when associated with high biodiversity values given that the world economy andmuch less the developing countries are capacble of assuming the costs of resettlement. This is due to the difficulties associated with the economic valuation of biodiversity and the failures of the world economic markets that do not internalize said value..

The imposition of isolation generates a disconnect of local communities from the protected area, in addition to a sentiment of confrontation. The path is to accept that those local communities are potential partners in conservation, not necessarily enemies.

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1 [12] UAESPNN. **Política de Consolidación del Sistema Nacional de Arreas Protegidas, con Base en la Participación Social en la Conservación**. República de Colombia, Ministerio de Medio Ambiente, Unidad Administrativa Especial del Sistema de Parques Nacionales Naturales. Bogotá, Agosto de 1999. 26 p.

On the other hand, the policy of isolating geographic spaces from the processes of development tends to perpetuate the actual growth model that generates a cultural attitudinall change. The contrary occurs with conservation proposals that confront the development model and insist in its transformation toward a more nature friendly system, in areas recognized as crucial for the future of biodiversity.

The creation and consolidation of geographic areas in the name of development, is a protection mechanism but not the only one. The development of regional protected area systems is founded in sustainable agrarian systems, understood by those processes of compatible production and extraction with a logic of the conservation of nature and that, articulated to processes of social harmonization, permits the reduction of pressures on protected areas, and in the same manner intends to solidify from an integral perspective various schools of knowledge, recognizing the study of traditional agriculture and the popular knowledge as fundamental pillars of its origin.

In accordance with Decree 2164/95, indigenous communities together with groups of families of amerindian descent, with or without collective property title, conscientious of identity and that share values, traits, uses or customs of their culture, just as forms of government, management or social control and systems of self-regulation, that distinguish them from other communities.

When a social group is denominated ‘ campesino’ or peasant it is in reference to communities of families for which agrarian, productive and extractive activities are their principal form of deriving income in the rural areas that they inhabit, where the work force is predominantly comprised of family members and the production is for complete or partial self-consumption.

Proprietor is that person who backs the possession and profitable use of land with property title, whether individual or collective, properly registrated, while the possesor is he who lacks regulation and maintains his possession and/or profitable use in de facto situtaions or in informal titles. The latter is the case of most colonized peasants and indigenous peoples outside of reserves, even though they are present in exceptional cases in the remaining social grousp discussed above.

The proprietors or rural enterprise owners art those that conduct productive and extractive processes with siginifcant capital investments, salaried labor and market oriented production. This is also the case of commercial farming, cattle raising, and large-scale livestock, poultry and fish farming, and in the industrial forest plantations, among other activities that may be found in the Andean zone.

The proprietors or institutional owners are very diverse, in that they can range from academic or research institutions with relatively large areas to conduct their research and experiements or military installations in strategic sites toofical and private entities that use small areas to install telecommunication equipment.

The subsoil resources are property of the Nation, for which every mining activity is carried out under governmental concession, even though small mining is on the margin of the laws, which has been denominated spontaneous mining.

**LEGAL FOUNDATIONS**

This document reflects the Policy for Consolidation of National System of Protected Areas, rooted in the Social Participation in Conservation (*Política de Consolidación del Sistema Nacional de*

*Arreas Protegidas, con Base en la Participación Social en la Conservación),* approved by the National Environmental Council and disseminated by the Ministry of Environment in October 1999.

Additionally, in accordance with Article 16 of Covenant No. 169 of the OIT with regard to "Indigenous Peoples and Tribes in Independent Countries" signed by Colombia August 7, 1991, the indigenous peoples that live within or outside of legally constituted reserves have the right to remain in their place of inhabitance.

Decree 622 of 1997 regarding the national system of parks establishes that settlement and indigenous production systems are compatible with the conservation of protected areas, for that reason the permanence of a community in a protected area will be respected and its rights to take advantage of economically renewable natural resources, observing the compatible technologies with the objectives of the conservation of the respective area. Consequently, under the Colombian legislation, the Indigenous Reserve is compatible with the areas of the National Natural Parks Systems, under strict protection.

In the same decree, legal land titles are respected within protected areas and it is specified that agreement is reached with land owners compensation to the limitations of land use together with incentives to make settlements to their owners for land use and natural resrouces, via sustainable agricultural systems. Although within the Colombian constitution and laws, gaps exist that generate uncertainties about the collective rights of peasant communities, "raizales" (those social groups that are born and have ancestors in their area of inhabitance) that inhabit protected areas, the cited decree does not explicitly regulate their expulsion or expropiration.

In the 1990s regional and private conservation proposals were suggested. Among the regional proposals the department of Risaralda is detached. The private reserves have solidified themselves in the Network of Private Reserves of Civil Society, made up of 25,000 hectars of 93 associates, located across the length and width of the national territory. Although they make up a much smaller territory than the System of National Parks, they have committed various social actors to the conservation of biodiversity and natural ecosystems, for whom the Network of Reserves has been a space of reflection about the social mission of conservation. The new political guidelines of the Parks Unit of the Environmental Ministry is a reflection of the fruits of this process. Since recetly, the Decree regulates the establishment of private reserves.

**PRINCIPLES OF THE POLICY**

*Consensualized decision-making*. The development of regional systems of protected areas should be a social exercise, based on processes of harmonizing interests and perceptions, guided by analysis and comprehension of the relationship between society and nature in the diverse reality of each region. Therefore, one of the principals of action should be the articulation of all persepctives from the civil society and the State, with an emphasis on the local reality.

*Conservation as a collective proposal.* All types of initiatives suggested by individuals, organized groups or the public sector should be articulated among local and regional actors when introduced and methods for solidifying regional systems of protected areas promoted, always with the ultimate goal being understood as conservation.

*Integrity*. The consensualized construction of regional systems of protected areas will begin with an integral vision of the territroy, that intends to overcome the fragmentation of the construction of knowledge, and the difficulty to foster a multicasual vision of the realities that confront the regional system of protected areas.

*Timely and Sufficient Information*. Those responsible for conservation programs are obligated to supply the population inhabiting the protected areas and its buffer zones available information regarding the objectives and scope of the projects that affect them, as well as the potential benefits and opportunities, with the understanding that this should take place prior to initiating participatory decision-making processes.

*Respect to social groups entailed to protected areas.* The development of regional systems of protected areas will begin with the recognition and environmental valuation of social and institutional actors associated to them, for whom the decision should begin with integrated analysis of the following aspects: historical relation of the social actors in the area, their models of occupation and use of natural resources, the environmental regulatory system that governs de factos, its expectations relative to the area and the legal jurisdiction of its relation..

*Respect of aquired rights*. In the process of building consensus abour the objectives and strategies of conservation, the rights of the social groups involved shall be established and respected - equally those contemplated by current legislation and international treaties just as those defeated in previous negotiations with the State.

*Respect to local systems of social control of natural resource management*: The planning and execution of a conservation program shall recognize the diverse systems of social control for natural resource management, exercised by multiple cultures in geographically, ecologically, socially and organizationally diverse manners. Conservation actions should seek to be compatible with both systems, the national environment and the consensus of the population historically settled in the area.

*Equitable benefits of conservation*: The development of conservation programs requires training of personnel and and as a result supplies a source of employment; likewise it represents an opportunity to become familiar with and make use of the sustainable monetarization of the diverse environmental functions of natural ecosystems. These are the benefits to which the dwellers of the park areas and buffer zone should have privilidged access.

*Parks with people*. Given that the same legislative act that created the areas of the National Natural Parks System inhibit conventional social investment, transition mechanisms should be introduced to protect conservation units with human presence.

*Creation of new protected areas.* Should be the result of social harmonization , supported by interinstitutional agreements regarding land use and needs for strict protection of ecosystems.

*Gender Equity*. The distribution of benefits and ompensations among men and women of the settled familes in protected areas should recognize that the social roles undertaken by different genders in productive activites guarantees and equitable control and access to compensations and incentives..

*Privileges to vulnerable populations*. Women head of households, children, elderly, disabled and other vulnerable groups shall have privileged access to the benefits of the conservation programs.

*Peaceful solution to conflicts*. Entities and procedures shall be established that guarantee the peaceful resolution of conflicts that emerge during the planning and execution of the conservation program, equally among the population as between the population the entities responsible for the program.

**IMPLEMENTATION STRATEGY FOR THE POLICY WITHIN THE PROJECT**

*1. Begin with participatory processes.* A principal strategy of the project to assure that its activities have no adverse impacts on involved populations, is that to begin with participatory processes that are compatible with the objectives of the project. This reduces the possibility of encountering stakeholders who confront the project considering that social and economic sustainability is threatened, on the contrary they should perceive the project as support to achieve goals consensualized in a participatory manner, with regard to initiatives of territorial ordinance. Adequate participatory processes already exist in various project zones given the community organizational levels in many zones of the Andes and a high grade of transformation that demonstrates that the opportunity costs of conservation are greater than continuing its destruction. The participatory mechanisms incorporated into the project design are detailed in Annex 11.

*2. Participatory design of regional protected area systems*. The responsibility for conservation and the sustainable use of biodiversity fall directly and indirectly on numerous institutions, as well as civil society. Project resources are limited in relation to the real necessities of conservation in the Andes, for which one of the objectives of the project is to incentivate participatory actions with the majority of these actors, which constitutes part of the social contract that allows the saving of institutional resources and the completion of agreements with distinct social groups about financial compensation for the restrictions to the utilization of natural resources, derived from the needs of nature conservation.

The participatory design of regional systems of protected areas is a strategy to achieve this objective and is functioning in three project zones. This process groups among other the CARs, the UAESPNN, the IAvH, the INCORA, NGOs and community organizations of regional character and productive union associations. As a team they identified the gaps in conservation in the region and the best alternatives to fill them from the biological and socio-economic point of view (taking into consideration the former point). This shall permit that the actions undertaken have a minimal impact on the local communities at the time they count on the support of participants to minimize the impact. The project has allocated US$680.000 for these activities.

*3.Participatory identification of new protected areas.* The new areas of the National Natural Parks System shall suggest process of reaching agreement in terms of this policy, which should begin with the study and analysis of the social dynamics of the territories crucial for biodiversity conservation. The agreements should be the culmination of profound processes of social reflection, an avenue to legitimize decisions regarding various important aspects of the project. The criteria to support the creation of new areas shall be the projects to be approved shall have resolved any form of conflict of land use or tenure to be eligible for financing. In this manner, the project strategy seeks to resolution of local problems in order to support any type of financing. This norm forms part of the eligibility criteria for activities described in the Operational Manual.

*4. New protected areas with national character*. An example of this type of process is noted in the Annex detailing the participation of indigenous peoples in the project (Annex 12) .

*5. Support to municipal Territorial Ordinance Plans (POT) and in the Life Plans of ethnic territories in zones of interest to the project.* These planning instruments, actually in process of becoming legalized, are an opportunity to involve localities in the conservation proposals without need to impose upon them. For this reason the project shall support these processes through active participation, when possible, and through the provision of available information, because they should be considered as spaces that allow for the identification of opportunities for the project.

*6. Promotion of sustainable productive activities.* The design and implementation of the management plans for protected areas have as an objective to ensure the long term sustainability, which considers the actual and expected impact that the neighboring communities generate. For this adequate sustainable productive activities shall be identified and promoted en each site. During the first phase of preparation, the principal knowledge alternatives were gathered with the assistance of CORPOICA. This process shall continue during the execution of the management plans and of Component 2 of the project (conservation in rural areas) that includes the development of management tools for rural areas, the identification and promotion of green products and markets, the dissemination strategy and replicates the results of Component 2, and finally promotes biodiversity friendly goods and services. The field implementation of this strategy, shall support the Municipal Units of Agropecuary Technical Assistance (UMATA), in the spirit of integrating its productive proposals with the conservationists through technical assistance to foster productive alternatives with lower environmental impacts.

*7. Development of incentive systems for Andean Region use*. Another form of improving the compatibility among conservationists and human use is to promote the creation of economic and institutional incentive systems at regional and local levels. This strategy commences with the acknowledgement that conservation may imply that the producer can not assume for the greater society. It seeks to attract institutions and resources that are offered and are interested in offering incentives for Andean Region production the Certificate of Forestry Incentive (CIF), but that does not always have its desired affect. The project will therefore act as a facilitator to consider the various incentive offers in the areas of action of the project and provide information to analyze the impacts of incentives in protected areas and their relation with the incentives actually offered. In this manner, actual incentives may be adjusted and gaps identified along with forms to overcome them so that it operates as an incentive system that responds to a regional strategy and not as a isolated incentives that seek specific objectives.

*8. Promotion and strengthening of the private reserves and the networks of private reserves.* As previously stated, a fundamental aspect of this strategy is to identify actors with interests compatible with the objectives of the project. This is the case of private proprietors with interests in conservation. In the Andes today there exists more than 200 private reserves, where the proprietors have reserved all or part of their land for conservation. Many of these reserves (93) are affiliated with the Network Association of Private Reserves of Civil Society. The project relies on resources to support the conformation and consolidation of private reserves in the areas of action of the project and to strengthen to network that associates them in a manner that can offer improved services to those affiliated while attracting more. It is important to note that indispensable requirement to receive project support for the conformation of private reserves is the possession of a land title and

the actual control of its use, in a manner that guarantees its conservation for at least the medium term and that the possibility does not exist to forcibly displace the population. This regulation for investment eligibility, as previously mentioned, forms part of the Operations Manual that will be applied for the duration of the project

*9. Settler peasants and others* The settler peasants with unsustainable productive or extractive activities shall be linked to the conservation programs in terms of this policy and shall participate in Component 2 that supports changes in productive systems that are more compatible with the conservation of nature.

*10. Economic resources* The following table displays the principal resources for the implementation of this strategy.

| Activities | Amount |
|---|---|
| Participatory design of regional systems of protected areas | US$ 680.000 |
| Workshops, meetings and dissemination materials for the participatory design of protected areas | US$325.000 |
| Design and implementation of protected area management plans | US$ 7.500.000 |
| Design and implementation of tools for rural area management | US$ 3.460.000 |
| Identification of green products and markets | US$ 1.390.000 |
| Dissemination strategy and replication of the conservation component results in rural settings. | US$ 470.000 |
| Fund for the promotion of biodiversity friendly goods and services. | US$ 1.000.000 |
| Development of an incentive system for Andean Region use | US$ 355.000 |
| Promotion and strengthening of private reserves. | US$ 1.000.000 |
| Promotion and strengthening of networks of private reserves. | US$ 300.000 |

## Annex 14: Colombia GEF Portfolio

Colombia is generally recognized to be one of the five "megadiverse" nations in the world (Mittermeier, 1998) and has one the highest concentrations of species per unit area. It is home to about 15% of all known terrestrial species including the largest number of species of birds and amphibians in the world and one of the highest number of vascular plants and vertebrates. The country also possesses 18 ecoregions (WWF/World Bank report, 1996), the second highest of any country in Latin America. The most recent ecosystem map of Colombia (Instituto Alexander von Humboldt, 1998) identifies 65 ecosystem types.

This outstanding natural endowment is reflected in the country's current GEF portfolio which falls largely within the biodiversity thematic area and includes initiatives under three different Operational Programs (#2, #3, #4) and the crosscutting issues of Land Degradation and Watershed Management. The various proposals, at different stages of preparation and implementation, target key representations of the county's wide spectrum of ecosystems, geographical areas, environmental and social issues, from the Andean Paramo, to the Amazonian Forest, to the Pacific Coast, and to the Caribbean Marine Resources.

Whilst this range of initiatives is highly justified by the country's megadiverse status, it calls for the definition of a coherent programme approach in order to optimize resource allocation, ensure synergies and complementarities within the GEF biodiversity window and maintain overall coherency with national priorities, policies and plans. The GoC has taken important steps to meet this challenge through the definition of a series of commitments and specific mechanisms including the following:-

*Coordination Committee*: The Minister of Environment (MMA), UNDP and the World Bank have established a Permanent GEF Committee that became fully operational in the second semester of 1999 and has the following objectives:- 1) to ensure that all the new GEF initiatives respond to Government priorities, as defined by the National Environmental Policy and the National Biodiversity Strategy and Action Plan; 2) to clearly establish the thematic complementarity of different initiatives and their different geographical location; 3) to exchange information on successful and unsuccessful experiences and lessons learnt during project preparation; 4) to create a forum of discussion between Implementing Agencies, Executing Agencies and GoC on portfolio progress and execution in order to improve the efficiency in the use of the financial and human resources; and 5) to exchange technical assistance between the different initiatives.

*Common Vision:* The Colombia biodiversity portfolio projects share the same vision and strategy whose main characteristics are:- 1) the conservation of biodiversity of global importance, through the sustainable use of biodiversity and natural resources; 2) the identification and removal of barriers for Sustainable Production Systems, as part of the strategy to prevent biodiversity loss; 3) the participation of the local communities, and civil society in the definition and execution of the conservation strategy; 4) the identification and implementation of a broad range of protected area management categories for a more comprehensive conservation strategy; and 5) decentralized environmental management at the regional and local level, as a necessary factor for the success of any biodiversity conservation strategy.

*Institutional and Organizational Coverage:* The GEF Colombia biodiversity portfolio features a wide institutional variety of executing agencies, that not only ensures the country's absorptive capacity for the portfolio but also enriches the dialogue, the exchange of experiences, and methodologies between individual proposals. This institutional diversity ranges from National Government Institutions (e.g. the National Parks Unit), to Regional Government Institutions (e.g. the Corporaciones Autonomas Regionales (CARs), to National NGOs (e.g. Foundation Natura and Foundation Pro-Sierra), to local NGOs (e.g. Proselva and Etnollano), and to research institutes (e.g. Instituto Alexander von Humboldt).

**Portfolio Overview**

The Colombia GEF biodiversity portfolio comprises nine projects that are under implementation (1), preparation (7), and identification (1). A summary of project partners, objectives, and status is described below.

***Under Implementation***:

*1. Sustainable Use of Biodiversity in the Western Slope of the Serranía del Baudó (Choco)* – Medium Sized GEF – Implementing Agency: World Bank. Executing Agency: Foundation Natura Colombia. The objective of this MSP is the development of a strategy for the sustainable use of biodiversity in the western slope of the Serranía del Baudó and the marine resources of its coastal area (Choco- Pacific Coast) in a joint effort between governmental institutions and civil society, designed to benefit local communities, within OP#2, Coastal, Marine, and Freshwater Ecosystems) and OP#3, Forests (GEF Approval April 1999; WB Approval June 1999; project start up September 1999).

*2. Caribbean Archipelago Biosphere Reserve: Regional Marine Protected Area* System – Medium Sized GEF – Implementing Agency: World Bank. Executing Agency: CORALINA. The objective of the project is to conserve biodiversity and ensure sustainable use of coastal and marine resources in the Archipelago, while enhancing equitable benefit distribution for the community, within OP#2, Coastal, Marine, and Freshwater Ecosystems (GEF Approval May 00, CEO approval June 00, WB approval June 00; Project start up August 00)).

***Under Preparation:***

*3. Conservation of Biodiversity in the Sierra Nevada de Santa Marta* – Full Size GEF – Implementing Agency: World Bank. Executing Agency: Fundación Prosierra Nevada de Santa Marta. The objective of this project is to conserve, restore and promote sustainable use of the mosaic of tropical ecosystems in the Sierra Nevada de Santa Marta, within OP #4, Mountain Ecosystems, and OP# 3, Forests (GEF-Council approval, December 1999).

*4. Andean Region use of biodiversity in the Andes region*. – Full Size GEF – Implementing Agency: World Bank. Executing Agency: Institute von Humboldt. The project's development objective is to increase conservation, knowledge, and sustainable use of globally important biodiversity in the Colombian Andes, within OP #4, Mountain Ecosystems, and OP# 3, Forests (GEF Council Approval, May 2000).

*5. Biodiversity Conservation in the Paramo and Montane Forest Ecosystem of the Colombian Massif* – Full Size GEF – Implementing Agency: UNDP. Executing Agency: National Parks

Unit. The proposed project will protect globally outstanding ecosystems in the region, establishing a network of protected areas, improving buffer zone management by enhancing sustainable land use in areas adjacent to parks, and integrating biodiversity management principles into regional and local processes, within OP #4, Mountain Ecosystems, and OP#3, Forests. In view of the fragility and severe land degradation of mountain areas, it will also address the crosscutting issue of land degradation (Block A granted).

*6. Biodiversity Conservation in the Special Management Area La Macarena* – Full Size GEF – Implementing Agency: UNDP. Executing Agency: CORMACARENA. The objective of this project is the conservation of biodiversity in the special management area La Macarena, strengthening the management of the reserve and contributing to sustainable natural resources practices, within OP#4, Mountain Ecosystems, and OP#3, Forests (Block B granted).

*7. Andean Region Development of the Mataven Forest (Amazonia)* –Medium Sized GEF – Implementing Agency: World Bank. Executing Agency: Etnollano. The objective of this MSP is to support the establishment and demarcation of indigenous territory as a strategy for natural resources conservation. It is working on the creation and management of the first "Indigenous National Park" as a strategy for Andean Region use of biodiversity in the Mataven forest in the Amazon region, within OP#3, Forests. (Block A granted, MSP Brief submitted for GEF approval)

*8. Community Based Management for the Naya Conservation (Choco)*–Medium Sized GEF – Implementing Agency: World Bank. Executing Agency: Foundation Proselva. The objective of this project is to develop and implement a community-based biodiversity management and monitoring plan, endorsed by local communities and government, to be the long term guide for future development in the Naya river basin of the Choco region, within OP#3, Forests, and OP#4, Mountain Ecosystems (Block A granted).

***Under Identification:***

*9. Marine and Coastal Protected Areas System of the Caribbean and the Pacific* - – Full Size GEF – Implementing Agency: UNDP. Executing Agency: INVEMAR. The objective of this project is the Andean Region use of biodiversity in the marine and coastal protected areas of the Colombian Caribbean Sea and Pacific Ocean, in order to contribute to the preservation of the cultural diversity and the sustainable development of the nation, within OP#2, Coastal, Marine, and Freshwater Ecosystems (Block B under preparation).

## ANNEX 15: GEF Biodiversity Projects in the Andean Region

### Key Position of the Andean Region

Within a megadiverse country, the Colombian Andes is biologically the nation's richest biogeographic region, surpassing even the humid lowland forests of the Amazon, with 21 distinct ecosystem types (Instituto Alexander von Humboldt, 1998) and high levels of endemism. This is largely due to the division of the Andean range into three distinct mountain chains in the south of Colombia. Each chain, or Cordillera, has high and differentiated diversity due to the wide range of altitudes, climates, and geology resulting in geographical isolation, particularly in the valleys and mountainous areas. The Andean region also has a remarkably high cultural diversity with numerous indigenous groups. Housing approximately 80% of the nation's total population, it holds a key role in the country's economy and as such had been placed as the highest priority in different national plans and policies including the National Development Plan, the Collective Environmental Plan, and National Biodiversity Strategy and Action Plan.

### National Strategy for Conservation in the Andes

In view of its crucial importance, the GoC has taken additional care to ensure strategic GEF intervention in the Andean region in order to avoid irreversible losses to globally significant biodiversity. In August 1999 the MMA presented its *National Strategy for Conservation in the Andes* as the first stage of a long term policy to conserve biodiversity in this region. This strategy contains four well-targeted and coordinated GEF proposals designed to address the most immediate priorities in the region in a cost-effective and timely manner.

These four proposals include one national "umbrella" project and three regionally based projects and fall within OP #4, Mountain Ecosystems, and OP#3, Forests[13]. In view of the fragility and severe land degradation of mountain areas, they will also address the crosscutting issue of land degradation. The umbrella project will focus on themes best addressed from a national viewpoint such as revision of the legal frameworks, developing conservation incentives such as environmental service fees and green markets, and incorporating biodiversity considerations in sectoral development. It will also develop national stakeholder and information networks, strengthen institutional capacity for biodiversity conservation and increase the knowledge base on biodiversity. In addition to these nationally oriented themes, the umbrella project will initiate regional conservation actions in zones selected for their global biodiversity significance and to ensure a comprehensive coverage of ecosystems focusing on areas not targeted through the regional projects of the Andean Strategy.

This umbrella project will be complemented by regionally based projects in the Colombian Massif, in the Sierra Nevada de Santa Marta and in the Serrania de la Macarena. These areas were selected based on four main criteria:- (i) the strategic value within the nation's biodiversity; (ii) innovative elements that could enrich the National Conservation Strategy; (iii) social and environmental processes that require differential treatment and (iv) well advanced and solid local processes that present opportunities to work in areas of potential risk with greater success rates.

[13] See Colombia GEF Portfolio Annex

The Colombian Massif is located at the confluence of four biogeographic regions (Amazon, Pacific, Orinoco, and Andes) and at the intersection of the three Andean Cordilleras giving rise to a rich mosaic of unique ecosystems. Furthermore, the Massif is known as the hydrographic star of Colombia and is the catchment area of the county's four most important rivers. The Sierra Nevada de Santa Marta is located at the confluence of the Andean and the Caribbean bioregions and marks the most northern extreme of the entire the Andean Chain. It the world' s highest coastal peak, offering nearly all the climatic zones that can be found in Tropical America, resulting in an outstanding biodiversity. The Serrania de la Macarena is located at the confluence of the Amazon, Andes and Orinoco bioregions, represents the most western point of the Guayana Shield and is the oldest geological formation in the country. The Serrania has a remarkably high endemism and borders the eastern flanks of the Eastern Cordillera marking the biologically rich transition between Andean and Amazon ecosystems.

Each regional project also presents unique cultural characteristics and important inputs for a national strategy. The Colombian Massif has the largest ethnic diversity in a uniform region and as such is ideal for the definition and development of inter-cultural management categories for the conservation in the Andean region. The Sierra Nevada de Santa Marta equally offers a unique input of indigenous knowledge to the conservation strategy as it houses the county's most culturally consolidated and structurally organized ethnic group. The Serrania de la Macarena in contrast presents the conservation challenges of areas under recent occupation following unplanned and rapid colonization processes. This region also presents an opportunity to evaluate a unique management category - Special Management Area- that requires the joint management of a Regional Environmental Authority (CORMACARENA) and the National Parks Service. The Massif and Sierra Nevada, in contrast, will consolidate and evaluate a different management category-a Biosphere Reserve - in the former led by National Parks Service and the latter a NGO.

**Coordination Amongst Andean Projects**

In addition to the general co-ordination efforts described in the Colombia GEF Portfolio 15, additional measures have been taken to avoid duplicity between these closely related Andean proposals. These efforts have focused on the clear definition of each project's contribution to the Andean Strategy; the role of the National Parks Service, IAvH´s, CAR' s, NGO' s and other institutions in each project; and the identification of specific mechanisms to unify technical criteria, define complementary project baselines and co-financing sources and develop coordination mechanisms for project implementation.

**Unification of technical criteria to ensure uniform inputs to the Colombia Andean Strategy**

- All projects share the ecoregional approach in the design of their conservation strategy. The scale of the ecoregions presented in Dinestein et al, 1998, has been detailed to allow national analysis and cross-referencing with the national ecosystems map produced by the Institute Alexander von Humboldt (1998). This classification has been used by all the projects as the basis for biological analysis.

- The projects support the design and implementation of the national system of protected areas currently being developed under the lead of UAESPPN that will include a broad range of management categories. They will implement regional systems that will serve as pilot

experiences that could be replicated in other areas of the country. Furthermore, selection of sites for on the ground work has been based on an ecosystemic analysis to ensure representative regional systems of protected areas as the basis for in-situ conservation in the long term.

- All projects recognize the importance of permanent participation to assure ownership and support of all stakeholders involved, from investors, the State, technical and scientific community on the ground implementing agencies and local communities. This is in line with the Parks Service instrument "*Política de la Conservación con la Participación Social*" which will be adopted for the development of the conservation areas components of all projects.

- A complete biodiversity baseline for the Andes and biodiversity information system will be developed under the lead of IAvH to readdress the lack of basic knowledge and poor access of decision-makers to this, that are root causes of biodiversity loss in Colombia. All projects in the Andean strategy will contribute to this goal and help disseminate the information in adequate format for decision-makers.

**Economic baseline and project co-financing**

The teams of the projects have also been working together to identify their baselines and negotiate co-financing in order to optimize the use of available resources. As a result, a realistic calculation of the resources for each project is under construction and will be clearly defined by the time all projects reach maturity, avoiding double accounting.

**Coordination Mechanisms for Project Implementation**

A series of mechanisms have been established that will be further detailed as the projects mature. These include the following:

- To avoid duplication of efforts and assure unity of criteria, UAESPNN and IAvH will coordinate the activities of all projects related to national parks and biodiversity information collection and management, respectively. The UAESPNN will be integral part of each project component focusing on the creation of regional protected areas systems ensuring that these become complementary and functional modules of the national system under creation by UAESPNN. Where appropriate the UAESPPN will use its close relationships with local communities and other stakeholders in and near national parks to strengthen participatory processes of all projects. IAvH will offer training and its experience in ecosystem mapping and biodiversity characterization. Both IAvH and UAESPNN will coordinate a revision of the current conservation legislation in Colombia according to their legal mandate and propose adequate modifications to the GoC consequent with the conclusions reached during the implementation of the strategy for the Andes.

- The Ministry of the Environment will convene an annual Andean coordination workshop, funded jointly through the projects in the strategy. These workshops will have open and closed sessions each with clearly defined objectives. The open sessions will be used to present project advances to diverse national and international audiences and provide international expertise on the state of the art of Andean Region use of mountain ecosystems.

The closed sessions will be restricted to project teams and experts and will focus on joint planning exercises, optimizing resources, interchange of experiences and specific contribution of the projects to the Andean Strategy.

- Regular meetings will be held between project coordinators and national executing agencies to assure complementarily at the operational level. Project coordinators will convene these meetings as specific needs arise. Project coordinators will also be invited as observers to the IA evaluation missions of each respective project.

- Mechanisms, such as common web pages and information bulletins, will be developed for information exchange. All information collected by the projects will be of public domain, and will be integrated in the biodiversity information system under creation by IAvH and the umbrella project

- The work to be undertaken by the umbrella project on conservation incentives and green markets (including ecotourism) will be adopted in all the projects to improve long term financial sustainability of conservation actions. Local specifics and opportunities may be addressed in regional projects where appropriate and later taken up by the umbrella project. All projects will benefit from the biotrade initiative under implementation by IAvH.

## ANNEX 16: Monitoring and Evaluation Program

The objective of this plan is to offer information to decision-makers about the evolution of biodiversity, as the system on which the project acts, and about the administrative and financial development of the project, to evaluate the project' s evolution and its impact. The first type of information will be collected and stored in an indicators system that reflects the state of the biodiversity in the project areas, the negative pressures that affect it and the institutional response implemented to face those negative pressures. The second type of information, will be collected and stored in an indicators system to evaluate the efficacy, effectively and timing of project actions at any time as well as to allow a final evaluation of the project' s impact and performance.

Part A describes the specific components of each of the indicators systems whilst part B describes the operational structure required to implement the systems and to follow the commitments acquired with the financiers and with the WB as implementing agency of the GEF.

### A. PROJECT' S MONITORING AND EVALUATION INDICATORS

The system counts with two basic components: i) *simple indicators*: to **monitor** biodiversity characteristics as well as social, economic and demographic conditions in project areas; and ii) *complex indicators*: to **evaluate** the performance and impact of the project. This section presents the basic characteristics of these two types of indicators. Table 1 shows project' s simple indicators whilst Table 2 describes how complex indicators to evaluate performance and impact of the project are built form simple indicators. More technical detail can be found in the document *Sistema de Indicadores de Seguimiento y Evaluación del Projecto y de la Política de Biodiversidad en los Andes Colombianos– Fundamentos Conceptuales y Metodológico* (IAvH, 2000) in project files.

### 1. Simple Indicators to Monitor Biodiversity:

Monitoring indicators are quantitative measures of relevant manifestations of: a) the state of biodiversity, b) the pressure over biodiversity due to human activities and c) the institutional response to change the biodiversity state and negative pressures over it. These are called *Simple* because they are only a measure describing a situation, they do not intend to qualify or judge the situation. In other words they express simple irrefutable facts about biodiversity in this case organized in a state-pressure-response structure[14].

- *Indicators of State.* Measure biodiversity state at all times. Allow biodiversity change monitoring throughout the project. Detected changes are not necessarily result of project actions.

[14] This system is similar to the one used by OECD (Organization for Economic Cooperation and Development) as well as to the one suggested by UN:
OECD (1994) Environmental Indicators, OECD Core Set, Paris.
United Nations (1996) Indicators of Sustainable Development Framework and Methodologies,

- *Indicators of Pressure.* Reflect social, economic, politic and demographic factors that produce changes on the state of biodiversity by interacting directly or indirectly with it.

- *Indicators of Response.* Identify the actions and measures put in place to achieve the desired biodiversity scenarios. They reflect in a synthetic fashion governmental, institutional and project *de facto* policies.

**2. Complex Indicators to Evaluate the Performance and Impact of the project.**

Simple state-pressure-response indicators are required but not enough to make judgments about performance and impact of the project. For that matter we move onto complex indicators that relate project goals and expected impacts with actual achievements. It is here where project defined goals and expected impacts come into play.

Evaluation indicators are classified in two categories: a) Project performance indicators related to the evaluation of project actions and b) Project impact indicators related to changes in biodiversity state-pressure-response situation.

- *Project performance Indicators*. Compare programmed versus executed actions and outputs using three measures: effectiveness, efficiency and timing.

  – The *effectiveness indicator*. Measures the advance of an specific action against its programming. It is expressed as the percentage of the programmed action that has been executed in reality.

  – The *efficiency indicator*. It is based on the programmed resources for an activity and measures the percentage actually used to execute it.

  – The *timing indicator*. Measures the time gap between the real and the programmed ending of an activity.

- *Project Impact Indicators.* Compare biodiversity state-pressure-response situation before and after project intervention. An first approximation to the initial situation or base line was constructed during project preparation and will be complemented at the beginning of the project. The main expected impact goals were defined during project preparation and are in the project' s log-frame. The reaching of these goals can be additionally evaluated using two indicators for those goals with enough information:

  – The *Productivity Indicator*. Measures the cost-benefit relationship. Benefits are estimated as the economic value of the achieved changes.

  – The *Quality Indicator*. Measures the difference between the planned and the obtained output in terms of technical standards collectively accepted as desirable.

## B. INDICATORS SYSTEM IMPLEMENTATION PLAN

### 1. Biodiversity Monitoring Indicators system

Implementation and operation of this system requires a technical administration unit that will be hosted at IAvH. The system will be implemented in collaboration with local, regional and national institutions that will provide some of the information and that will have access to the integrated databases and will receive the reports to help them in their decision making.

The main activities to be undertaken by the technical administration unit are the refinement of the indicators system, the establishment of collaborative agreements with local, regional and national entities collaborating with the system. The design of POAs, administration and management of the databases, data processing and generation of reports and the design of a long term financial sustainability strategy for the system.

The system has been and will continue to be designed to function only with information available and information which is regularly updated by defined institutions. New information can be incorporated in the system as long as it is responsibility for data gathering is clearly defined.

Additional consulting will be required to:

a) Monitoring and training to evaluate and strengthen the capacity of the collaborating institutions to provide data and use the results.
b) Design of data sampling and gathering methodologies for desirable information not yet available

### 2. Project performance and impact indicators system

Project performance and impact monitoring and evaluation will be undertaken by the Project Coordination Unit which will keep track of all project activities and collect the required information to calculate the indicators. To assist on this matter, the project will acquire and install project monitoring and evaluation software. The main activities of the PCU regarding this issue are:

a) Design of the information gathering and update procedure to be followed for all the activities undertaken by the project, including initiation dates, intermediate commitments and dates, funds flow and achievements.

b) Information gathering throughout the project; and

c) Monitoring and evaluation of the *effectiveness*, *efficiency* and *Timing* of project activities according to the previously presented indicators.

It will be responsibility of the unit to keep close track of project beneficiaries and activities to assure adequate and timely information flow. The basis of project performance

evaluation will be the annual activities plan that will be ready the previous October of every year. Semi-annual project performance monitoring and evaluation reports will be prepared comparing these plans with the project evolution. These reports will be ready by March and October every year reporting about the previous periods July-December and January-June respectively. Project impact evaluation according to the indicators already mentioned will be undertaken by independent consultants by the end of the project since environmental impacts take a long term to leave traceable tracks.

**Table 1. Biodiversity Monitoring Simple Indicators: A. Biodiversity Conservation; B. Biodiversity Sustainable Use; c. Biodiversity Knowledge**

| **A. Biodiversity Conservation** | | |
|---|---|---|
| | **Variable** | **Indicator** |
| STATE | Natural ecosystem area | Area of each ecosystem in ecosystems maps |
| | Threatened species | # of Species identified as threatened in red lists and books |
| | Ecosystems fragmentation | Current fragmentation index Vs Original fragmentation index |
| | Water production | IDEAM' s estimates of waterflow in L/seg-km$^2$. |
| | Water flow regulation | Standard deviation of monthly waterflow divided by the monthly average. |
| | Water shortage | Relationship between water demand and offer |
| PRESSSURE | Use of land in areas of biological interest | Area in grassland and cultures within areas on biological interest |
| | Road density in areas of biological interest | Road kilometers per Km2 of area of biological interest |
| | Illegal extraction of flora and fauna | Number of confiscated specimens |
| | Human density | Rural density according to DANE' s census |
| | Human life quality | ICV (Indice de condiciones de vida) according to DNP |
| | Economical activity. | Bank deposits amount |
| | Water demand | Water produced by areas of biological interest used for aqueducts or hydroelectric |
| | Violence | Percentage of violent deaths |
| | Fumigated area | Surface reported by illicit crops eradication plans |
| | Introduction of transgenic material | Number of organisms known to be introduced |
| | Invasive species | Number of known introduced species |
| | Hunting | Confiscated specimens and hunting permits |
| | Protected area per ecosystem | Percentage of original ecosystems area currently under protection |
| | *Ex situ* conservation | Percentage of threatened species conserved *ex situ* |

**Annex 16**

| B. Biodiversity Sustainable Use | | |
|---|---|---|
| | **Variable** | **Indicator** |
| STATE | Area under biodiversity sustainable use | Area certified for sustainable use production |
| | Area under Biodiversity friendly coffee | Percentage of coffee planted area under shade coffee production |
| | Area under traditional cultures | Percentage of all productive area exploited with traditional practices |
| | Sustainable wood extraction | Percentage of the estimate of extracted wood that was legally extracted |
| | Tourist attraction | Number of tourist visits |
| PRESSURE | Agrochemical use | National production - exports + imports |
| RESPONSE | Adequate Protected Areas' management | Number of areas with management plans under execution<br>Expenditure in the implementation of management plans |

| C. Biodiversity Knowledge | | |
|---|---|---|
| | **Variable** | **Indicator** |
| STATE | Andean Biodiversity Publication | Number of scientific publications about Colombian biodiversity |
| | Man power dedicated to study biodiversity | Number of professionals working on biodiversity from the institutions holding agreements with IAvH |
| | Digitized data | Total number of digitized registers available in biological databases |
| | Repatriated data | Percentage of international collections with Colombian data that have repatriated their information. |
| RESPONSE | Government investment in environment and biodiversity research | Percentage of governmental budget dedicated to biodiversity research |
| | Amount of biodiversity research projects | Number of biodiversity research permits |
| | Biodiversity interest in governmental institutions | Percentage of biologists amongst governmental employees |
| | Biodiversity Research incentives | Number of research grants<br>Percentage of applications actually funded |

(a) Table 2: Examples of types of Indicators: *Simple Indicators* fro monitoring and *Complex Indicators* for evaluation

| **Monitored Object** | a. Indicator Type | | |
|---|---|---|---|
| | **Monitoring** | **Evaluation** | **Impact** |
| Ecosystem | ***State* (e.g. Number of hectares)**<br>**Eo: Ha at the beginning of the project**<br>**$E_1$: Ha at any given time**<br>*Pressure* **(e.g. Population density in the ecosystem' s area of influence)**<br>**Po: At the beginning of the project**<br>**$P_1$: At any given time**<br>*Response* **(e.g., Number of hectares under some degree of protection)**<br>**Ro: At the beginning of the project**<br>**$R_1$: At any given time** | Effectiveness = $[(R_1-R_0)/Rp - Ro) * 100]$<br>Efficiency = $CT_e / CT_p$<br>Timing = $(R_{t1}- R_{t0})/ R_{t0} *100$ | % of recovered ecosystem = $[(E_1 – E_0)/E_0]x100$<br>Additional valuation:<br>Productivity: cost per ha recovered<br>Quality: Biological diversity present in recovered area. |

Rp = Project target
$R_{t1}$, $R_{t0}$ = Real and programmed activity ending time.
CT = Total Cost.
e,p = executed and programmed

## ANNEX 17: SECURITY ISSUES

Colombia has been affected by political violence and public order problems for decades. The origins of the problem go back to the times of political violence of the 1950s, when the first insurgent groups emerged. Over time this process has given birth to diverse political tendencies in the distinct regions of Colombia. At different moments, peace negotiations and relations have advanced, which have led to the institigated the demobilization of groups such as M-19 and Quíntin Lame. Despite these efforts, the subversive presence has increased in recent years, apparently linked to the financing of their activities with resources derived from the cultivation and processing of illegal crops. The situation has become more grave with the constitution of paramilitary groups that have advanced activities against the subversive groups, principally in Caribbean Colombia and more recently in Amazonian Colombia.

The government of Colombia has advanced a negotiation process with the main armed groups, in hopes of finding a political departure from the conflict. For the past two years a peace process has been advancing with the FARC-EP that includes the establishment of a distension zone in the Department of Caquetá. This process includes the establishment of a negotiations table that has identified a ten point agenda. It is important to point out that the environment forms part of the agenda and is one of the priority themes to be dealt with. Simultaneously dialogue with the ELN is advancing, with hope for the establishment of a national convention to discuss peace issues. It is evident that those processes are long and complex, but the existing room for negotiations should be recognized as important to work towards an eventual political solution.

Colombian institutions have been working at the center of this conflict. The Institute Alexander von Humboldt is no exception, given that it has been conducting field work in diverse regions during the last five years, without having security problems. We have noted that a profound respect exists for environmental issues, and that the distinct actors with whom IaVH has been working (CARs, NGOs, municipalities, grass roots organizations, etc..) share the goals of knowledge, conservation and the sustainable use of natural resources.

We have noted that a profound respect exists for environmental issues, and that the distinct actors share the goals of knowledge, conservation and the sustainable use of natural resources. Not only are we convinved that it is possible and necessary to work amid the conflict, but also that environmental themes may contribute to the solution of the armed conflict in Colombia.

The present government has designed the Plan Colombia as an integral strategy to substitute the cultivation of illicit drugs in conflict zones through the direct eradication of crops and the development of productive alternatives. It is estimated that in actuality nearly 100,000 hectars of Coca crops exist, concentrated in the Departments of Putumayo and Caquetá, and some zones of Catatumbo. A much smaller extension of poppy crops exists in the high Andean zones, principally in the Macizo Colombiano. The rural

populations of these regions have chosen to cultivate illicit crops as a source of income generation due to the lack of competitive alternatives.

The Plan Colombia would not have direct impacts on the project areas as Coca cultivation is growing principally in the lowlands of the Amazon and Catatumbo. The consideration of public order has been a central element in the design of this project. In the process of selecting the focus areas of the project, one of the central criteria has been to avoid armed conflict zones. For this reason, the Serranía de San Lucas in the south of Bolívar was excuded from the first phase, despite its enormous importance as one of the remaining Andean forests with transition to the dry forests of Caribbean Colombia. The zones identified during the first phase of the project have been included due to the viability of carrying out field work. Nevetheless it is important to recognize that the security outlook may change rapidly, and for this reason it is necessary to maintain flexibility in the implementation of the project in order to reduce risks and at the same time take advantage of the opportunities that may emerge.

The experience aquired by the Instituto Humboldt has permitted the design of a methodology, which has been successful to date, to work in rural zones and avoid security problems. The central element is the active participation of local groups in the design and implementation of the project. The transparency adequate management of information is key to guarantee the security of people working in the field. To this end, we have adopted written presentation materials, in clear and simple language, that respond to the concerns of the distinct actors. Information with regard to the participating institutions, the objective and scope of the project, the types of activities to be carried out and the complete list of participants are fundamental aspects. This information, like the spaces for local participation in every aspect of the project, facilitates local ownership and strengthens the likelihood of project success.

In conclusion, it is important to recognize the special characteristics of a country such as Colombia at the time of project design and implementation. The project has taken into account these elements in the design process, and throughout the execution of the project the continuos review of these conditions will be necessary, for in some instances adjustments will have to be made. The project may provide some support to the peace process by helping some local sub-projects to develop pilot initiatives on the sustainable use of biodiversity in the Andean Region. Finally, it is important to back and support the institutions such as Instituto Humboldt that are seeking ways to continue to work amid the conflict, and who have the necessary experience to confront project implementation in Colombia.

## ANNEX 18: SELECTION OF PRIORITY AREAS

Colombia is generally recognized to be one of the five "megadiverse" nations in the world (Mittermeier, 1998). With a total surface area of 1.14 million $km^2$, representing about 0.8% of the world's surface area, Colombia is home to about 15% of all known terrestrial species (Table 1). This makes Colombia one of the countries with the highest concentration of species per unit area. The country has the largest number of species of birds and amphibians in the world and ranks high in the number of vascular plants and vertebrates. The country also possesses 18 ecoregions (WWF/World Bank report, 1996), the second highest of any country in Latin America. The most recent ecosystem map of Colombia ((Etter, A., 1998) identifies 65 ecosystem types.

**Table 1 – Biodiversity: Colombia and the World**

| Category | Number of Species | Ranking of Diversity (in the World) | Number of Endemic Species | Ranking of Country Endemism |
|---|---|---|---|---|
| | | | | |
| Higher plants | 45000-51000 | 2 | 15000-17000 | 3 |
| Vertebrates (except fish) | 3374 | 1 | 634 | 3 |
| Mammals | 456 | 3 | 28 | 13 |
| Birds | 1815 | 1 | 142 | 5 |
| Reptiles | 520 | 3 | 97 | 11 |
| Amphibians | 583 | 1 | 367 | 1 |
| Butterflies | 3100 | 3 | 300 | 4 |

*Source: Mittermeier et al. (1997): Megadiversity, CEMEX, Mexico City.*

Each of the five different bio-geographic regions of Colombia (Amazonas, Orinoquia, Caribe, Pacifico, and the Andes) can boast a tremendous biological richness in line with the overall biological importance of the country. However, within Colombia, the Andes region stands out in terms of biological richness (Table 2). This is so even when compared with humid lowland rain forests of Amazonian Colombia. When comparing these five regions, the Andes has the highest number of species of mammals, birds, reptiles, and amphibians.

The Colombian Andes

The Andes contain 21 distinct ecosystem types (Etter et al., 1999), each of which is remarkably diverse as the result of great fluctuations in altitude, climate, and geology resulting in geographical isolation, particularly in the valleys and mountainous areas. This has resulted in very high rates of endemism. Biodiversity in Colombia is still not fully documented. Recently, field surveys in the "Cordillera Oriental" undertaken by the Instituto Alexander von Humboldt indicated that 30% of 400 recorded bird species were new records for this area, 5% were new for the country and one is probably new for science. Inventories and field surveys are still required to further document the magnitude

of Colombia' s biodiversity and support stronger priority setting exercises and policy formulation.

**Table 2 - Biodiversity: the Andean within Colombia**

| REGION | Mammals | | Birds | | Reptiles | | Amphibians | | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| Amazonas | 85 | 19 | 868 | 50 | 147 | 29 | 134 | 23 | 1234 | 37 |
| Orinoquia | 101 | 22 | 644 | 37 | 119 | 24 | 41 | 7 | 905 | 27 |
| Caribe | 100 | 22 | 951 | 54 | 101 | 20 | 28 | 5 | 1180 | 36 |
| Pacifico | 167 | 37 | 830 | 47 | 210 | 42 | 181 | 31 | 1388 | 42 |
| **Andean** | **177** | **39** | **974** | **56** | **277** | **55** | **353** | **61** | **1781** | **54** |
| TOTAL | 454 | | 1752 | | 506 | | 583 | | 3295 | |

Source: Informe Nacional sobre el Estado de la Biodiversidad en Colombia (Instituto Alexander von Humboldt, 1998).

The high conservation priority assigned to the Colombian Andes is a function not only of its biological richness but also of the high level of threats to its biological integrity. Over seventy per cent of the country's population lives in the Andes and this has resulted in the transformation of about two thirds of the region's natural habitats. At the same time, this also means that a third of the Andes remains as natural habitat. These areas, albeit fragmented and for the most part unprotected, represent a tremendous potential for saving the globally important biodiversity of this region.

For these reasons, socioeconomic as well as biological criteria have to be considered hand by hand when selecting project working areas, key activities and designing a participation strategy.

Selection of Project zones

The Andes, as defined in this project (areas of the Cordilleras above 500 m, excluding the Sierra de Santa Marta and Serranía de la Macarena), remains very large and diverse. Although some components of the project, such as intersectoral coordination and monitoring, intend to support investments over this entire area, those components which involve on-the-ground investments in specifically defined geographic areas must be more focussed. This is a function of the limited resources of the project and the undesirability of spreading these investments over very large areas.

As part of the National Biodiversity Report, Etter has recently mapped 71 ecosystems in Colombia. (*Informe Nacional Sobre el Estado de la Biodiversidad Colombia 1997,*

Santafé de Bogotá, IAvH, PNUMA, Ministerio del Medio Ambiente, 1998). An update of this map for the andean region (Etter, A. et al, 1999) shows 21 ecosystems within the Andes and these units were considered the starting point of an exercise in selection of the highest priority areas of the project. However, this classification of ecosystems only considers structurally similar habitats (e.g., "Moist Andean Forests below 1000 m") and does not take into account that similar ecosystems in widely separated areas, such as different cordillera, may have quite distinct faunas and floras. To better take this into consideration, the ecoregions map of Colombia (based on the WWF/World Bank ecoregions report of Dinerstein, et al. 1997 but using a slightly revised map produced by WWF-Colombia) was overlaid on the ecosystems of Colombia in order to subdivide those ecosystems that occur in more than one ecoregion. This for example, resulted in the division of "Moist Andean Forests below 1000 m" into three distinct ecosystem types corresponding to the Cordillera Oriental Mountain Forests, Nortwestern Andes Mountain forests and the Magdalena Mountain Forests ecoregions.

The ecosystems identified still represent a very large area so a methodology was adopted to prioritize areas within the Andes. The objective of this methodology was to select 8 to 12 zones (blocks of natural ecosystems) containing a representative sample of all Andean ecosystems whilst minimizing the area required.

The principal inputs at this stage were:

- A detailed and exhaustive review of conservation priorities in Colombia that was carried out in 1999 by a joint team of WWF-Colombia and the IAvH (Castro and Hernández, 1999). Their determination of high priority areas in Colombia was based on a consideration of biological richness (defined by altitudinal gradients and areas of avian endemism), representativity, and ecological viability (presence of blocks of habitat of at least 10,000 ha).

- An update of the actual ecosystems map of the National Biodiversity Report and a map of the original ecosystems of the Andes, generated as part of project preparation by Universidad Javeriana, using climatic, topographic and soil data by a model calibrated with the remnant natural ecosystems. (Etter, A. *et al*, 1999).

- A proposal of priority areas in "General Analysis on Representativity and Transformation of Andean Ecosystems" (Etter, A. *et al*, 1999)

- The results of the Social Assessment (see Annex 11 for details). A few elements are described here.

- Areas where implementation of project activities was considered not viable, mainly highly violent areas, areas of illicit crop cultivation and areas of very weak institutional capacity.

- Areas to be included under other GEF biodiversity conservation projects under preparation: The Macizo project, the Macarena project and the Sierra Nevada project, all part of the Colombian strategy for the conservation of the Andes described in the

document "*Presentación de Projectos GEF Andinos, Una estrategia nacional para la Conservación de los Andes*" (Colombian Ministry of the Environment, 1999).

As a result, over thirty percent of the original project area was deselected. Within the remaining area, a set of 11 zones encompassing a representative sample of all Andean ecosystems was selected; they are the alternative zones in which the project will work and from which phase 1 zones will be selected. Table 3 shows all Andean ecosystems per ecoregion, their conservation status and their representativity within national parks and within the project zones.

Through an iterative process, the selection of project zones can be summarized as follows: (see Map to locate the zones and table 5 for details):

- Identification of ecosystems recognized and documented as being of outstanding biodiversity importance and delimitation of a zone of contiguous remnants of natural ecosystems. This resulted in the selection of the following 2 zones

- The zone including the Páramo del Cocuy, the largest complex of paramos recognised as the most biodiverse paramo area in the world acording to the National Biodiversity Report (*Informe Nacional Sobre el Estado de la Biodiversidad Colombia 1997*, Santafé de Bogotá, IAvH, PNUMA, Ministerio del Medio Ambiente, 1998). The zone was defined as the paramos and the contiguous moist forests.

- The zone including the Alto Putumayo, the Andes transition towards the Amazons which is estimated to be twice as biodiverse as equivalent ecosystems in the north of the Andes. This was concluded as a result of a systematic assessment carried out by IavH during 1998 and 1999 for the eastern flank of the Cordillera Oriental from the Venezuelan to the Ecuador borders, the best preserved area of the Colombian Andes (*Caracterización de la Biodiversidad en Areas Prioritarias de la Vertiente Oriental de la Cordillera Oriental*, Villa de Leyva, Instituto Humboldt, 1999).

Identification of zones with a wide range of ecosystems complementary to those already selected. When possible, each new zone was located in a new ecoregion. In case of alternative equivalent zones, preference was given to those with more favorable land tenure conditions, existing parks and stronger CAR support. When no large remnants of an ecosystem exist, zones can include transformed areas such as coffee grown areas to address conservation within rural landscapes.

Before selection, a feasibility check was done for each of the zones, taking into account available socioeconomic information as well as the response from regional actors such as CARs, some NGOs and Universities. Secondary socioeconomic information at municipality scale was collected and integrated in a database during project preparation to be used in the selection process and as input for the Biodiversity state-preasure-response indicators system to be implemented during the project. Collected information includes more than 60 variables grouped into i-social and demographic variables, ii-sociopolitical and institutional, iii-economic and finantial and iv-natural resources. A

database manager was developed to manage the database. Table 4 presents some statistics calculated with the available data.

Minimum criteria for the selection of a zone was:

- Strong support from the concerned CAR(s) and demonstrated willingness to co-finance investments
- Local communities interest in environmental issues
- Clear trends towards sustainable production
- Land tenure situation favorable to establishment of protected areas.
- In the case of pretending the establishment of large protected areas, absence of human populations or likelihood of reaching a mutual understanding on conservation goals.

So far the main criteria used to define zone boundaries has been the identification of relatively pristine contiguous ecosystems blocks and surrounding area with relative socioeconomic homogeneity and similar productive systems. In some cases, however, boundaries were modified to minimize the number of CARs in each region when the contribution of a CAR to a zone was small. Detail zone boundaries will be defined during project implementation in a case to case basis. This according to the response of local communities and municipalities to the project as well as based on more detailed land cover information.

Project Phase 1 Zones

Phase 1 of the project will address Zones 1 to 5 (see Tables 3, and 4, 5 and Map), The selected zones are distributed over 6 of the 9 WWF/World Bank ecoregions that overlap the area defined as The Andes for this project. Although not full ecoregional coverage, the selected zones cover all ecosystem types identified by the National Biodiversity Report before subdividing them per ecoregions.

As well as representativity, project effectiveness and viability were taken into consideration in the selection of zones. Phase 1 project zones include those with the strongest institutional capacity and shown support to project objectives by key partners such as CARs, NOGs, local communities (indigenous communities crucial in Alto Putumayo, zone 2), producers associations (Federación de Cafeteros, crucial in zone 5).

It is worth noting that some zones, as shown in Map, appear as enclosing non-natural remnant areas. This is the case for ecosystem types that have no very large remnant left and have to be conserved in relatively fragmented landscapes. In reality those areas contain important natural remnants only not large enough to show at the original scale of the maps (1:1´500.000)

**Table 3: Basic information on each of the 21 ecosystems found in the Andes, the ecoregions in which they are found, their conservation and protection state and their representativity within project zones. BAD: Tall dense forest; BMD: Medium dense Forest; BBA: Low open forest; AA: Bushes, BBD: Low dense forest; BMA: Medium open forest; BB: Low forest. Based on the maps in Etter, A. et al. 1999 and *WWF/World Bank ecoregions report of Dinerstein, et al. 1997*.**

| Code | Ecoregion Ecosystem | Original (ha) | Remnant (ha) | % of Orig | National Parks Area (ha) | %of Orig | %of Rem | Project Zones 1-11 Area (ha) | % of Orig | % of Rem. | Phase 1 Zones (1-5) Area (ha) | % of Orig | % of Rem | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 46 | *Bosques Montanos de la cordillera Oriental* | | | | | | | | | | | | | |
| A1 | BMD Perhúmedo Andino | 222056 | 160660 | 72% | 28560 | 13% | 18% | | | | | | | Most remnants in the Macarena Project area |
| A3 | BMD Húmedo Andino | 1790312 | 876224 | 49% | 208491 | 12% | 24% | 253910 | 14% | 29% | 229571 | 13% | 26% | |
| Aa2 | BBD Húmedo Alto-Andino | 1303923 | 727365 | 56% | 177016 | 14% | 24% | 302602 | 23% | 42% | 298779 | 23% | 41% | |
| Aa3 | BBD Seco Alto-Andino | 100602 | 52743 | 52% | | | | | | | | | | Remnants only in Perijá, a violent area. |
| Aa4 | BMD Húmedo-Seco Alto-Andino | 82488 | 78548 | 95% | 17598 | 21% | 22% | 5191 | 6% | 7% | | | | Most Remnants in the Macizo Project area |
| Sa1 | BAD Perhúmedo Sub-Andino | 938458 | 403222 | 43% | 61998 | 7% | 15% | | | | | | | Most remnants in the Macarena Project area |
| Sa2 | BAD húmado Sub-Andino | 738979 | 224883 | 30% | 87477 | 12% | 39% | 64276 | 9% | 29% | 64276 | 9% | 29% | |
| 41 | ***Bosques Montanos del Noroeste Andino*** | | | | | | | | | | | | | |
| A1 | BMD Perhúmedo Andino | 1119972 | 702005 | 63% | 165702 | 15% | 24% | 130424 | 12% | 19% | 58544 | 5% | 8% | |
| A3 | BMD Húmedo Andino | 402705 | 90927 | 23% | | | | 89020 | 22% | 98% | 31775 | 8% | 35% | |
| Aa1 | BBD Perhúmedo Alto-Andino | 547851 | 353711 | 65% | 68801 | 13% | 19% | 44338 | 8% | 13% | 22676 | 4% | 6% | |
| Aa2 | BBD Húmedo Alto-Andino | 654221 | 146061 | 22% | 2623 | 0% | 2% | 72211 | 11% | 49% | 51009 | 8% | 35% | |
| Aa3 | BBD Seco Alto-Andino | 60712 | 4245 | 7% | | | | 3139 | 5% | 74% | 3139 | 5% | 74% | |
| Aa4 | BMD Húmedo-Seco Alto-Andino | 41652 | 31396 | 75% | 1928 | 5% | 6% | | | | | | | Largest remnant in the Naya Corridor Project area |
| Sa1 | BAD Perhúmedo Sub-Andino | 931940 | 624225 | 67% | 123992 | 13% | 20% | 58314 | 6% | 9% | 18486 | 2% | 3% | |
| Sa2 | BAD húmado Sub-Andino | 95327 | 51635 | 54% | | | | 49357 | 52% | 96% | 24023 | 25% | 47% | |
| V3 | BMA y AA Seco Valles | 192672 | 50359 | 26% | | | | 39883 | 21% | 79% | 12547 | 7% | 25% | |
| 43 | ***Bosques Montanos del Valle del Cauca*** | | | | | | | | | | | | | |
| A1 | BMD Perhúmedo Andino | 764217 | 52347 | 7% | 436 | 0% | 1% | 9565 | 1% | 18% | 9565 | 1% | 18% | Project includes the largest remnant |
| A2 | BMD Perhúmedo-Húmedo Andino | 257004 | | | | | | | | | | | | No big remnants. Conservation with rural landscape management. |
| A3 | BMD Húmedo Andino | 816546 | 6555 | 1% | 1359 | 0% | 21% | | | | | | | No big remnants. Conservation with rural landscape management. |
| Aa1 | BBD Perhúmedo Alto-Andino | 577723 | 129450 | 22% | 12343 | 2% | 10% | 17083 | 3% | 13% | 17083 | 3% | 13% | |
| Aa2 | BBD Húmedo Alto-Andino | 457326 | 82437 | 18% | 23582 | 5% | 29% | 11904 | 3% | 14% | 11904 | 3% | 14% | Largest remnants in the Macizo Project area |
| Aa4 | BMD Húmedo-Seco Alto-Andino | 50890 | 11220 | 22% | 1272 | 3% | 11% | 5811 | 11% | 52% | 5811 | 11% | 52% | Largest remnants in the Macizo Project area |
| Sa1 | BAD Perhúmedo Sub-Andino | 112733 | 38244 | 34% | | | | | | | | | | Remnantes only in Paramillo, a violent area |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 44 | ***Bosques Montanos del Valle del Magdalena*** | | | | | | | | | | | | | |
| A1 | BMD Perhúmedo Andino | 1910327 | 148115 | 8% | 4954 | 0% | 3% | 21660 | 1% | 15% | 183 | 0% | 0% | |
| A3 | BMD Húmedo Andino | 1566761 | 205063 | 13% | | | | 50693 | 3% | 25% | 10983 | 1% | 5% | |
| A4 | BMD Seco Andino | 29631 | 29089 | 98% | | | | 29138 | 98% | 100% | | | | |
| Aa1 | BBD Perhúmedo Alto-Andino | 1380753 | 471877 | 34% | 60343 | 4% | 13% | 21918 | 2% | 5% | 870 | 0% | 0% | |
| Aa2 | BBD Húmedo Alto-Andino | 520202 | 225176 | 43% | 3586 | 1% | 2% | 59692 | 11% | 27% | 16642 | 3% | 7% | |
| Aa3 | BBD Seco Alto-Andino | 610566 | 87854 | 14% | | | | 63942 | 10% | 73% | 50366 | 8% | 57% | |
| Aa4 | BMD Húmedo-Seco Alto-Andino | 405996 | 194926 | 48% | 8903 | 2% | 5% | 23781 | 6% | 12% | 17436 | 4% | 9% | |
| L1 | Arbustal y Bosque Bajo SemiáridoAltiplano | 217096 | 37651 | 17% | 1004 | 0% | 3% | 35759 | 16% | 95% | 35759 | 16% | 95% | |
| L2 | BMD Seco-Semiárido Altiplano | 182370 | | | | | | | | | | | | No remnants left |
| L3 | Humedal Altiplano | 80724 | 14000 | 17% | | | | 10065 | 12% | 72% | 372 | 0% | 3% | |
| Sa1 | BAD Perhúmedo Sub-Andino | 863561 | 365861 | 42% | | | | 55531 | 6% | 15% | | | | |
| Sa2 | BAD húmado Sub-Andino | 1678450 | 357516 | 21% | | | | 35894 | 2% | 10% | | | | |
| V3 | BMA y AA Seco Valles | 411976 | 71352 | 17% | | | | 66971 | 16% | 94% | 2201 | 1% | 3% | |
| V4 | AA y BB Semiáridos Valles | 140936 | 87691 | 62% | | | | 87896 | 62% | 100% | 410 | 0% | 0% | |
| 47 | ***Bosques Montanos del este de la cordillera real*** | | | | | | | | | | | | | |
| A1 | BMD Perhúmedo Andino | 348052 | 301784 | 87% | | | | 108980 | 31% | 36% | 108980 | 31% | 36% | |
| Aa1 | BBD Perhúmedo Alto-Andino | 356982 | 298844 | 84% | | | | 143282 | 40% | 48% | 143294 | 40% | 48% | |
| Aa2 | BBD Húmedo Alto-Andino | 76049 | 30130 | 40% | | | | 16569 | 22% | 55% | 16569 | 22% | 55% | |
| Sa1 | BAD Perhúmedo Sub-Andino | 272132 | 212270 | 78% | | | | 116304 | 43% | 55% | | | | |
| 78 | ***Bosques secos del Valle del Magdalena*** | | | | | | | | | | | | | |
| Sa2 | BAD húmado Sub-Andino | 646518 | | | | | | | | | | | | No remnants left |
| V1 | BMD Seco-Semiárido Valles | 708008 | | | | | | | | | | | | No remnants left |
| V3 | BMA y AA Seco Valles | 473745 | 32261 | 7% | | | | 32300 | 7% | 100% | | | | |
| V4 | AA y BB Semiáridos Valles | 45463 | 16418 | 36% | | | | 14115 | 31% | 86% | | | | |
| 77 | ***Bosques secos del Valle del Cauca*** | | | | | | | | | | | | | |
| V1 | BMD Seco-Semiárido Valles | 222521 | | | | | | | | | | | | No remnants left |
| V2 | Humedal Valles | 37465 | | | | | | | | | | | | No remnants left |
| V3 | BMA y AA Seco Valles | 156641 | 49834 | 32% | | | | 42048 | 27% | 84% | | | | Only one large remnant very altered |
| V4 | AA y BB Semiáridos Valles | 12100 | 11830 | 98% | | | | 11927 | 99% | 100% | | | | Only one large remnant very altered |
| 79 | ***Bosques secos del Valle del Patia*** | | | | | | | | | | | | | |
| Sa2 | BAD húmado Sub-Andino | 75670 | 4805 | 6% | | | | 4805 | 6% | 100% | | | | |
| V1 | BMD Seco-Semiárido Valles | 23258 | | | | | | | | | | | | No remnants left |
| V3 | BMA y AA Seco Valles | 108281 | 67512 | 62% | | | | 67512 | 62% | 100% | | | | |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V4 | AA y BB Semiáridos Valles | 11704 | 5823 | 50% | | | | 5754 | 49% | 99% | | | | |
| 139 | ***Paramos de los Andes del Norte*** | | | | | | | | | | | | | |
| P1 | Páramo Húmedo | 729658 | 664631 | 91% | 266646 | 37% | 40% | 353646 | 48% | 53% | 353555 | 48% | 53% | |
| P2 | Páramo Húmedo | 571629 | 527108 | 92% | 192462 | 34% | 37% | 117302 | 21% | 22% | 117317 | 21% | 22% | |
| P3 | Páramo Seco | 93310 | 78283 | 84% | 3351 | 4% | 4% | 23311 | 25% | 30% | 23311 | 25% | 30% | |
| P4 | Superpáramo | 32368 | 31868 | 98% | 31605 | 98% | 99% | 25232 | 78% | 79% | 25232 | 78% | 79% | |