

Please provide the following details on the origin of this report

Contracting Party	Colombia
National Focal Point	
Full name of the institution:	Ministry of Foreign Relations
Name and title of contact officer:	
Mailing address:	
Telephone:	
Fax:	
E-mail:	
Contact officer for national report (if different)	
Full name of the institution:	Ministry of Environment, Housing and Territorial Development
Name and title of contact officer:	Ministry of Environment, Housing and Territorial Development
Mailing address:	Calle 37 no. 8-40
Telephone:	(571) 288 98 60
Fax:	(571) 288 6954
E-mail:	amhernandez@minambiente.gov.co
Submission	
Signature of officer responsible for submitting national report:	
Date of submission:	

Please provide summary information on the process by which this report has been prepared, including information on the types of stakeholders who have been actively involved in its preparation and on material which was used as a basis for the report

INTRODUCTION AND ACKNOWLEDGEMENTS

As a party to the Convention, Colombia presented its first report to the Convention Secretariat in April, 1998, when it gave an account of the institutional and legal advances towards the implementation of the Convention.

The Ministry of Environment, Housing and Territorial Development was designated by the Ministry of Foreign Relations to be responsible for the present Second National Report on Biological Diversity, through the office of the Vice-Minister of Environment, which placed its elaboration in the hands of its International Affairs Group. Ana María Hernández Salgar, advisor on the subject of Biodiversity, was in charge of its general coordination, with the support of Mónica Eslava D'Isidoro for technical coordination and Susana Díaz Buelvas for its editing.

The following members of the Alexander von Humboldt Institute of Research in Biological Resources provided technical support throughout the whole process: María Elfi Chaves, Sub-director of the Institute; María Claudia Fandiño, Coordinator of intersectorial policies ; Diego Ochoa, Head of the Office of Communication and his team for audio-visual media, as well as Katharina Kriger, Coordinator of the Clearing-house Mechanism, Pilar Galindo, Systems Engineer for the Clearing-house Mechanism; Juan Carlos Bello, Coordinator of the Information System on Biodiversity and Andrés Ramón, Engineer for the Information System on Biodiversity.

Support was also provided by Captain Francisco Arias, director of the Benito Vives D'Andreis Instituto - INVEMAR -, and Luz Marina Mantilla, director of the Amazon Institute of Scientific Investigations- SINCHI. Through their advisors both institutes took part in the workshops held in the Atlantic and Amazon regions, respectively. Bismarck Chaverra, director of the " John Von Neumann" Institute of Environmental Investigations of the Pacific - IIAP - was present in the national workshop.

The participation of the following Regional Autonomous Corporations and for sustainable development (CAR's) enabled specific information to be obtained about the implementation of the Convention in the different regions of the country: The CAR Cundinamarca, CAR para el Desarrollo Sostenible de la Meseta de Bucaramanga, Corantioquia, Cornare, Corpoamazonía, Corpourabá, Cortolima, CAR del Cauca, Corporación del Sur de Bolívar, CAR del Valle del Cauca, Coporcaldas, Corpomojana, Carsucre, Coralina, Corpocesar, Corporación del Valle del Sinú y del San Jorge and Corpoguajira.

As well as the above-mentioned Autonomous Corporations, the following institutions responded to the questionnaire and/or participated in the regional workshops:

As well as the above-mentioned Autonomous Corporations, the following institutions responded to the questionnaire and/or participated in the regional workshops:

Interconexión Eléctrica S.A.-ISA, Neotrópicos, Orius Biotecnología, Fedepalma (Federation of palm-growers), Tropenbos, Ave Fénix, Conservation

International, Fundación Natura, World Wildlife Fund - WWF, Fundación Omacha, Fundación Yubarta, Proyecto BOA, Fundación Biozoo, Asociación para El Estudio y la Conservación de las Aves Acuáticas En Colombia (Association for the Conservation of Aquatic Birds in Colombia-Calidris), La Red de reservas de la Sociedad Civil (the Network of reserves of the Civil Society), Dirección Nacional Marítima (National Maritime Directorate- DIMAR), Unidad Administrativa Especial del Sistema de Parques Nacionales Naturales (Special Administrative Unit of the System of National Natural Parks), Dirección de Ecosistemas y Oficina de Educación y participación Ciudadana, del Ministerio de Ambiente, Vivienda y Desarrollo Territorial (Directorate of Ecosystems and Office of Education and Civic Participation of the Ministry of Environment, Housing and Territorial Development), Ministerio de Agricultura y Desarrollo Rural (Ministry of Agriculture and Rural Development), Ministerio de Relaciones Exteriores (Ministry of Foreign Relations), Ministerio de Comercio Exterior (Ministry of Foreign Commerce), Ministerio del Interior (Ministry of the Interior), Instituto de Estudios Amazónicos (Institute of Amazonian Studies-SINCHI), Instituto de Investigación en Recursos Biológicos Alexander von Humboldt (Alexander von Humboldt Institute of Research into Biological Resources), Instituto de Investigaciones Ambientales del Pacífico " John Von Neumann" - (John Von Neumann Institute of Environmental Investigations of the Pacific - IIAP) , Instituto Benito Vives D'Andreis - INVEMAR, Red de Desarrollo Sostenible (Network for Sustainable Development), Colciencias, Corporación Nacional de Investigación y Fomento Forestal (National Corporation for Forestry Research and Promotion- CONIF) ,Centro de Control de la Contaminación del Pacífico (Center for Control of Contamination of the Pacific - CCCP), Centro de Investigaciones Oceanográficas e Hidrográficas (Center for Oceanographic and Hydrographic Investigations- CIOH), Centro Forestal Tropical Bajo Calima (Tropical Forestry Center for the Lower Calima), Establecimiento Público Ambiental de Cartagena (Public Environmental Establishment of Cartagena-EPA), Corporación Colombiana de Investigación Agropecuaria (Colombian Corporation for Research into Agriculture and Stock-raising - CORPOICA), Departamento Administrativo del Medio Ambiente - (Administrative Environment Department -DAMA), Instituto de Hidrología Meteorología y Estudios Ambientales (Institute of Hydrology, Meteorology and Environmental Studies - IDEAM), Departamento Nacional de Planeación (National Planning Department - DNP), Instituto Colombiano Agropecuario (Colombian Institute of Agriculture and Stock-raising- IICA), Centro de Investigaciones de la Caña de Azúcar (Sugar Cane Research Center- CENICAÑA), Centro de Investigaciones del Banano - (Banana Research Center- CENIBANANO), Instituto Vallecaucano de Investigaciones Científicas (Scientific Research Center of the Valley of Cauca- INCIVA), INPA, Jardín Botánico de Bogotá José Celestino Mutis (José Celestino Mutis Botanical Garden of Bogotá) , Jardín Botánico de Popayán (Popayán Botanical Garden), Herbario de Medellín (Medellín Herbarium) , Universidad del Llano, Universidad de Caldas, Universidad del Tolima, Pontificia Universidad Javeriana, Universidad Externado de Colombia, Universidad de Antioquia, Universidad del Magdalena, Universidad del Atlántico and Universidad del Chocó.

(See appendix 1 list of participants in the project and appendix 4 on abbreviations)

Being able to count on the presence and active participation of indigenous and local organizations was very enriching. Among these were the Colombian National Indigenous Organization - ONIC, The Organization of the Indigenous Peoples of the Colombian Amazon-OPIAC and the "CIMARRÓN" Afro-Colombian Organization.

In the same manner, the contributions by investigators inscribed in the Colombian Clearing-house Mechanism -CHM - helped to complement the information in specific areas.

The Global Environment Facility -GEF - provided the financial help for the execution of the Project, whose submission counted upon the valuable support of the office of the United Nations Environment Program - UNEP, Nairobi; the Bogotá office of the United Nations Development Program -UNDP - acted as the implementing agency for Colombia.

Process of preparation

Convocation and workshops

On the recommendation of the Convention Secretariat, which requested that a wide participation by parties interested in the subject be taken into account, and in view of the heterogeneity and megadiversity of Colombia, the project held a national convocation, employing the information found in the data base of the Colombian Clearing-house Mechanism - CHM. In line with this, a series of five regional workshops for gathering information were realized (in the Andean, Caribbean, Pacific, Orinoco and Amazon regions), as well a national workshop, in which the participants contributed their experiences in bio-diversity and gained a more profound knowledge of the subject.

Gathering Information

The questionnaires that were filled out were assembled and the information contained in them was analyzed both quantitatively and qualitatively. For the quantitative analysis, the answers of all the participating entities were tabulated, which provided a balanced average for each question. In that way it became possible to establish trends for each of the possible answers set down in the questionnaire.¹ The qualitative information derived from comments, clarifications and examples is presented in the current document.

The information which is presented here corresponds to the material provided by the participating entities both in the questionnaires and in the regional workshops therefore it expresses the vision and opinion of each institution and the only changes have to do with the form of presentation.

A Preliminary Document, with all of the gathered information, was placed on the web-site of the Colombian Clearing-house Mechanism and the additions and corrections made to it in the National Workshop are incorporated into the present Report.

The institutions with a national coverage or with branches responsible for different thematic areas, in turn, distributed the questionnaire among their subordinate bodies in order to present a final compilation representing their institutional vision as a whole.

Information was sought in the data bases and documentation centers of the participating entities and their reports on their projects and activities during the past two years.²

¹ See appendix 2 trends. In some cases the trend was change on the recommendation of those attending the national workshop who had relevant information for suggesting such changes.

² See appendix 3 sources

Please provide information on any particular circumstances in your country that are relevant to understanding the answers to the questions in this report

Megadiversity:

Colombia heads the list of "megadiverse countries" or "biotic powers". Occupying 0.7% of the world's continental surface, it has 10% of the planet's biodiversity, a feature which makes it one of the countries with the highest diversity of species per unit of area on a world level. It possesses a rich ecological, climatic, biological and ecosystemic diversity. It harbors 35,000 species of vascular plants, 2,890 species of vertebrates, 1,752 species of birds and 475 species of reptiles.

The complex environmental wealth of Colombia is due, among other reasons, to its privileged geographical position in the northeast corner of South America, on the world's intertropical belt. Here, in that part of the American continent which joins South, Central and North America, is found a millenary biological corridor, a prehistoric scenario for the transit, refuge and appearance of numerous live species during the course of the planet's evolutionary history.

The country has also been recognized as one of the world's richest in water resources and sources. Its rich supplies of water make it a great hydric source that feeds the major tributaries of the gigantic river basins of South America: the Amazon, Orinoco, Magdalena and Cauca.

Just as the hydric reserves of the country and its privileged genetic bank represent strategic resources for the ecological equilibrium of the planet, so too do its tropical forests. By producing oxygen and acting as sinks for contaminating CO₂ gases, they play a significant role in maintaining the climatic stability of the planet.

Social problems:

Despite this enormous wealth, Colombia suffers from many social problems, which cause diverse ecosystems to be subjected to a strong anthropic pressure (over-exploitation of resources, a growing expansion of the agricultural frontier) and brings a consequent reduction and loss of biodiversity.

The internal conflict:

The internal conflict that is currently affecting our country requires the state to make large investments in the maintenance of public security, thus reducing its economic

support for the care of our natural resources, scientific research and the training of professionals.

Another of the relevant aspects of the problem of internal conflict is that it is difficult for investigators to carry out field studies in areas of conflict: it is also difficult for the public in general to enter them. This reduces the possibilities for conserving and exploiting many bio-diversity goods and services under *in situ* conditions.

The structure of environmental institutions in Colombia**The National Environmental System - SINA:**

The Ministry of Environment, Housing and Territorial Development is responsible for regulating the organization and functioning of the National Environmental System, which is made up of state entities responsible for environmental policies and actions, community and non-government organizations working on environmental problems and the public, private or joint entities that produce information, carry out scientific studies or undertake technological development in the environmental field.

The Autonomous Regional Corporations - CAR's

The CAR's are corporate bodies of a public character, made up of the municipalities, departments and other territorial entities that form a biogeographical, hydrographic or geopolitical unit. They are furnished with administrative and financial autonomy, have their own sources of financing and an independent legal status. As the maximum environmental authority in their respective jurisdictions, they must execute the national environmental policy laid down by the Ministry of Environment, administer renewable and non-renewable natural resources and the environment and promote the sustainable development of their regions.

Among their most important tasks an outstanding one is to advise departments and municipalities on the definition of their plans of environmental development and other areas they are responsible for "so as to ensure harmony and coherence in the policies and actions adopted by the different territorial entities," in line with Article 5 of Law 99 of 1993.

They have the mission of administering and protecting natural resources in the departments, which means that they are committed to the sustainable management of such resources and the support of investigations. In many of them the component of bio-diversity has been recognized to be a stronghold of the region and knowledge of such resources has been strengthened through characterizations of wild flora and fauna.

Scientific Research Institutes:

In accordance with Law 99 of 1993, which establishes the Ministry of Environment and the National Environmental System, five scientific research institutes were created, which lend scientific and technical research to the Ministry of Environment, Housing and Territorial Development:

- Instituto de Hidrología, Meteorología y Estudios Ambientales - Institute of Hydrology, Meteorology and Environmental Studies - IDEAM
- Instituto de Investigaciones Marinas y Costeras "José Benito Vives De Andreis" - "José Benito Vives De Andreis" Institute of Marine and Coastal Investigations INVEMAR
- Instituto de Investigación en Recursos Biológicos "Alexander von Humboldt" - "Alexander von Humboldt" Institute of Research into Biological Resources
- Instituto Amazónico de Investigaciones Científicas - Amazonian Institute of Scientific Investigations -SINCHI
- Instituto de Investigaciones Ambientales del Pacífico "John von Neumann" - "John von Neumann" Institute of Environmental Investigations of the Pacific

The COP has established programmes of work that respond to a number of Articles. Please identify the relative priority accorded to each theme and the adequacy of resources. This will allow subsequent information on implementation of each Article to be put into context. There are other questions on implementation of the programmes of work at the end of these guidelines.

Inland water ecosystems

1. What is the relative priority for implementation of this work programme in your country?	
a) High	x
b) Medium	
c) Low	
d) Not relevant	
2. To what extent are the resources available adequate for meeting the obligations and recommendations made?	
a) Good	
b) Adequate	
c) Limiting	x
d) Severely limiting	

Marine and coastal biological diversity

3. What is the relative priority for implementation of this work programme in your country?	
a) High	
b) Medium	x
c) Low	
d) Not relevant	
4. To what extent are the resources available adequate for meeting the obligations and recommendations made?	
a) Good	
b) Adequate	
c) Limiting	x
d) Severely limiting	

Agricultural biological diversity

5. What is the relative priority for implementation of this work programme in your country?	
a) High	
b) Medium	x
c) Low	
d) Not relevant	
6. To what extent are the resources available adequate for meeting the obligations and recommendations made?	
a) Good	

b) Adequate	
c) Limiting	x
d) Severely limiting	

Forest biological diversity

7. What is the relative priority for implementation of this work programme in your country?	
a) High	
b) Medium	x
c) Low	
d) Not relevant	
8. To what extent are the resources available adequate for meeting the obligations and recommendations made?	
a) Good	
b) Adequate	
c) Limiting	x
d) Severely limiting	

Biological diversity of dry and sub-humid lands

9. What is the relative priority for implementation of this work programme in your country?	
a) High	
b) Medium	
c) Low	x
d) Not relevant	
10. To what extent are the resources available adequate for meeting the obligations and recommendations made?	
a) Good	
b) Adequate	
c) Limiting	x
d) Severely limiting	

Further comments on work programmes and priorities

The programs are integrated into the action plans of the environmental entities of the country. However, there are economic restrictions which make it difficult to implement them. We count upon the technical capacity to develop these programs but its coverage is low.

The particular experiences of the country's environmental institutions are highlighted: they show an important effort towards the implementation of the work programs.³

³ Humboldt Institute: inventory of the country's ecosystems. In the first stage the map of Colombian ecosystems was created (Etter, 1998). In the second stage maps of the ecosystems of the Andean and Orinoco regions are being created, at scales of 1:250000 and windows at scales of 1:100000.

Article 5 Cooperation

11. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?					
a) High	x	b) Medium		c) Low	
12. To what extent are the resources available adequate for meeting the obligations and recommendations made?					
a) Good		b) Adequate		c) Limiting	x
Further comments on relative priority and on availability of resources (see further comments below)					
13. Is your country actively cooperating with other Parties in respect of areas beyond national jurisdiction for the conservation and sustainable use of biological diversity?					
a) bilateral cooperation (please give details below)					x
b) international programmes (please give details below)					x
c) international agreements (please give details below)					

The characterizations on the level of species also figure in these ecosystems to which priority is given, which have been little studied in the country.

Omacha Foundation: programs of research into the aquatic fauna of continental ecosystems, with the aim of creating middle and long term programs of management and conservation in the areas where there is the highest risk of a reduction of populations of mammals and fishes.

WWF-Colombia: focuses on the conservation of terrestrial eco-regions, while, in a parallel manner, it strengthens its support for and work on aquatic eco-regions, both marine and fresh water. Its priority eco-regions are:

- *Chocó-Darién*: identification of priority conservation areas and work with grassroots organizations and institutions.
- *Northern Andes*: identification of priority conservation areas and work with grassroots organizations and institutions.
- *Llanos* (Eastern prairies): Initiation of work to win recognition as a Ramsar site for and undertake an integral management of the basin of the Orinoco, together with organizations like Unillanos (University of the Llanos), the von Humboldt Institute and the Omacha Foundation, among others.

Bogotá Botanical Garden: Preliminary studies of biological diversity, with an emphasis on the floristic composition of a remnant (*chaco*) of the cold desert of Mondoñedo, on the edge of the savannah of Bogotá, Colombia, a unique source of numerous endemic species of flora. It has been decimated by the extraction of sand from the soil and marked loss of vegetation cover.

CORPOCALDAS: Its priority are agro-ecosystems, since they are the predominant matrix in the landscape under its jurisdiction.

Decision IV/4. Status and trends of the biological diversity of inland water ecosystems and options for conservation and sustainable use

14. Has your country developed effective cooperation for the sustainable management of transboundary watersheds, catchments, river basins and migratory species through bilateral and multilateral agreements?	
a) no	
b) yes - limited extent (please give details below)	x
c) yes - significant extent (please give details below)	
d) not applicable	

Decision IV/15. The relationship of the CBD with the CSD and biodiversity-related conventions, other international agreements, institutions and processes or relevance

15. Has your country developed management practices for transboundary protected areas?	
a) no	
b) yes - limited extent (please give details below)	x
c) yes - significant extent (please give details below)	
d) not relevant	

Decision V/21. Co-operation with other bodies

16. Has your country collaborated with the International Biodiversity Observation Year of DIVERSITAS, and ensured complementarity with the initiative foreseen to be undertaken by the United Nations Educational, Scientific and Cultural Organization and the Secretariat of the Convention on Biological Diversity to increase scientific knowledge and public awareness of the crucial role of biodiversity for sustainable development?	
a) no	
b) to a limited extent	x
c) to a significant extent	

Decision V/27. Contribution of the Convention on Biological Diversity to the ten-year review of progress achieved since the United Nations Conference on Environment and Development

17. Is your country planning to highlight and emphasize biological diversity considerations in its contribution to the ten-year review of progress since the Earth Summit?	
a) no	
b) yes	x

Further comments on implementation of this Article

The country counts on a broad provision of cooperation by multilateral and bilateral agencies, as well as NGO's. Information about these lines and sources of cooperation are available in the inventory of the Ministry of Environment, Housing and Territorial Development. However, in order to accede to cooperation, the capacity for designing, elaborating and applying for projects should be improved, especially at a local, municipal and regional level. To achieve this, strategies of dissemination of information

and training are required.

In a similar fashion, there is a need to better characterize and assign priorities to national and regional demands and interests and to prevent resources from remaining in the hands of the main institutions of the government, so that smaller research organizations may have access to them. It is also necessary to achieve a balanced approach to cooperation, focused on fulfilment of the three objectives of the BDC.

A subject of great importance is the development of the capacity to effect synergies with other agreements to maximize the effectiveness of cooperation. In this respect, one advance is the implementation of the NCSA project on synergies among the Biodiversity, Climate Change and Desertification treaties, with funding from the GEF.

Along the same lines, the procedures for implementing joint actions of cooperation that involve resources from the national budget and private investment must be simplified and broadened. This should incorporate criteria of justice and equity within the framework of international trade, the preparation of experts, educating and creating awareness in the public and access to technologies.

The emphasis of cooperation in the country has been on the processes of work in the eco-regions of the Chocó and the Andes, while other regions of the country have received less attention, as is the case of the Orinoco, Amazon and Caribbean.

In the academic sector, the resources available to public universities are very limited and access to external support even more so. Cooperation is aimed at encouraging investigations which develop new technologies, but obtaining resources for more basic aspects of the study of biodiversity is more difficult. 4.

It is worth noting that while cooperation exists for work on promissory species in general, there is no cooperation for research into native species that may be promissory for agriculture as a contribution to diversification.

In the field of food and agriculture there is a basic document on the encouragement of national capacity and international cooperation, which was financed by the Commission on Genetic Resources for food and agriculture of the FAO⁵. It is a compilation of information about the present situation of the country's main zoogenetic resources of zootechnical interest.

Finally, it is worth mentioning that practices of inter-institutional⁶ cooperation have begun within the country, although, as mentioned above, more advances are needed in this area.

4 According to the report of the University of Antioquia, obtaining resources for the subject of biodiversity is not easy, given the conditions of public order in the country, and particularly in Antioquia, since they do not allow for field studies to be carried out for the necessary length of time and with the necessary conditions of security.

5 First Report on the "Situation of Zoogenetic Resources in Colombia" - FAO

6 AUGURA is working jointly with other institutions in the Urabá zone of Antioquia in the search for a better management of the hydrographic basis that make up the banana zone of Uraba. Likewise, it has entered into agreements to carry out research with entities like CORBANA in Costa Rica, particularly in CENIBANANO.

13 - Is your country actively cooperating with other Parties in respect of areas beyond national jurisdiction for the conservation and sustainable use of biological diversity?

One of the pillars of Colombian foreign policy is multilateral and regional cooperation on subjects of national interest like biodiversity, which is the concern of the present Convention. On the basis of this principle, we expect negotiations in block for means to facilitate the implementation of the Convention, in accordance with the commitments of the developed countries.

In point of fact, within the framework of the Andean Community, a legally-binding community accord, Colombia is cooperating with the other four member countries and undertaking joint efforts which range from legislative developments to administrative ones) and also include subregional policies, strategies and programs.⁷

In addition, Colombia has implemented, in a permanent form, the Clearing-house Mechanism, which has allowed it to accede to and grant bilateral cooperation.⁸

The country counts upon the Colombian Agency for International Cooperation (ACCI), supported by the International Affairs Group of the Ministry of Environment, for the facilitation of international cooperation.

As well as forming part of the Biodiversity Convention, Colombia is a signatory of other international treaties, like that on Climate Change, the Permanent Commission for the South Pacific, the Greater Caribbean Agreement, agreements related to contamination by terrestrial sources or hydrocarbons and the El Niño Phenomenon Regional Study. In addition, it develops projects as a focal point, like CARICOM and GIWA.

The INVEMAR has agreements with universities and entities like:

- The Cuban Ministry of Science, Technology and Environment.

⁷ Legislative: Andean Decisions 182, 345, 392 and 486;

Administrative: Andean Committee of Environmental Authorities;

Subregional policies: Guidelines for Environmental Management and Sustainable Development;

Strategies: Biodiversity Strategies of the Tropical Andean Countries;

Programs: Proposal for an Action Plan for the implementation of the Regional Biodiversity Strategy.

⁸. Agreement with the German government on the financing of research projects, International Programs like that for the biological corridor of the Chocó Biogeographical Zone and the WWF Program for Conservation of the Andes, and international cooperation with different institutions, like GEF-Andes project.

⁹ The SINCHI Institute has undertaken different investigations within the framework of the Treaty for Amazonian Cooperation, related to the ordering of shared basins, as is the case with the basin of the river Putumayo, where work has been done on the subject of fishery resources and other components associated with the theme. These efforts seek an integral management of fishing in order to maintain the biological diversity of the river and the improvement of the quality of life of its inhabitants, with an emphasis on fishermen and direct beneficiaries of the resource.

- The Institute of Marine Technology and Sciences of the University of Bolívar in Venezuela
- The Australian Institute of Marine Sciences
- Smithsonian Tropical Research Institute

International

- Institute for Aerospace Survey and Earth Science
- The Kalmar University, for the execution of the GIWA-2002 Project

14 - Has your country developed effective cooperation for the sustainable management of transboundary watersheds, catchments, river basins and migratory species through bilateral and multilateral agreements?

The objectives and scopes of bilateral and multilateral agreements and accords of cooperation are limited by the shortage of financial resources both in Colombia and in neighboring countries like Venezuela, Peru, Ecuador and Brazil.

The frontier commissions with Brazil, Ecuador, Panama and Venezuela which are intended to promote bi-national integration have centered their experience on joint actions for the management of shared hydrographic basins. In the case of Brazil, on several occasions efforts have been made to find common points for the management and sustainable development of the tropical forests of the Amazon, but with little success. Some progress has been observed in the development of the Integrated Plan of the Neighboring Communities of the Apaporis-Tabatinga Axis. Something similar has occurred in the Darien region shared with Panama.

Cooperation on the ordering of cross-frontier river basins and strategic ecosystems have been developed on a regional scale with the CAR. There have been efforts by research institutes. 9

Finally, with regard to decision IV/4, it is recommended that Colombia makes the efforts required to become part of The Convention on the Conservation of Migratory Species of Wild Animals -CMS.

15 - Has your country developed management practices for transboundary protected areas?

Yes, to a limited extent. Within the framework of the 1978 Treaty for Amazonian Cooperation, several initiatives for protected bi-national areas and some tri-national ones have always been in the minds of those who have considered this Treaty as an ideal instrument for the preservation of ample zones of the Amazonian lowlands. But, in practice, none of these ideas has prospered.

Within the framework of the Biodiversity Strategy of the Tropical Andean Countries (Decision 523, 2002), the shared ecosystems are identified as one of the priorities of the strategy. In this case, more than protected areas co-administered by two or more countries, the objective is to conserve and make a sustainable use of ecosystems, species and genetic resources *in situ*, with complementary *ex situ* actions.

The Andean strategy has a line of action aimed at strengthening subregional initiatives for the coordination of cross-frontier and common ecosystems through the joint implementation of the Convention's programs on Biological

Diversity and taking advantage of experiences in the handling of hydrographic basins, terrestrial and aquatic ecosystems and species.

On this latter level of biodiversity, that of species, and in the context of cross-frontier and common ecosystems, the Strategy foresees tangible results in the subregional adaptation to the agro-biodiversity program of the Biodiversity Convention. In addition, it expects that a system of warning and cooperation for the control of the illegal traffic in biodiversity will be designed. These systems are also critical for the task of promoting data bases, inventories, monitoring systems and joint measures for the control, management and eradication of invasive exotic species.

17 - Is your country planning to highlight and emphasize biological diversity considerations in its contribution to the ten-year review of progress since the Earth Summit?

Yes, in Colombia the Earth Summit has been an obligatory landmark and reference point in the history of the environmental sector and for the model of sustainable development. Ever since the 44th Session of the General Assembly of the United Nations, when the terms of reference for the Conference on Environment and Development were agreed on, Colombia has made permanent contributions to the process for the negotiation and implementation of Agenda 21, the Biological Diversity and Climate Change Conventions and other collateral commitments. It is worth noting, as well, that, thanks to the advances in the process of negotiating Agenda 21, the new Colombian Constitution of 1991 introduced ecological considerations, for which reason it has been called the "Green Constitution".

Beyond these constitutional elements, the Earth Summit also inspired Law 99 of 1993, which gave origin to the National Environmental System (SINA). In Article 1.2, Law 99 states as a general principle that the biodiversity of the country, as a national heritage and one that is of interest to mankind, should be protected as a matter of priority and exploited in a sustainable manner.

Now, ten years later, Colombia counts upon an institutional development at national, regional and local levels, as well as a programmatic development in different elements of biodiversity. All of these advances have been important in the definition of guidelines for international cooperation and were useful in the preparation of the Johannesburg Summit and the Conferences of the Parties of the different environment conventions, especially in the case of the Biodiversity Convention.

Among other advances, the following stand out: the national biodiversity policy; the policy for social participation in the conservation of protected areas; environmental management for wild fauna in Colombia; the strategy for the conservation of plants; the national strategy for the managing of information about live collections in botanical gardens; the technical bases for the conservation and sustainable use of wetlands; the national program for research into marine and coastal biodiversity; the program for the sustainable management and restoration of Colombian high mountain ecosystems and a research project that seeks to establish foundations for a national policy of access to and exploitation of genetic resources (in progress).

Nevertheless, these advances in the development of policies and strategies, while necessary, are insufficient to slow down the loss of national biodiversity. A good part of the responsibility for this situation is attributable to problems with the development of technical capacity, but most of all it is due to problems of a political kind: problems of public order,

the rapid increase of poverty levels and the stagnation of economic growth. They have undermined the importance of biodiversity in policies of national security, macroeconomic and sectorial policies and in social and environmental policies themselves.

This aside, as a result of the above-mentioned summit the Network for Sustainable Development was established as a world program promoted by the United Nations in the Earth Summit that took place in 1992. It is an instrument for the dissemination and promotion of the principles established in the official document "Agenda 21". From the very start, the existence of the Network has depended on international cooperation, with the aim of encouraging training in and access to new technologies that contribute to the human development of all nations, especially the developing ones.

At the present time, activities of education and training about the subject of international agreements are being carried out with Afro-Colombian, indigenous and peasant-farmer communities in some regions of the country.

Article 6 General measures for conservation and sustainable use

18. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?					
a) High		b) Medium	X	c) Low	
19. To what extent are the resources available adequate for meeting the obligations and recommendations made?					
a) Good		b) Adequate	X	c) Limiting	d) Severely limiting
Further comments on relative priority and on availability of resources (see further comments below)					
20. What is the status of your national biodiversity strategy (6a)?					
a) none					
b) early stages of development					X
c) advanced stages of development					
d) completed ¹⁰					
e) completed and adopted ²					
f) reports on implementation available					
21. What is the status of your national biodiversity action plan (6a)?					
a) none					
b) early stages of development					X
c) advanced stages of development					
d) completed ²					
e) completed and adopted ²					
f) reports on implementation available					
22. Do your national strategies and action plans cover all articles of the Convention (6a)?					

^{10/} Please provide information requested at the end of these guidelines.

a) some articles only	
b) most articles	x
c) all articles	
23. Do your national strategies and action plans cover integration of other sectoral activities (6b)?	
a) no	
b) some sectors	x
c) all major sectors	
d) all sectors	

Decision II/7 and Decision III/9 Consideration of Articles 6 and 8

24. Is action being taken to exchange information and share experience on the national action planning process with other Contracting Parties?	
a) little or no action	
b) sharing of strategies, plans and/or case-studies	x
c) regional meetings	
25. Do all of your country's strategies and action plans include an international cooperation component?	
a) no	
b) yes	x
26. Are your country's strategies and action plans coordinated with those of neighbouring countries?	
a) no	
b) bilateral/multilateral discussions under way	
c) coordinated in some areas/themes	x
d) fully coordinated	
e) not applicable	
27. Has your country set measurable targets within its strategies and action plans?	
a) no	
b) early stages of development	x
c) advanced stages of development	
d) programme in place	
e) reports on implementation available	
If a developing country Party or a Party with economy in transition -	
28. Has your country received support from the financial mechanism for the preparation of its national strategy and action plan?	
a) no	
b) yes	x
If yes, which was the Implementing Agency (UNDP/UNEP/World Bank)?	

Decisions III/21. Relationship of the Convention with the CSD and biodiversity-related conventions

29. Are the national focal points for the CBD and the competent authorities of the Ramsar Convention, Bonn Convention and CITES cooperating in the implementation of these conventions to avoid duplication?	
a) no	
b) yes - limited extent	x
c) yes - significant extent	

Further comments on implementation of this Article

Progress has been observed in incorporating considerations of conservation and the sustainable use of biodiversity in the design of policies on a national, regional and sectorial level. However, there are problems of coordination and dissemination for a correct implementation of such policies on all levels. For this reason we need to divulge national priorities and harmonize them with regional and local priorities, and at the same time provide technical and financial support in the public, private and academic sectors, as well as link agents from indigenous and local communities with all of the processes and projects.

Likewise, the handling of information related to the BDC should be centralized, in order to make it accessible to all the responsible or interested entities and persons, since there is no unified vision on a national level of the general measures for the implementation of the Convention, which means that its fulfillment largely depends on independent efforts and not a coordinated state policy.

Ignorance about many fundamental aspects of natural history and the functioning of ecosystems have made it difficult to undertake a realistic approach to the development of practices for the sustainable utilization of biodiversity.

The financial support available for carrying out programs of conservation and sustainable use is very poor in many cases.

In most cases, financial resources are meager, which means that implementation is centered in scattered projects.¹¹ This is aggravated by the

¹¹ AUGURA has received support for different programs from entities like the UNDP, among them, that of the INTEGRAL SELF-SUFFICIENT FARM OF THE URABA REGION.

Corantioquia: "Guadua as an economic, social and environmental alternative for the province of Rionegro" project.

Projects for breeding farms of captive species of wild fauna, with the aim of commercial exploitation and maintenance of the species.

National strategy for the conservation of plants

National strategy for the conservation of birds

National strategy for the conservation of dantas (tapirs).

National strategy for the conservation of the *titi grís* monkey *Saguinus leucopus* White-footed Tamarin

National strategy for the conservation of the *paujil de pico azul* *Crax alberti*. Blue-billed Curassow. ...

fact that, on some occasions, the demands of economic profitability work to the detriment of the conservation and sustainable use of the components of biodiversity. For that reason there is an urgent need to work with an adequate treatment consistent with social welfare and the eradication of poverty.

The Humboldt Institute coordinated the realization of a technical proposal for the National Action Plan for Biodiversity, in which around 90 specialists participated, who, in the framework of 9 strategies, defined short, middle and long term goals for the conservation, knowledge and sustainable use of biodiversity in the country

On the basis of this technical proposal for the National Action Plan, the Humboldt Institute is promoting and supporting the formulation of regional action plans (for the area of jurisdiction of the regional environmental authorities, which in many cases coincide with the Departments of the country), led by regional environmental authorities and with the participation of the productive sectors, grassroots groups, regional and local environmental organizations and universities, among others.

In addition, for the past few years the same Institute has participated in inter-institutional groups whose aim is to include criteria of biodiversity in sectorial policies. To begin with, work has been done with the agricultural sector. In the near future work will be done with the energy-mining sector and the sectors of infrastructure and transport.

25- Do all of your country's strategies and action plans include an international cooperation component?

CAR's of the Andean region: National Plan for the Andean Condor

WWF - Colombia: Emphasis in the national program on these two areas of work-

Instituto Humboldt: Program for Sustainable Biotrade and Incentives for the Conservation of Strategic Ecosystems.

12 With regard to this convention, the country has lagged in the implementation of a National Wetlands Committee that would serve as the competent authority in this area.

13 Coropaldas: there has existed a permanent cooperation among entities of the National Environment System with regard to the CITES provisions. Likewise, in the evaluation of wetlands we have worked with the parameters defined by the RAMSAR Commission. In the latter process technical training and exchange of information have been received.

There is a system of Animal Germplasm Banks, both *in situ* and *in vitro*, which, in addition to their conservation, enables some activities for the sustainable management of native races of animals to be carried out. Four bovine banks of the *Romosinuano*, *Blanco orejinegro*, *Costeño con cuernos* and *Sanmartinero* races, with a total of 2500 animals; three ovine banks of the *Mora*, *Criolla* and *Ovino de pelo* races, with a total of 300 animals; a caprine bank with a total of 131 animals and three porcine banks of the races *Zungo*, *Casco de mula* and *Sanpedreño* with a total of 158 animals.

On the sectorial level there exists the National Plan for Marine Biodiversity, which currently counts upon such concrete actions as: investigation towards the establishment of marine areas; inventories of the fauna in marine ecosystems; evaluation of the state of health of coral reefs; impact of fishing on marine diversity; plan for marine bio-prospecting - with a document and projects for applied research.

Management plan for mangrove zone: Sucre, Córdoba and Guajira.

Policy for the Integrated Management of Coastal Zones: activities have been carried out, like the determination of the coastal environmental units that are the basis for knowledge of marine and coastal characterization.

Yes, but there are still problems in establishing cooperation, on the part of both the authorities and the civil society.

26- Are your country's strategies and action plans coordinated with those of neighbouring countries?

Yes, there are efforts: there is a regional strategy on biodiversity of the Andean Community of Nations and the Treaty for Amazonian Cooperation. However, these advances are not sufficient. The process of intersectorial consolidation and articulation with other country must be deepened and continued.

29- Are the national focal points for the CBD and the competent authorities of the Ramsar Convention, Bonn Convention and CITES cooperating in the implementation of these conventions to avoid duplication?

Of the three main environmental conventions (biodiversity, desertification and climate change), the Biodiversity Convention is the only one that counts on a strategic plan whose precise mission is the above-mentioned goal. This plan includes the strategic goal of considering the Biodiversity Convention as the leading institution in the areas of biodiversity on an international level. For that reason, the focal point of the Convention in Colombia has the task of establishing closer links with the Ramsar and CITES conventions, reorienting their implementation towards a clear contribution to the goal of reducing the rate of biodiversity loss.

Due to serious problems of coordination and in some cases of contradictory environmental objectives (giving energy efficiency a higher priority than projects for the use and change of use of soils and forests), it is necessary to develop a systemic, institutional and individual capacity that facilitates the emergence of positive synergies among these conventions and others that are equally important for achieving the global goal, as is the case with the Ramsar Convention,¹² the Bonn Convention (which Colombia has not ratified) and the CITES Convention. Some environmental entities have particular experiences in this specific theme.¹³

Article 7 Identification and monitoring

30. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?					
a) High		b) Medium	x	c) Low	
31. To what extent are the resources available adequate for meeting the obligations and recommendations made?					
a) Good		b) Adequate		c) Limiting	x
Further comments on relative priority and on availability of resources					
32. Does your country have an ongoing inventory programme at species level (7a)?					
a) minimal activity					
b) for key groups (such as threatened or endemic species) or indicators					
c) for a range of major groups				x	
d) for a comprehensive range of species					
33. Does your country have an ongoing inventory programme at ecosystem level (7a)?					
a) minimal activity					

b) for ecosystems of particular interest only	
c) for major ecosystems	x
d) for a comprehensive range of ecosystems	
34. Does your country have an ongoing inventory programme at genetic level (7a)?	
a) minimal activity	x
b) minor programme in some sectors	
c) major programme in some sectors	
d) major programme in all relevant sectors	
35. Does your country have ongoing monitoring programmes at species level (7a)?	
a) minimal activity	
b) for key groups (such as threatened or endemic species) or indicators	x
c) for a range of major groups	
d) for a comprehensive range of species	
36. Does your country have ongoing monitoring programmes at ecosystem level (7b)?	
a) minimal activity	x
b) for ecosystems of particular interest only	x
c) for major ecosystems	
d) for a comprehensive range of ecosystems	
37. Does your country have ongoing monitoring programmes at genetic level (7b)?	
a) minimal activity	x
b) minor programme in some sectors	
c) major programme in some sectors	
d) major programme in all relevant sectors	
38. Has your country identified activities with adverse affects on biodiversity (7c)?	
a) limited understanding	x
b) threats well known in some areas, not in others	x
c) most threats known, some gaps in knowledge	
d) comprehensive understanding	
e) reports available	
39. Is your country monitoring these activities and their effects (7c)?	
a) no	
b) early stages of programme development	x
c) advanced stages of programme development	
d) programme in place	
e) reports on implementation available	
40. Does your country coordinate information collection and management at the national level (7d)?	
a) no	
b) early stages of programme development	x

c) advanced stages of programme development	
d) programme in place	
e) reports on implementation available	

Decision III/10 Identification, monitoring and assessment

41. Has your country identified national indicators of biodiversity?	
a) no	
b) assessment of potential indicators underway	x
c) indicators identified (if so, please describe below)	
42. Is your country using rapid assessment and remote sensing techniques?	
a) no	
b) assessing opportunities	
c) yes, to a limited extent	x
d) yes, to a major extent	
e) reports on implementation available	
43. Has your country adopted a "step-by-step" approach to implementing Article 7 with initial emphasis on identification of biodiversity components (7a) and activities having adverse effects on them (7c)?	
a) no	x
b) not appropriate to national circumstances	
c) yes	
44. Is your country cooperating with other Contracting Parties on pilot projects to demonstrate the use of assessment and indicator methodologies?	
a) no	x
b) yes (if so give details below)	
45. Has your country prepared any reports of experience with application of assessment methodologies and made these available to other Contracting Parties?	
a) no	x
b) yes	
46. Is your country seeking to make taxonomic information held in its collections more widely available?	
a) no relevant collections	
b) no action	
c) yes (if so, please give details below)	x

Decision V/7. Identification, monitoring and assessment, and indicators

47. Is your country actively involved in co-operating with other countries in your region in the field of indicators, monitoring and assessment?	
a) no	
b) limited co-operation	x
c) extensive co-operation on some issues	

d) extensive co-operation on a wide range of issues	
48. Has your country made available case studies concerning the development and implementation of assessment, monitoring and indicator programmes?	
a) no	x
b) yes - sent to the Secretariat	
c) yes - through the national CHM	
d) yes - other means (please specify)	
49. Is your country assisting other Parties to increase their capacity to develop indicator and monitoring programmes?	
a) no	
b) providing training	
c) providing direct support	
d) sharing experience	x
e) other (please describe)	

Further comments on implementation of this Article

32 - 33 y 34 Does your country have an ongoing inventory programme at species, ecosystem and genetic level (7a)?

The theme of inventories in the country has shown advances in all areas: Red Books on endangered species, inventories of marine macrofauna in the Caribbean and the Pacific, a detailed inventory of temporal changes in ecosystems, the formulation of indicators for monitoring and evaluating the components of biodiversity, but, at the same time, it is subject to a series of structural problems, such as the absence of a national policy, the low resources destined for the theme (most financial resources come from alternative, non-state sources), a lack of unification in the methods of identification, as well as gaps in the identification of many taxonomic groups. Likewise, there is ignorance about ecosystemic dynamics, which leads to difficulties in assigning priorities to the species or ecosystems that should be conserved.

A Biodiversity Information System is currently being implemented, but more progress is needed on the organization and maintenance of the data derived from the sampling, above all on a regional level, where the inventories carried out are not done in a systematic way.

Furthermore, while there is a relatively ample inventory of flora and fauna with some type of potential that benefits mankind, there is a shortage of research into the chemical properties and active principles of such substances, which in a certain way limits the development of practices of sustainability.

It is important to emphasize that the biological inventories concentrate on unexplored and virgin zones, but priority should be given to redoubling efforts in densely populated areas like the Andean zone, where the highest biotic diversity of the country is found.

Lastly, the experiences of the environmental entities that are striving to implement the present article are noteworthy.¹⁴

¹⁴ The Yubarta Foundation has identified aquatic mammals, with a special emphasis on the Colombian Pacific and some investigations in the Caribbean.

Corpocaldas through agreements with other entities: Follow-up of plots of flora in the Department of Caldas (the coffee zone of Colombia), for example Biotrop-type plots in the eastern part of Caldas (Flores Forest, Río Blanco reserve, Río Manso reserve) and follow-up of the establishment of forestry cover and commercial plantations. Likewise, confiscation of the illegal trade in fauna in the project of institutional regulations

Cornare and Corantioquia: cooperative inter-institutional project for the control of activities in the zone of the river Claro Cocorná Sur (Puerto Triunfo-Puerto Nare), in the middle basin of the river Magdalena pertaining to the Department of Antioquia.

University of Antioquia: Studies of environmental impact and diversity in defined zones which lead to recommendations and collections from particular ecosystems, as well as consultancy works for entities like ISA and Corantioquia.

The Environmental Exploration and Monitoring Group (GEMA) of the von Humboldt Institute: manual of "Methods for the realization of characterizations of biodiversity"

The Javeriana University: projects for "The Social Evaluation of the Biodiversity of the coffee zone" and the "Project for the Improvement and georeferencing of biological collections".

AUGURA-BANATURA: Currently working on the level of identification of sectorial indicators and natural resources.

AUGURA - Colombian Farmers Society (SAC): "Environmental Guide for the Banana Subsector", which identifies the sector's most important impacts on the environment, including biodiversity.

CENIBANANO: under an agreement with the CIAT (International Center for Tropical Agriculture): programs for the development of precision agriculture.

15 CAM (Marine Environmental Quality) Network for both coasts
Monitoring of the Ciénaga Grande de Santa Marta and the old delta of the River Sinú.
Monitoring of the state of health of Colombian coral reefs.

Omacha Foundation: monitoring of aquatic ecosystems, especially in the Orinoco.

16 Omacha Foundation: has found contaminants in the muscles of *bagres* (catfish)
Invemar: studies under development on the impact of dragnet fishing on shrimp in marine benthos

17 . Amazon region: studies with the von Humboldt Institute on the evaluation of indicators for the follow-up of the National Biodiversity Policy.

Andean region: Corpocaldas works on the design of institutional indicators, among them those for biodiversity, but they are yet to be used as a reference for the monitoring and follow-up of the same.

18 Cooperation with Venezuela in the Orinoco region and Project for the Design and Implementation of a System of Indicators for the Follow-up of the Biodiversity Policy in the Colombia Amazon, the latter coordinated by the von Humboldt Institute.

19 Von Humboldt Institute: Systematization (in process) of the collections, so that they may be consulted through its website.

Corpoamazonia: has a botanical garden which is of easy access for the community and researchers.

University of Antioquia: the dissemination of the collections has been realized by means of publications, reports, internal bulletins, training courses for students and national polls.

36 y 37 - Does your country have ongoing monitoring programmes at ecosystem and genetic level (7b)?

There are different examples of monitoring aimed at knowing the state of ecosystems and their components.15

38 - Has your country identified activities with adverse affects on biodiversity (7c)?

Important components for conservation have been identified and the monitoring of activities that have harmful effects on biodiversity has been realized, but there is a lack of urgent conservation measures. There are different platforms for data bases and there use is restricted.

There are results of particular investigations.16

40 - Does your country coordinate information collection and management at the national level (7d)?

Early stages of the development of programs with some particular experiences, such as the "Report on the state of the marine resources of Colombia", by the INVEMAR, and the "Report on the present state of natural resources", by the Contraloría General de la Nación (Controller-General's Office).

41 - Has your country identified national indicators of biodiversity?

There are possible indicators that are being evaluated, with some particular experiences.17

44- Is your country cooperating with other Contracting Parties on pilot projects to demonstrate the use of assessment and indicator methodologies?

In general terms, no, but there are some efforts in the country's regions.18

46- Is your country seeking to make taxonomic information held in its collections more widely available?

Yes. The National University's Institute of Natural Sciences, as the national coordinating center for the world initiative on taxonomy, has done very good work on taxonomic information and this has been widely disseminated.

There are also the experiences of research institutes, botanical gardens, herbariums and universities.19

47- Is your country actively involved in co-operating with other countries in your region in the field of indicators, monitoring and assessment? and 49 - Is your country assisting other Parties to increase their capacity to develop indicator and monitoring programmes?

The assistance provided to other States for the purpose of strengthening their capacity to develop indicators and programs of vigilance is realized through the publication and dissemination of information about Colombia and protected zones that involve neighboring countries.

48 - Has your country made available case studies concerning the development and implementation of assessment, monitoring and indicator programmes?

Other media are used, such as books and other publications by the research institutes.

The different regional herbariums, both of public and private institutions, allow both undergraduate and postgraduate students to consult their collections.

Decisions on Taxonomy

**Decision IV/1 Report and recommendations of the third meeting of SBSTTA
[part]**

50. Has your country carried out a national taxonomic needs assessment, and/or held workshops to determine national taxonomic priorities?	
a) no	
b) early stages of assessment	x
c) advanced stages of assessment	
d) assessment completed	
51. Has your country developed a national taxonomic action plan?	
a) no	
b) early stages of development	x
c) advanced stages of development	
d) action plan in place	
e) reports on implementation available	
52. Is your country making available appropriate resources to enhance the availability of taxonomic information?	
a) no	
b) yes, but this does not cover all known needs adequately	x
c) yes, covering all known needs	
53. Is your country encouraging bilateral and multilateral training and employment opportunities for taxonomists, particularly those dealing with poorly known organisms?	
a) no	x
b) some opportunities	
c) significant opportunities	
54. Is your country investing on a long-term basis in the development of appropriate infrastructure for your national taxonomic collections?	
a) no	
b) some investment	x
c) significant investment	
55. Is your country encouraging partnerships between taxonomic institutions in developed and developing countries?	
a) no	x
b) yes - stated policy	
c) yes - systematic national programme	
56. Has your country adopted any international agreed levels of collection housing?	
a) no	
b) under review	
c) being implemented by some collections	x
d) being implemented by all major collections	

57. Has your country provided training programmes in taxonomy?	
a) no	
b) some	x
c) many	
58. Has your country reported on measures adopted to strengthen national capacity in taxonomy, to designate national reference centres, and to make information housed in collections available to countries of origin?	
a) no	x
b) yes - in the previous national report	
c) yes - via the clearing-house mechanism	
d) yes - other means (please give details below)	
59. Has your country taken steps to ensure that institutions responsible for biological diversity inventories and taxonomic activities are financially and administratively stable?	
a) no	
b) under review	
c) yes for some institutions	x
d) yes for all major institutions	
60. Has your country assisted taxonomic institutions to establish consortia to conduct regional projects?	
a) no	
b) under review	
c) yes - limited extent	x
d) yes - significant extent	
61. Has your country given special attention to international funding of fellowships for specialist training abroad or for attracting international experts to national or regional courses?	
a) no	
b) under review	
c) yes - limited extent	x
c) yes - significant extent	
62. Has your country provided programmes for re-training of qualified professionals moving into taxonomy-related fields?	
a) no	
b) some	x
c) many	

**Decision V/9. Global Taxonomy Initiative: Implementation and further
advance of the Suggestions for Action**

63. Has your country identified its information requirements in the area of taxonomy, and assessed its national capacity to meet these requirements?	
a) no	
b) basic assessment	x
c) thorough assessment	
64. Has your country established or consolidated taxonomic reference centres?	
a) no	
b) yes	x
65. Has your country worked to increase its capacity in the area of taxonomic research?	
a) no	
b) yes	x
66. Has your country communicated information on programmes, projects and initiatives for consideration as pilot projects under the Global Taxonomy Initiative to the Executive Secretary?	
a) no	x
b) yes	
67. Has your country designated a national Global Taxonomy Initiative focal point linked to other national focal points?	
a) no	x
b) yes	
68. Has your country participated in the development of regional networks to facilitate information-sharing for the Global Taxonomy Initiative?	
a) no	x
b) yes	
<i>If a developing country Party or Party with economy in transition -</i>	
69. Has your country sought resources through the financial mechanism for the priority actions identified in the decision?	
a) no	x
b) applied for unsuccessfully	
c) applied for successfully	

Further comments on implementation of these decisions

The subject of taxonomy is a priority one for the country, but national contributions are limited (it is mainly done for universities and the red lists of endangered species). For this reason, there is a need to recognize and comprehend taxonomy as an essential instrument for the conservation and sustainable development of biological diversity. Relevance should be given to the role of the territorial entities: in this respect a systematic agenda of taxonomy should be created, relying on the help of Colombian botanical gardens and herbariums.

Likewise, more and better reference collections should be established and their contents should be disseminated.

The financing of projects for the biological and taxonomical characterization of ecosystems of interest stands out.

51 - Has your country developed a national taxonomic action plan?

The herbariums and botanical gardens cooperated in the drafting of the National Strategy on Plants. The Systematic Agenda for the 21st Century was done with the von Humboldt Institute, the National University and other experts in the subject.

53 - Is your country encouraging bilateral and multilateral training and employment opportunities for taxonomists, particularly those dealing with poorly known organisms?

There is little encouragement of professional education and training in taxonomy: it is a matter of personal interest, rather than national strategies or policies. Job opportunities for taxonomists are meager in Colombia and are given to professionals with a lot of experience: we need to form a new generation of taxonomists.

As an alternative to these defects, taxonomic studies are "camouflaged" as tools for developing and fulfilling the objectives of environmental projects, without being a requirement of them.

As a consequence of the lack of investigators in classical taxonomy (understood as scientific rigor in nomenclature and an up to date knowledge of the specialist literature), there are evidences of confusions and lack of taxonomic knowledge about groups and families: the lists of endangered species are sparse and lack development, updating of nomenclature and correct citations. For these reasons one sees the need to verify before publishing and to exercise quality control over the taxonomic products which the country offers.

Few investigators are being trained, which implies an enormous delay in research (especially in little known groups like protozoa and insects). It is for the above reason that foreign investigators are often needed. Another problem in this respect is legislation, which impedes the egress of genetic material even when it is for purposes of identification. Thus, the country urgently needs to open the doors to the training of taxonomists: from making collection permits more accessible to support for paid leaves and fellowships.

62 - Has your country provided programmes for re-training of qualified professionals moving into taxonomy-related fields?

There are efforts by some universities,²⁰ but they are only scattered ones: in general students need to begin acquiring taxonomic and systematic knowledge in high school in order to have the practical talents that are required for the development of the country. There is a lack of trained teachers to establish faculties of taxonomic study and this subject is tending to disappear from biology courses.

67 - Has your country designated a national Global Taxonomy Initiative focal point linked to other national focal points?

The focal point is the Institute of Natural Sciences of the National University.

²⁰ National University of Colombia: Masters and Doctorate Programs in Biology, with a line of investigation in Systematics and Taxonomy. Javeriana University; Programs of its Institute of Biology.

Article 8 In situ conservation [excluding Articles 8h and 8j]

70. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?					
a) High		b) Medium	x	c) Low	
71. To what extent are the resources available adequate for meeting the obligations and recommendations made?					
a) Good		b) Adequate		c) Limiting	x
Further comments on relative priority and on availability of resources (see further comments below)					
72. Has your country established a system of protected areas which aims to conserve biological diversity (8a)?					
a) system under development					x
b) national review of protected areas coverage available					
c) national protected area systems plan in place					
d) relatively complete system in place					
73. Are there nationally adopted guidelines for the selection, establishment and management of protected areas (8b)?					
a) no					
b) no, under development					
c) yes					x
d) yes, undergoing review and extension					
74. Does your country regulate or manage biological resources important for the conservation of biological diversity with a view to ensuring their conservation and sustainable use (8c)?					
a) no					
b) early stages of development					x
c) advanced stages of development					
d) programme or policy in place					
e) reports on implementation available					

75. Has your country undertaken measures that promote the protection of ecosystems, natural habitats and the maintenance of viable populations of species in natural surroundings (8d)?	
a) no measures	
b) some measures in place	x
c) potential measures under review	
d) reasonably comprehensive measures in place	
76. Has your country undertaken measures that promote environmentally sound and sustainable development in areas adjacent to protected areas (8e)?	
a) no measures	
b) some measures in place	x
c) potential measures under review	
d) reasonably comprehensive measures in place	
77. Has your country undertaken measures to rehabilitate and restore degraded ecosystems (8f)?	
a) no measures	
b) some measures in place	x
c) potential measures under review	
d) comprehensive measures in place	
78. Has your country undertaken measures to promote the recovery of threatened species (8f)?	
a) no measures	
b) some measures in place	x
c) potential measures under review	
d) comprehensive measures in place	
79. Has your country undertaken measures to regulate, manage or control the risks associated with the use and release of living modified organisms resulting from biotechnology (8g)?	
a) no measures	
b) some measures in place	x
c) potential measures under review	
d) comprehensive measures in place	
80. Has your country made attempts to provide the conditions needed for compatibility between present uses and the conservation of biological diversity and sustainable use of its components (8i)?	
a) no	
b) early stages of development	x
c) advanced stages of development	
d) programme or policy in place	
e) reports on implementation available	
81. Has your country developed and maintained the necessary legislation and/or other regulatory provisions for the protection of threatened species and populations (8k)?	
a) no	

b) early stages of development	x
c) advanced stages of development	
d) legislation or other measures in place	
82. Does your country regulate or manage processes and categories of activities identified under Article 7 as having significant adverse effects on biological diversity (81)?	
a) no	
b) under review	
c) yes, to a limited extent	x
d) yes, to a significant extent	
<i>If a developed country Party -</i>	
83. Does your country cooperate in providing financial and other support for <i>in-situ</i> conservation particularly to developing countries (8m)?	
<i>If a developing country Party or Party with economy in transition -</i>	
84. Does your country receive financial and other support for <i>in situ</i> conservation (8m)?	
a) no	
b) yes (if so, please give details below)	x

Decision II/7 Consideration of Articles 6 and 8 of the Convention

85. Is action being taken to share information and experience on implementation of this Article with other Contracting Parties?	
a) little or no action	
b) sharing of written materials and/or case-studies	x
c) regional meetings	

Further comments on implementation of this Article

<p>70- What is the relative priority afforded to implementation of this Article and the associated decisions by your country?</p> <p>The country gives it a middling priority, but the resources the country devotes to it are restricted. In any case, it is worth noting that important donations from international cooperation have been received in the past two years.</p> <p>There are differences in the priority given to the implementation of the article in different regions of the country and inequity in the distribution of resources for the centralization of the same resources. <u>21</u></p> <p>72 - Has your country established a system of protected areas which aims to conserve biological diversity (8a)?</p> <p>It is a process under construction: although the country has zones of territory destined to conservation, represented by 49 protected areas</p>
--

21Coastal and marine zones, region of the Orinoco and Amazon

(National System of Protected Areas - SINAP), it can not be said that it is an established system, nor conceptually strong. The SINAP's coverage is insufficient to guarantee the protection of the country's extraordinary diversity.

On a regional and departmental level, there are efforts in this field, though the Regional Systems of Protected Areas (SIRAPs) and the Departmental Systems of Protected Areas (SIDAPs, which include areas of national, municipal and private civil society reserves), but there is a lack of development on the global focus of the national system and how the regional systems fit into it.

For the above reason, although there have been advances, an urgent improvement is needed in the following aspects: agreements on the definition of the basic agents that make up the SINAP, definition of the concept of a protected area and its categories of management, a normative base to uphold the system, the development and completion of the biological inventories of the protected areas, and the drafting and implementation of management plans.

22 Projects realized by the Parks Unit, the Humboldt Institute and the WWF-Colombia. The WWF in the identification of strategic areas of conservation in the ecoregions of the Andes and the Chocó.

23 CARDER: Advances in the construction of a SIRAP, with emphasis on hydric protection and regulation.

CVC: Revision of the conceptual bases of the SIDAP.

Corpocaldas: Although the institutional priority is low in relation to the protection of ecosystems *in situ*, the entity acquired the Florencia forest, in a zone of high rainfall (7,000 mm/year), given the important biodiversity which this ecosystem harbors.

Corpoguajira: Identification of strategic ecoregions, cleaning up of reservation and sectors which supply water. CVS: Projects and agreements with the Center for the Conservation of Biodiversity of the Upper Sinú, the Parks Unit, URRRA S.A., Biozoo and Ecofondo.

Omacha Foundation: creation of an area of reserve of the civil society in the Orinoco.

WWF - Colombia: Has been working a joint manner with organizations like the Colombian Network of Private Reserves of the Civil Society, with the aim of strengthening the organization and promoting the establishment of private reserves that guarantee the conservation of strategic ecosystems.

24 There are currently 195 reserves on a national level, with more than 40,000 hectares, most of them located in the Andean zone. However, there is large nucleus in the zone of Leticia and others in Nariño, the Sierra Nevada, the Chocó, etc. More than 50 organizations are working on a local, national and international level.

25 Policy of social participation in conservation. UAESPNN - Ministry of Environment, 2001

26 At the present time the following projects are being developed: "Rehabilitation of areas affected by open sky coal mining in the Department of La Guajira"; "Restoration of salt-water zones in areas of mangroves in the old delta of the river Sinú"; and "Rehabilitation of the Ciénaga Grande de Santa Marta". (The latter is the biggest project in the country, with resources of 5 million dollars from the GTZ. The government is giving it continuity).

There have been advances in the selection of areas of conservation under the criterion of representativeness, 22 but in any case there are gaps in the habitats which have suffered a fragmentation and deterioration of their structure and function. Therefore, priority should be given to zones within the strategic ecoregions of the country, in order to recuperate the animal populations that carry out critical ecological roles for the ecosystem. This will allow us to plan the conservation of the protected areas with broader perspectives and objectives which include long-term goals.

It is worth highlighting the experiences of some CAR's and NGO's which have undertaken work in this field²³ and that of the Network of Reserves of the Civil Society, with more than 10 years of experience, during which they have accomplished important advances for the country. 24

76 - Has your country undertaken measures that promote environmentally sound and sustainable development in areas adjacent to protected areas (8e)?

The "Parks for People" Policy encourages a recognition of and appreciation for the agents of conservation, in order to consolidate the areas of System, based on an understanding of the particular characteristics of the population and their historic link with the protected areas, their socio-cultural identity, their models of occupation and their use of natural resources.

One of the strategic guidelines of this Policy is that of productive systems for conservation, by means of a strategy that promotes processes of social organization, community training and the formulation and co-management of projects with a local impact, oriented towards the planning of farms (property planning) with peasant-farmer populations, the ordering of fishing with communities of fishermen or of spaces of use with ethnic groups, thus providing concrete responses to the productive needs of the families which coexist with the natural surroundings of the national parks while, at the same time, creating real processes of conservation. 25

77- Has your country undertaken measures to rehabilitate and restore degraded ecosystems (8f)?

There are some established measures and outstanding projects on a regional level that help in implementation²⁶, but we do not yet count on a policy or sufficient resources.

78- Has your country undertaken measures to promote the recovery of threatened species (8f)?

Work on regional and national coordination for CITES is being done, on the basis of norms and general studies of the subject.

79 - Has your country undertaken measures to regulate, manage or control the risks associated with the use and release of living modified organisms resulting from biotechnology (8g)?

The country has made advances in the creation of a regulatory framework through Agreement 013/98, which was updated by Agreement 002/2002, which created the National Technical Council for Agricultural Biosafety (CTN), as an advisory body for the General Management of the Colombian Agriculture and Stock-raising Institute - ICA. It is made up of representatives of the

academic sector, the public bodies that are responsible for the matter, the trade bodies linked to the sector and representatives of groups of both large and small producers. In addition, resolution 3492 of December 1998 was issued, which regulates the process of submitting, studying and deciding on applications by users for permission to introduce, produce, liberate and commercialize GMOs. In April 2002, by means of agreement 0004 of the Directive Council of the ICA, the National Technical Council for Stock-raising was created as scientific and technical body to advise the Colombian Agriculture and Stock-raising Institute on the evaluation of the introduction, production, liberation, commercialization, investigation, biological development and quality control of genetically-modified organisms (GMOs) that affect the health and production of domesticated animals, their derivatives and the products which they contain..

The National Technical Council for Stock-raising is made up of the above-mentioned government bodies, trade groups of cattle-, pig-, poultry- and fish-breeders, veterinary pharmacists and two representatives of the civil society (from the Association of Peasant-Farmer Users and Consumers of Colombia).

The principles governing the strategy of environmental sustainability in the program for the conservation and sustainable use of environmental goods and services laid down in the National Development plan include the promotion of biotechnology on the basis of biodiversity and the establishment of biosafety, including the formulation of a policy for biotechnology and the regulation of hazards resulting from the introduction, mobilization and genetic manipulation of live organisms. In addition, taking into account that the country has an immense patrimony in the field of biodiversity and genetic resources, which may be exploited through the numerous opportunities offered by modern biotechnology today, we seek an improvement of the country's capacity to improve and apply the legal framework and the development of a strategy to inform and educate public opinion about the benefits and risks associated with biotechnology.

Despite the advances that have been mentioned, for university institutions regulations in this field hinder the development of academic research, as in the case of restrictions on the shipping of material to be examined by specialists. Such regulations hinder research into species and the training of students and teachers, insofar as they are unable to effect international exchanges of specimens, nor ask foreign museums to participate in their identification.

82- Does your country regulate or manage processes and categories of activities identified under Article 7 as having significant adverse effects on biological diversity (81)?

There exist mechanisms and instruments such as environmental guides to facilitate regulation and foresee the impacts of activities with adverse effects on biological diversity. However, the level of implementation is middling, since the country faces outstanding problems in this field, such as the impacts of the fumigation of illicit crops and megaprojects like hydroelectricity plants. The measures needed to deal with these problems have not been taken.

84 - Does your country receive financial and other support for in situ conservation (8m)?

The resources from international cooperation have significantly increased,

year after year. They represented an investment of US\$ 5 million in the year 2002. This year resources needed for counterpart funding reach 1.2 million dollars (20% of the managed international resources). However, the funds assigned from the country's general budget only amount of 24% of what is required.

The Dutch government and the GEF are among the bodies which have provided financial support.

Article 8h Alien species

86. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?					
a) High	x	b) Medium		c) Low	
87. To what extent are the resources available adequate for meeting the obligations and recommendations made?					
a) Good		b) Adequate		c) Limiting	x
d) Severely limiting					
Further comments on relative priority and on availability of resources					
88. Has your country identified alien species introduced?					
a) no					
b) only major species of concern					x
c) only new or recent introductions					
d) a comprehensive system tracks new introductions					
e) a comprehensive system tracks all known introductions					
89. Has your country assessed the risks posed to ecosystems, habitats or species by the introduction of these alien species?					
a) no					
b) only some alien species of concern have been assessed					x
c) most alien species have been assessed					
90. Has your country undertaken measures to prevent the introduction of, control or eradicate those alien species which threaten ecosystems, habitats or species?					
a) no measures					
b) some measures in place					x
c) potential measures under review					
d) comprehensive measures in place					

Decision IV/1 Report and recommendations of the third meeting of SBSTTA

91. Is your country collaborating in the development of projects at national, regional, sub-regional and international levels to address the issue of alien species?	
a) little or no action	x
b) discussion on potential projects under way	
c) active development of new projects	
92. Does your national strategy and action plan address the issue of alien species?	
a) no	
b) yes - limited extent	x
c) yes - significant extent	

Decision V/8. Alien species that threaten ecosystems, habitats or species

93. Is your country applying the interim guiding principles for prevention, introduction and mitigation of impacts of alien species in the context of activities aimed at implementing article 8(h) of the Convention, and in the various sectors?	
a) no	
b) under consideration	
c) limited implementation in some sectors	x
d) extensive implementation in some sectors	
e) extensive implementation in most sectors	
94. Has your country submitted case-studies to the Executive Secretary focusing on thematic assessments?	
a) no	
b) in preparation	x
c) yes	
95. Has your country submitted written comments on the interim guiding principles to the Executive Secretary?	
a) no	
b) yes	x
96. Has your country given priority to the development and implementation of alien invasive species strategies and action plans?	
a) no	x
b) yes	
97. In dealing with the issue of invasive species, has your country developed or involved itself in mechanisms for international co-operation, including the exchange of best practices?	
a) no	
b) trans-boundary co-operation	
c) regional co-operation	x
d) multilateral co-operation	
98. Is your country giving priority attention to geographically and evolutionarily isolated ecosystems in its work on alien invasive species?	
a) no	x

b) yes	
99. Is your country using the ecosystem approach and precautionary and bio-geographical approaches as appropriate in its work on alien invasive species?	
a) no	x
b) yes	
100. Has your country developed effective education, training and public-awareness measures concerning the issue of alien species?	
a) no	x
b) some initiatives	
c) many initiatives	
101. Is your country making available the information which it holds on alien species through the CHM?	
a) no	
b) some information	x
c) all available information	
d) information available through other channels (please specify)	
102. Is your country providing support to enable the Global Invasive Species Programme to fulfil the tasks outlined in the decision and its annexes?	
a) no	
b) limited support	x
c) substantial support	

Further comments on implementation of this Article

The regulations exist, but their implementation has been difficult: the introduction of exotic species represents one of the essential causes of biodiversity loss. Our country does not count on measures or programs for the control and mitigation of the adverse effects of such introductions, nor

27 Introduction of rainbow trout and Nile Tilapia in the hydric system as well as the use of conifers and eucalyptus in the management of hydrographic basins.

28 CENIBANANO: Project for the follow-up of the introduction of *flemingia macrophylla* in the zone of Urabá.

BANATURA: Training courses that include the subject of exotic species.

AUGURA: Phytosanitary management of ballast with the aim of controlling the propagation of exotic species, especially insects. FAO norm ISPM15 - Standard of International Plant Protection Convention regarding wood packaging materials-

Bogotá Botanical Garden: In the Capital District there are some studies about the effect of invasive species on ecosystems of importance.

Von Humboldt Institute: Research alliance between the Institute and investigators from Brazil and Argentina. Through the Institute, Colombia would be in charge of compiling information, characterizing the invasive

mechanisms to regulate their impact. 27

It is worth noting advances in the realization of the national inventory of various groups of exotic species and the interest in developing studies and adopting measures of control, above all, in relation to groups of fishes, amphibians and reptiles, among others.

There is a lack of awareness about the impact they have and a need to formulate a clear policy about their presence in protected areas. On the regional and national level there are isolated 28 initiatives and studies 29 which stand out as advances in implementation.

Article 8j Traditional knowledge and related provisions

103. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?					
a) High		b) Medium		c) Low	x
104. To what extent are the resources available adequate for meeting the obligations and recommendations made?					
a) Good		b) Adequate		c) Limiting	x
Further comments on relative priority and on availability of resources (see further comments below)					
105. Has your country undertaken measures to ensure that the knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity are respected, preserved and maintained?					
a) no measures					
b) some measures in place					x
c) potential measures under review					
d) comprehensive measures in place					
106. Is your country working to encourage the equitable sharing of benefits arising from the utilization of such knowledge, innovations and practices?					
a) no					
b) early stages of development					x
c) advanced stages of development					
d) programme or policy in place					

species of fauna and flora and elaborating distribution maps. Likewise, the Institute is in the process of making a preliminary list of invasive plants.

29 Recently a study and analysis was done on the implications of the introduction of the West Nile Virus into the birds of Colombia. The final document includes an analysis of the bird species which have been infected by the West Nile Virus in North America, according to the NWHC (2002) and indicates which of these are present in Colombia and which have migratory populations which move between North America and Colombia (Rosselli, 2002).

Decision III/4 and Decision IV/9. Implementation of Article 8(j)

107. Has your country developed national legislation and corresponding strategies for the implementation of Article 8(j)?	
a) no	
b) early stages of development	x
c) advanced stages of development	
d) legislation or other measures in place	
108. Has your country supplied information on the implementation of Article 8(j) to other Contracting Parties through media such as the national report?	
a) no	
b) yes - previous national report	x
c) yes - CHM	
d) yes - other means (please give details below)	
109. Has your country submitted case-studies to the Executive Secretary on measures taken to develop and implement the Convention's provisions relating to indigenous and local communities?	
a) no	x
b) yes	
110. Is your country participating in appropriate working groups and meetings?	
a) none	
b) some	x
c) all	
111. Is your country facilitating the active participation of representatives of indigenous and local communities in these working groups and meetings?	
a) no	
b) yes	x

Decision V/16. Article 8(j) and related provisions

112. Has your country reviewed the programme of work specified in the annex to the decision, and identified how to implement those tasks appropriate to national circumstances?	
a) no	
b) under review	x
c) yes (please provide details)	
113. Is your country integrating such tasks into its ongoing programmes, taking into account the identified collaboration opportunities?	
a) no	
b) not appropriate to national circumstances	
c) yes - to a limited extent	x
d) yes - to a significant extent	
114. Is your country taking full account of existing instruments, guidelines, codes and other relevant activities in the implementation of the programme of work?	
a) no	

b) not appropriate to national circumstances	
c) yes - to a limited extent	x
d) yes - to a significant extent	
115. Has your country provided appropriate financial support for the implementation of the programme of work?	
a) no	
b) not appropriate to national circumstances	
c) yes - to a limited extent	x
d) yes - to a significant extent	
116. Has your country fully incorporated women and women's organizations in the activities undertaken to implement the programme of work contained in the annex to the decision and other relevant activities under the Convention?	
a) no	x
b) yes	
117. Has your country taken measures to facilitate the full and effective participation of indigenous and local communities in the implementation of the Convention?	
a) no	
b) not appropriate to national circumstances	
c) yes - to a limited extent	x
d) yes - to a significant extent	
118. Has your country provided case studies on methods and approaches concerning the preservation and sharing of traditional knowledge, and the control of that information by indigenous and local communities?	
a) no	x
b) not relevant	
c) yes - sent to the Secretariat	
d) yes - through the national CHM	
e) yes - available through other means (please specify)	
119. Does your country exchange information and share experiences regarding national legislation and other measures for the protection of the knowledge, innovations and practices of indigenous and local communities?	
a) no	
b) not relevant	
c) yes - through the CHM	x
d) yes - with specific countries	
e) yes - available through other means (please specify)	
120. Has your country taken measures to promote the conservation and maintenance of knowledge, innovations, and practices of indigenous and local communities?	
a) no	
b) not relevant	
c) some measures	x
d) extensive measures	

121. Has your country supported the development of registers of traditional knowledge, innovations and practices of indigenous and local communities, in collaboration with these communities?	
a) no	x
b) not relevant	
c) development in progress	
d) register fully developed	
122. Have representatives of indigenous and local community organizations participated in your official delegation to meetings held under the Convention on Biological Diversity?	
a) not relevant	x
b) not appropriate	
c) yes	
123. Is your country assisting the Secretariat to fully utilize the clearing-house mechanism to co-operate closely with indigenous and local communities to explore ways that enable them to make informed decisions concerning release of their traditional knowledge?	
a) no	x
b) awaiting information on how to proceed	
c) yes	
124. Has your country identified resources for funding the activities identified in the decision?	
a) no	x
b) not relevant	
c) partly	
d) fully	

Further comments on implementation of this Article

The implementation of article 8j has been problematical; it has been given a limited priority which is not in accordance with the importance which it has for the country, since it has not been possible to reach agreements on fundamental aspects, like the fair distribution of the benefits accruing to and rights of communities over their ancestral knowledge.

In this aspect, the proposal is to agree on a *sui generis* regime that allows such communities to share their knowledge and, at the same time, enjoy its benefits.

One advance in regard to this regime is in its stage of finalization: a project by the Humboldt Institute which seeks to create a technical policy proposal for and a norm on access to genetic resources. This project has elaborated a proposal for a *sui generis* regime for the protection of traditional knowledge, as a working document for the competent national authority and indigenous and local organizations. It includes four case studies done by the communities themselves. They are: indigenous communities of the department of Antioquia, indigenous and peasant-farmer communities of the north of the department of el Cauca, indigenous communities of the middle basin of the river Caquetá in the department of Amazonas and Afro-Colombian communities of the municipality of Buenaventura in the department of el Valle.

Furthermore, although financial and technical efforts have been devoted to the subjects related to the development of this article by the Ministry of Environment, Housing and Territorial Development, the Ministry of Interior and the scientific research institutes of the National Environmental System, like the von Humboldt Institute and the SINCHI, as well as the IIAP, they have been sufficient to comply with the stages of dissemination in and consultation with the indigenous and local communities, aspects which require a special attention.

One of the most controversial points has to do with medicinal plants and their potential use, since many ethnic groups, especially those of the Amazon, have a vast knowledge of this field which they are willing to share so long as there are equitable conditions for the distribution of benefits.

Among the advances on a national level there stand out the working group of the Ministry of Interior through the General Directorate of Ethnic Affairs³⁰; the existence of the ad hoc Group of traditional knowledge associated with biological resources, convoked by the Humboldt Institute, the agreement between the Humboldt Institute³¹ and the Colombian Institute of Anthropology and History (ICANH) for joint work in this field.

There are other experiences on a regional level.³²

³⁰ Focal point for dealing with the subject of traditional knowledge, in support of the decisions which the Ministry of Foreign Relations should take.

³¹ The group has met on four occasions and with its support three national workshops have been held, with the participation of indigenous, Afro-Colombian and peasant-farmer organizations and persons.

³² Association of Agricultural and Stock-raising Producers of the Amazon (APAA).

SINCHI, National University: Project for sustainable chili peppers.

Sinchi: Work with indigenous communities on the Varzeas Project - traditional knowledge of the Tikuna ethnic group on jungle zones subject to seasonal flooding.

WWF- Colombia: Resources from the GTZ to support the strengthening of the work of communities on the subject of access to genetic resources, protection of traditional knowledge and intellectual property rights.

International Affairs Group - Ministry of Environment, Housing and Territorial Development: GEF Project on the 2nd National Report on Biodiversity and Evaluation of the Creation of Capacity for the Implementation of Article 8j and Related ones of the Convention on Biological Diversity, in implementation phase.

Botanical Garden of Bogotá: Investigations of the traditional knowledge of peasant-farmer populations of the Capital District about promissory species of wild flora; work with peasant-farmer communities of the Sumapaz region, in the Andean high plains region of the Departments of Cundinamarca and Boyacá, on the recuperation of oral tradition about medicinal plants and forest species used to protect micro-basins, through what are known as "conceptual *mingas*" (*mingas* are the traditional indigenous cooperative work gangs).

Corpocaldas: Application of traditional knowledge in the development of sustainable agro-ecosystems (indigenous communities of Ríosucio), as well

Article 9 Ex situ conservation

125. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?					
a) High	x	b) Medium		c) Low	
126. To what extent are the resources available adequate for meeting the obligations and recommendations made?					
a) Good		b) Adequate		c) Limiting	x
Further comments on relative priority and on availability of resources (see further comments below)					
127. Has your country adopted measures for the <u>ex situ</u> conservation of components of biological diversity <i>native</i> to your country (9a)?					
a) no measures					
b) some measures in place					x
c) potential measures under review					
d) comprehensive measures in place					
128. Has your country adopted measures for the <u>ex situ</u> conservation of components of biological diversity <i>originating outside</i> your country (9a)?					
a) no measures					
b) some measures in place					x
c) potential measures under review					
d) comprehensive measures in place					
129. If the answer to the previous question was yes, is this being done in active collaboration with organizations in the other countries (9a)?					
a) no					
b) yes					x
130. Has your country established and maintained facilities for the <u>ex situ</u> conservation of and research on plants, animals and micro-organisms that represent genetic resources <i>native</i> to your country (9b)?					
a) no					
b) yes - limited extent					x
c) yes - significant extent					
131. Has your country established and maintained facilities for the <u>ex situ</u> conservation of and research on plants, animals and micro-organisms that represent genetic resources <i>originating elsewhere</i> (9b)?					
a) no					
b) yes - limited extent					x
c) yes - significant extent					
132. If the answer to the previous question was yes, is this being done in active collaboration with organizations in the other countries (9a)?					

as traditional agro-forestry practices for the growing of coffee and sugar cane.

Omacha: work with local communities for the preservation of the traditional knowledge and use of resources.

a) no	x
b) yes	
133. Has your country adopted measures for the reintroduction of threatened species into their natural habitats under appropriate conditions (9c)?	
a) no measures	
b) some measures in place	x
c) potential measures under review	
d) comprehensive measures in place	
134. Has your country taken measures to regulate and manage the collection of biological resources from natural habitats for <u>ex situ</u> conservation purposes so as not to threaten ecosystems and <u>in situ</u> populations of species (9d)?	
a) no measures	
b) some measures in place	x
c) potential measures under review	
d) comprehensive measures in place	
<i>If a developed country Party -</i>	
135. Has your country cooperated in providing financial and other support for <u>ex situ</u> conservation and in the establishment and maintenance of <u>ex situ</u> conservation facilities in developing countries (9e)?	
<i>If a developing country Party or Party with economy in transition -</i>	
136. Has your country received financial and other support for ex situ conservation and in the establishment and maintenance of ex situ conservation facilities (9e)?	
a) no	
b) yes	x

Further comments on implementation of this Article

There are national efforts for the implementation of this article, represented by advances in legislation, research for the red books that have served to establish priorities for endangered species; and the formation of networks of botanical gardens and zoos.

Moreover, it should be noted that the country has placed more emphasis on the maintenance of phyto- and zoo-genetic collections with an economic-nutritional relevance than on animals or microorganisms. Towards this end it counts on institutions like the International Center for Tropical Agriculture, IICA and Corpoica, which have the appropriate infrastructure for conserving such collections.

Nevertheless, the availability of resources is very limited and it is focused on the most advanced projects of the country's zoos and botanical gardens. There is a great gap in the regions of the Chocó, Amazon and Orinoco.

For the above reasons there is a need for a national policy with an impact on a larger scale, by means of which investigation would be encouraged, taking into account that, more than exhibitions, the work of the centers of ex situ conservation is to complement measures of in situ conservation through education directed at the search for the sustainable use of resources, the conservation of ecosystems and the protection of endangered species.

Since resources are so scanty, the developed countries should be encouraged

to participate much more actively in local conservation efforts, through agreements for cooperation between their own botanical gardens and centers of conservation of flora *ex situ* and the centers of botanical gardens in the developing countries, based on an obvious respect for the norms of the Convention on Biological Diversity and the CITES and other local and regional regulations, like Decision 391 of the Andean Community.

127- Has your country adopted measures for the *ex situ* conservation of components of biological diversity native to your country (9a)?

We have a national tool for determining the Plan followed by Colombian zoos and aquariums in the collection of native and exotic species of wild fauna, and the National Collections Plan for Botanical Gardens. Through these tools, zoos and aquariums, as well as botanical gardens, may establish priorities for species and ecosystems, according to their geographical distribution and state of conservation. 33

By means of the two above-mentioned documents, the zoos and aquariums established the national plan for the conservation of endangered species. In the case of the botanical gardens, the implementation of the tool of the National Collection Plan is very recent, but it is expected that the National Conservation Plan for Flora will likewise be established for Botanical Gardens in the middle term.

With regard to the collections of botanical gardens, the country currently has 12 active gardens, located in the Caribbean, Andean, Northeastern and Southwestern regions; three inactive ones, in Villavicencio, Cali and the Darién; and three projects for gardens, in the Guajira, Vichada and Amazonas³⁴. In general, the gardens have made advances in the consolidation and implementation of the National Collection Plan for Botanical Gardens, mentioned above. Support for the projects in the Guajira, Vichada, Villavicencio and Amazonas is indispensable, as well for the establishment of a center for the Chocó.

The country currently has seven zoos, distributed in the following way: Caribbean region - Barranquilla; Andean region - Medellín, Pereira and three in Cundinamarca (Jaime Duque, Santa Cruz, Piscilago); Southwest region - Cali; there is a project for a zoo in the Amazonas. There are two aquariums: in the Islas del Rosario and in Santa Marta.

To resume, we must strengthen and apply such measures, as well as encourage more research into *ex situ* collections and support the initiatives and projects in the Guajira, Vichada, Amazonas and the Chocó. The latter two regions are the territories where resources are most exploited; despite their natural wealth, their resources do not remain there but are extracted and dispersed throughout the interior of the country. Likewise, the Guajira and the island territories are composed of very vulnerable and highly exploited

33. Work done on the initiative of the Ministry of Environment, Territorial Development and the Colombian Association of Zoological Parks, ACOPAZOA.

34. Governor's Office of the Department of Amazonas and Corpoamazonía: They have signed an agreement by which they are financing and developing the project for the zoo and botanical garden of the Amazonas. Thanks to this agreement, the project has a terrain of 179 hectares in the municipality of Leticia.

35. Breeding farms for the caimans of the river Magdalena, in Sucre and Córdoba.

36 AUGURA, through an agreement with CORPOICA, manages an important collection of varieties of Musacea. They are likewise establishing extension programs for groups like the Heliconia.

IICA: currently maintains an *in vitro* germplasm bank with more than 16,251 semen straws of the bovine races *Casanareño*, *Romosinuano*, *Blanco orejinegro*, *Sanmartinero*, *Costeño con cuernos*, *Casanareño*, *Hartón del Valle* and *Chino Santandereano*, and 2,600 semen straws of the ovine species. It has also undertaken development initiatives with

1,447 semen straws of the bovine races most widely accepted by producers, like the *Romosinuano* and *el Blanco orejinegro*.

37 "Caracol Pala" (Queen Conch) (Islas del Rosario); The Center for the care and evaluation of endangered species that result from the confiscation of wild fauna; implementation of transitory homes for the recuperation and reintroduction into their habitats of endangered species, for example, that of the University of the Amazonía.

38. Fish-farming projects for the development of native species, for example, the *bocachico*.

Conservation of a number of endangered species, among which stand out: *Zamia* and *Cavanillesia* and the flora of the zone of the dry canyon of the Río Chicamocha.

There are research centers for fish-farming (of both continental and marine varieties) in the Caribbean and the Pacific. These centers carry on research into native species suitable for fish-breeding. They work on reproduction, nutrition, feeding, as well as pathology, water quality and the massive production of seeds (larvae or spawn) meant for breeding farms and the restocking of public waters like rivers, reservoirs, lakes and marshes, among others.

Investigations are being carried out by different fish-farming research institutes into the preservation of semen for breeding purposes, the induced reproduction of fishes, cytogenetics, the reproduction of marine shrimps and genetic improvement.

The Cali zoo has a program for reproduction in captivity, with the support of international zoos, which includes a program for the reproduction and reintroduction into its habitat of the condor of the Andes. It has also begun to reproduce some species of the Cracidae family like *Crax alberti* and other birds like the *Semnoris ramphastinus*.

CORPOCALDAS and the San Diego Zoo: reintroduction of the Andean Condor, initially in the area of jurisdiction of "Los Nevados" National Natural Park.

A number of Autonomous Regional Corporations carry out research work into the *in vitro* propagation of native species, with the aim of increasing

ecosystems. The survival of their inhabitants is fragile and their resources are strongly endangered.

130- Has your country established and maintained facilities for the *ex situ* conservation of and research on plants, animals and micro-organisms that represent genetic resources native to your country (9b)?

There are advances, specifically with regard to species of a commercial or food use. There is little progress in this field on a regional level, despite scattered measures³⁵.

With regard to phylogenetic resources, the Ministry of Agriculture has given CORPOICA the responsibility for establishing *ex situ* collections. Of these, there are collections of plants, both in the field (distributed throughout national territory) and as seeds (in appropriate installations located in Tibaitatá, Bogotá and some working collections in the branch offices of CORPOICA). There are also some *ex situ* collections of microorganisms and the same for animals. There are also some collections of seeds of trees for forestry plantations, in the CONIF.

In order to establish mechanisms for the conservation and sustainable use of species of fauna which are exploited in a closed cycle (animal breeding), an alliance has been formed between the productive sector, government bodies (the Ministry of Environment, Housing and Territorial Development) and the Humboldt Institute, for the purpose of regulating such activities. It aims for an integrated management that links activities of *in situ* and *ex situ* conservation of species.

It counts on important collections of plants and animals³⁶

133- Has your country adopted measures for the reintroduction of threatened species into their natural habitats under appropriate conditions (9c)?

Colombia implements measures for an integral attention to the problems created by exploitations. Thus there have arisen Rescue Centers. The country currently has two centers in Bogotá, one in el Valle and another in Santa Marta. The functioning of the three centers is difficult, due to the lack of financial support.

With regard to the institutional policies of zoos, it can be said that in one way or another all have received support from the environmental authorities of their areas for receiving, attending to, rehabilitating and freeing seized fauna. The Rescue Centers in el Valle, Magdalena and Cundinamarca are the only functioning ones, their work being specifically aimed at looking after, evaluating and finding homes for seized animals.

This is one of the most weakly implemented provisions in the country: in reality, the few rescue centers that work in this field do not have the support sufficient to do a complete and rigorous job. As a result, mortality during captivity is high, their capacity is overstretched, care is inadequate and there is no way of providing food and medicine for all of the animals.

the production of native species that may be used in processes of ecosystem restoration.

The gravest situation occurs during the carrying out of the rehabilitation process, since, in practice, the act of freeing the animals is harsh: they are liberated without a previous adaptation and there is no follow-up. While Colombia has skilled professionals in this field, the realization of the processes lacks financial, political and administrative support.

Despite these problems, there are current research projects aimed at the recuperation and rehabilitation of endangered species. 37

134 - Has your country taken measures to regulate and manage the collection of biological resources from natural habitats for ex situ conservation purposes so as not to threaten ecosystems and in situ populations of species (9d)?

There is resolution 1317 of December 18, 2000 "by which some criteria are established for the granting of hunting licenses for the purposes of promoting and establishing animal breeding farms and adopting other regulations"

Likewise, adjustments are currently being made to Decree 1608 of 1974, which regulates everything that has to do with fauna.

There is little experience of marine ecosystems, but there are some regional projects in other ecosystems. 38

Article 10 Sustainable use of components of biological diversity

137. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?					
a) High		b) Medium	x	c) Low	
138. To what extent are the resources available adequate for meeting the obligations and recommendations made?					
a) Good		b) Adequate		c) Limiting	x
Further comments on relative priority and on availability of resources (see further comments below)					
139. Has your country integrated consideration of the conservation and sustainable use of biological resources into national decision making (10a)?					
a) no					
b) early stages of development					x
c) advanced stages of development					
d) programme or policy in place					
e) review of implementation available					
140. Has your country adopted measures relating to the use of biological resources that avoid or minimize adverse impacts on biological diversity (10b)?					
a) no measures					
b) some measures in place					x
c) potential measures under review					
d) comprehensive measures in place					

141. Has your country put in place measures that protect and encourage customary use of biological resources that is compatible with conservation or sustainable use requirements (10c)?	
a) no measures	
b) some measures in place	x
c) potential measures under review	
d) comprehensive measures in place	
142. Has your country put in place measures that help local populations develop and implement remedial action in degraded areas where biological diversity has been reduced (10d)?	
a) no measures	
b) some measures in place	x
c) potential measures under review	
d) comprehensive measures in place	
143. Does your country actively encourage cooperation between government authorities and the private sector in developing methods for sustainable use of biological diversity (10e)?	
a) no	
b) early stages of development	x
c) advanced stages of development	
d) programme or policy in place	
e) review of implementation available	

Decisions IV/15. Relationship of the Convention with the Commission on Sustainable Development and biodiversity-related conventions

144. Has your country submitted to the Secretariat information on tourism and its impacts on biological diversity, and efforts to effectively plan and manage tourism?	
a) no	x
b) yes - previous national report	
c) yes - case-studies	
d) yes - other means (please give details below)	
145. Has your country submitted to the Secretariat information on biodiversity-related activities of the CSD (such as SIDS, oceans, seas and freshwater resources, consumption and production patterns)?	
a) no	x
b) yes - previous national report	
c) yes - correspondence	
d) yes - other means (please give details below)	

Decision V/24. Sustainable use as a cross-cutting issue

146. Has your country identified indicators and incentive measures for sectors relevant to the conservation and sustainable use of biodiversity?	
a) no	
b) assessment of potential indicators underway	x

c) indicators identified (if so, please describe below)	
147. Has your country assisted other Parties to increase their capacity to implement sustainable-use practices, programmes and policies at regional, national and local levels, especially in pursuit of poverty alleviation?	
a) no	
b) not relevant	
c) to a limited extent	x
d) to a significant extent (please provide details)	
148. Has your country developed mechanisms to involve the private sector and indigenous and local communities in initiatives on sustainable use, and in mechanisms to ensure that indigenous and local communities benefit from such sustainable use?	
a) no	
b) mechanisms under development	x
c) mechanisms in place (please describe)	
149. Has your country identified areas for conservation that would benefit through the sustainable use of biological diversity and communicated this information to the Executive Secretary?	
a) no	
b) yes	x

Decision V/25. Biological diversity and tourism

150. Has your country based its policies, programmes and activities in the field of sustainable tourism on an assessment of the inter-linkages between tourism and biological diversity?	
a) no	
b) to a limited extent	x
c) to a significant extent	
151. Has your country submitted case-studies on tourism as an example of the sustainable use of biological diversity to the Executive Secretary?	
a) no	x
b) yes	
152. Has your country undertaken activities relevant to biodiversity and tourism in support of the International Year of Ecotourism?	
a) no	x
b) yes	
153. Has your country undertaken activities relevant to biodiversity and tourism in support of the International Year of Mountains?	
a) no	
b) yes	x
154. Has your country undertaken activities relevant to biodiversity and tourism in support of the International Coral Reef Initiative?	
a) no	x
b) yes	
155. Has your country established enabling policies and legal frameworks to complement voluntary efforts for the effective implementation of sustainable tourism?	

a) no	
b) to a limited extent	x
c) to a significant extent (please describe)	

Further comments on implementation of this Article

The importance which the country gives to the implementation of this article is middling, considering that, despite an ever more insistent focus in policies and legislation on the importance of biodiversity, there is no clarity about the form and mechanisms of firmly incorporating it into processes of national development. This priority is even lower when we observe the assigning of resources, which are very insufficient, although in relative terms total state investment in the environment has increased.

The country has still not integrated the subject of conservation and sustainable use, and the fragmented view of these dimensions has created policy conflicts which have inhibited the exploration of biodiversity's potential as a source of welfare and national wealth. Technological innovation is poorly treated in financial and juridical terms, to say nothing of human training in this respect.

There is a contradiction between current legislation and this article: the law prohibits the use of certain resources, whether sustainable or not, as in the case of some species that are utilized by communities.

The country is not taking in-depth measures to support populations or regions where biodiversity is threatened, nor is it making significant efforts to incorporate use as a mechanism of conservation, except for a couple of policy lines like those for biotrade and ecotourism. In terms of biotrade, the official program of green markets, which is focused more on the subjects of organic and biological production, has displaced (once more) the possibility of a strong business development based on the incorporation of new resources into markets. There are interesting efforts, but they are scattered and their impact is very reduced.

Cooperation with the private sector is still undermined by mistrust and intersectorial competition. Even though the discussion and development of the subject of incentives has considerably advanced, its practical application is still minimum.

In general terms, the subject of sustainable use is still very incipient: it is kept within the scheme of crafts practices and has very limited prospects of making an impact on a national level.

142 - Has your country put in place measures that help local populations develop and implement remedial action in degraded areas where biological diversity has been reduced (10d)?

There are some established measures. On a state level the "Green Plan" project stands out as a joint effort in this sense. There are also actions on a regional and local level.³⁹

143 - Does your country actively encourage cooperation between government authorities and the private sector in developing methods for sustainable use

of biological diversity (10e)?

It is the early stages of development, with noteworthy projects on a national level and regional alliances.⁴⁰

144-Has your country submitted to the Secretariat information on tourism and its impacts on biological diversity, and efforts to effectively plan and manage tourism?

Ecotourism is seen as an important alternative for the sustainable use of

³⁹ A number of projects are being carried out, like the conservation of hillsides in the Valley of Sibundoy (Putumayo), the characterization of fauna in the colonization front of el Picudo (Putumayo), as well as the development of material for the dissemination of fish-breeding techniques

⁴⁰ Development of projects in the forestry sector through alliances between CONIF and the Associations of Timber Producers of Caquetá, Amazonas and Putumayo.

Some autonomous regional corporations, in alliance with tourist-promotion entities, have been developing activities to be included within the management plan for the pilot areas of conservation defined by the SIRAP.

⁴¹ The Yubarta Foundation, together with the Autonomous Regional Corporation for the Valle del Cauca (CVC) and the Maritime Directorate of the National Navy of Colombia (Dimar) initiated a study aimed at formulating regulations for the recreational viewing of whales in Colombia, accompanied by a process for training boat pilots and other persons in the tourism sector.

The Omacha Foundation is promoting ecological tourism with local guides.

The WWF-Colombia participated in the formulation of the National Policy for Ecotourism, which established the need to understand biological diversity and cultural diversity in an integral rather than an isolated way.

⁴² CARSUCRE began a process to encourage the sowing of indigenous forestry material, like the iraca palm, for consumption and sustainable production.

SINCHI: Several projects on sustainable development with indigenous communities of the Amazon.

AUGURA has agreements and cooperates with other institutions, like CORPOURABÁ, CORPOICA, COLCIENCIAS, in the search for the sustainable development of the Urabá region.

CORPOCALDAS owns farms in different natural zones that would serve as potential scenarios for work in this field.

biodiversity and as an opportunity for self-administration and management by both communities and institutions. For an adequate development of this activity, it is necessary to preserve the ecosystems with the great landscape values, like, for example, the paramos, from the impact caused by activities like mining.

It is important to point out that the country has a National Ecotourism Policy and a Sectorial Plan for Tourism 2003-2006: "Tourism for a New Country".

In a similar way, it is worth noting some particular initiatives aimed at compliance with this stipulation. .41

147 - Has your country assisted other Parties to increase their capacity to implement sustainable-use practices, programmes and policies at regional, national and local levels, especially in pursuit of poverty alleviation?

Support was given to Ecuador, as a contracting party country, through seminars on fish-farming in the Ecuadorian Province of Nueva Loja. There are also training programs and joint workshops, and projects of common interest are being developed.

148 - Has your country developed mechanisms to involve the private sector and indigenous and local communities in initiatives on sustainable use, and in mechanisms to ensure that indigenous and local communities benefit from such sustainable use?

Mechanisms are being prepared, but there are initiatives in all regions of the country. .42

152 - Has your country undertaken activities relevant to biodiversity and tourism in support of the International Year of Ecotourism?

Yes, there are initiatives which encourage ecotourism on a national level. Fedesarrollo and the Ministry of Commerce, Industry and Tourism published the Ecotourism Plan.

153 - Has your country undertaken activities relevant to biodiversity and tourism in support of the International Year of Mountains?

In 2002 the Ministry of Environment, Housing and Territorial Development carried out activities relating to biodiversity in connection with the International Mountain Year. It has likewise made improvements in the installations and tourism infrastructure of the national parks located in mountainous zones.

154- Has your country undertaken activities relevant to biodiversity and tourism in support of the International Coral Reef Initiative?

There is a monitoring of the Colombian coral reefs, but efforts related to ecotourism are only beginning.

Article 11 Incentive measures

156. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?					
a) High		b) Medium	x	c) Low	
157. To what extent are the resources available adequate for meeting the obligations and recommendations made?					
a) Good		b) Adequate		c) Limiting	x
Further comments on relative priority and on availability of resources (see further comments below)					
158. Are programmes in place to identify and ensure the adoption of economically and socially sound measures that act as incentives for the conservation and sustainable use of components of biological diversity?					
a) no					
b) early stages of development					x
c) advanced stages of development					
d) programmes in place					
e) review of implementation available					
159. Do these incentives, and the programmes to identify them and ensure their adoption, cover the full range of sectoral activities?					
a) no					
b) some sectors					x
c) all major sectors					
d) all sectors					

Decision III/18. Incentive measures

160. Has your country reviewed legislation and economic policies to identify and promote incentives for the conservation and sustainable use of components of biological diversity?	
a) no	
b) reviews in progress	x
c) some reviews complete	
d) as far as practically possible	
161. Has your country ensured the development of mechanisms or approaches to ensure adequate incorporation of both market and non-market values of biological diversity into plans, policies and programmes and other relevant areas, <i>inter alia</i> , national accounting systems and investment strategies?	
a) no	
b) early stages of identifying mechanisms	x
c) advanced stages of identifying mechanisms	
d) mechanisms in place	
e) review of impact of mechanisms available	
162. Has your country developed training and capacity building programmes to implement incentive measures and promote private-sector initiatives?	

a) no	
b) planned	x
c) some	
d) many	
163. Has your country incorporated biological diversity considerations into impact assessments as a step in the design and implementation of incentive measures?	
a) no	
b) yes	x
164. Has your country shared experience on incentive measures with other Contracting Parties, including making relevant case-studies available to the Secretariat?	
a) no	
b) yes - previous national report	
c) yes - case-studies	x
d) yes - other means (please give details below)	

Decision IV/10. Measures for implementing the Convention [part]

165. Is your country actively designing and implementing incentive measures?	
a) no	
b) early stages of development	
c) advanced stages of development	
d) measures in place	
e) review of implementation available	x
166. Has your country identified threats to biological diversity and underlying causes of biodiversity loss, including the relevant actors, as a stage in designing incentive measures?	
a) no	
b) partially reviewed	
c) thoroughly reviewed	
d) measures designed based on the reviews	
e) review of implementation available	x
167. Do the existing incentive measures take account of economic, social, cultural and ethical valuation of biological diversity?	
a) no	
b) yes - limited extent	x
c) yes - significant extent	
168. Has your country developed legal and policy frameworks for the design and implementation of incentive measures?	
a) no	
b) early stages of development	
c) advanced stages of development	
d) frameworks in place	x

e) review of implementation available	
169. Does your country carry out consultative processes to define clear target-oriented incentive measures to address the underlying causes of biodiversity loss?	
a) no	
b) processes being identified	
c) processes identified but not implemented	
d) processes in place	x
170. Has your country identified and considered neutralizing perverse incentives?	
a) no	
b) identification programme under way	
c) identified but not all neutralized	x
d) identified and neutralized	

Decision V/15. Incentive measures

171. Has your country reviewed the incentive measures promoted through the Kyoto Protocol to the UN Framework Convention on Climate Change?	
a) no	
b) yes	x
172. Has your country explored possible ways and means by which these incentive measures can support the objectives of the Convention on Biological Diversity in your country?	
a) no	
b) under consideration	
c) early stages of development	
d) advanced stages of development	x
e) further information available	

Further comments on implementation of this Article

156 - What is the relative priority afforded to implementation of this Article and the associated decisions by your country?

The country is in the early stages of applying incentives in different fields. However, those which are related to sustainable development are still scanty and do not have a significant effect on the economy. In addition, there are no clear guidelines or directives on a central level for this subject (planning and environmental agencies) and the efforts that are being developed are based on the territorial entities or are limited to certain sectors like agriculture and stock-raising, forestry (Forestry Incentive Certificates) and hydric resources, and also in the private sector, where there are incentives for conservation, and the CAR's, with their secondary-growth plan. However, a real and efficient articulation of efforts for applying incentives is required. State support and the involvement of the territorial entities are required, as well as the creation of an operative capacity on local and regional levels to follow-up incentives.

While reforestation programs have been well promoted since they are good source of financing incentives, their possible impact on the conservation and sustainable use of biodiversity has not been estimated. The agriculture

and stock-raising sector has some initiatives, in collaboration with the research institutes, for the incorporation of criteria and the use of policy instruments in which incentives for the conservation and sustainable use of biodiversity are under consideration.

Finally, we should not forget that important efforts towards the adoption of incentives have been made by NGO's and state bodies-43

157 - To what extent are the resources available adequate for meeting the obligations and recommendations made?

Existen algunos incentivos económicos pero se carece de un mecanismo claro y permanente de financiación. Por otra parte, algunos incentivos no se desembolsan en dinero y pierden por esto su efectividad. Por ejemplo, el CIF existe, pero sin recursos.

There are some economic incentives but they lack a clear and permanent mechanism of financing. Furthermore, some incentives are not paid in money and thus lose their effectiveness. For example, Forestry Incentive Certificates exist, but they lack resources.

159 - Do these incentives, and the programmes to identify them and ensure their adoption, cover the full range of sectoral activities?

Only in some sectors. The emphasis of government policy on incentives is aimed at the conservation of hydric resources, green markets and the evaluation of environmental goods and services. In addition, some policy initiatives by some economic sectors have been asking for the incorporation of criteria and the utilization of policy instruments for the conservation and sustainable use of biodiversity. This is the case of the agriculture and stock-raising sectors. Forestry incentives have been implemented with some constancy, but the ones for the conservation and protection of forest reserves are few compared to the resources which the state assigns to the Forestry Incentive Certificates.

In addition, incentives have been applied to natural succession or secondary-growth forests in the paramo zone and there are tax incentives for conservation through the creation of reserves. It is important to point out that incentives to conserve many species are still lacking.

161 - Has your country ensured the development of mechanisms or approaches to ensure adequate incorporation of both market and non-market values of biological diversity into plans, policies and programmes and other relevant areas, inter alia, national accounting systems and investment strategies?

This activity is only just beginning.

162. Has your country developed training and capacity building programmes to implement incentive measures and promote private-sector initiatives?

In Colombia there exist a series of programs that emanate from the environmental sector and may be utilized for the development of mechanisms

43 Initiative by WWF-Colombia, with the Parks Unit, the Humboldt Institute, the Network of Reserves and the National Planning Department, in the Ad Hoc Group on incentives, with the aim of advancing in the study of incentives for the conservation and sustainable use of biodiversity. At the current time, it counts on a methodology for the design of incentives and has done some case studies on the subject.

and instruments that allow for incentives for the conservation and sustainable use of biological diversity: The Green Plan Program, the Program for Ordering Hydrographic Basins, the Biotrade Program: these constitute some policy lines. However, the dissemination of information about incentives is lacking in the country.

163 - Has your country incorporated biological diversity considerations into impact assessments as a step in the design and implementation of incentive measures?

In cooperation with other institutions, our country has done studies to analyze the incentives in force in Colombian legislation, which, by virtue of their design and definition, have an impact on biological diversity. This is found in the publication "Incentives for the conservation and sustainable use of biodiversity". At the present time more in-depth studies are being made, which seek to analyze the subject of incentives for private lands and wetlands and the relation between productive systems and biodiversity.

44

The Natura Foundation has, as a priority, the development of instruments and incentives that motivate and compensate for activities of conservation in the places where the institution works. In this sense there are projects that seek to maintain this idea in implementation and although resources are limited, they are focussed, as far as possible, on giving continuity to this subject.

Initiative by WWF-Colombia, with the Parks Unit, the Humboldt Institute, the Network of Reserves and the National Planning Department, in the Ad Hoc Group on incentives, with the aim of advancing in the study of incentives for the conservation and sustainable use of biodiversity. At the current time, it counts on a methodology for the design of incentives and has done some case studies on the subject.

Externado University: interdisciplinary studies require a greater priority for the evaluation of this article.

CORPOCALDAS regards this aspect as crucial in restoration, recuperation and protection projects, although it understands that incentives do not necessarily have to be economic. In this sense, a good functional relation among development, territorial ordering and river basin ordering plans is absolutely necessary.

On a national level the Ad Hoc Group on Incentives has been created, made up of the Parks Unit, the Humboldt Institute, the Network of Reserves and the National Planning Department, with the aim of advancing in the study of incentives for the conservation and sustainable use of biodiversity.

The Humboldt Institute is developing a series of activities that seek the design and implementation of incentives for the conservation and sustainable use of biodiversity in the context of protected areas, wetlands and paramos, hydrographic basins and productive systems. It is likewise analyzing some proposals for the utilization of economic incentives for the sustainable use of wild fauna.

Agreement with the International Tropical Timber Organization on economic alternatives for the development of native forests in the eastern part of the department of Antioquia.

165 - Is your country actively designing and implementing incentive measures?

There are a multiplicity of experiences in the country in the design and implementation of new or existing incentives, done by a number of regional and territorial authorities, research institutes and NGO's. However, the economic, legal and financial viability of many of the efforts directed to a local and regional level depend on the political orientation of the national development plan of the present government and other proposals for institutional and legal changes in the environmental sector (tax reform, proposal for modifying law 99 of 1993 and the analysis of the constitutionality of some economic instruments).

Between 1992 and 2002, 20 tax incentives were created (5 for the environmental field, 12 for housing and 3 for drinking water and basic hygiene). Between August 2002 and June 2003, 11 incentives were created (7 in the environmental field, 4 for housing and 1 for drinking water and basic hygiene). On a local level there are several incentives, like those for secondary-growth forests and the networks of reserves of the civil society.

There have been a number of experiences in this field. 44

This may give the impression that there is an excessive concentration of 2 elements of the design of incentives aimed at promoting the conservation of biodiversity. In the first place, one notes a special emphasis in using external financial resources that are transferred to the users of the ecosystems in order to make them change their economic decisions. In the second place, it would seem that an emphasis is being placed on incentives centered on individuals. In this respect, we must carefully evaluate the risks of introducing material incentives that undermine the motivations intrinsic to conservation. Furthermore, individual motivations may equally undermine the motivations of groups (for example, rural, peasant-farmer, Afro-Colombian and indigenous communities) that may arise from informal institutional arrangements where conservation has a social, cultural and even economic value.

171. Has your country reviewed the incentive measures promoted through the Kyoto Protocol to the UN Framework Convention on Climate Change?

There are mechanisms of clean development, for example, the exploitation of wind energy. Negotiations are currently under way for a wind park in the Guajira, with Dutch financing. Another is the economic evaluation of wetlands (Ciénaga Grande de Lorica, and la Cocha).

Article 12 Research and training

173. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?					
a) High		b) Medium	x	c) Low	
174. To what extent are the resources available adequate for meeting the obligations and recommendations made?					
a) Good		b) Adequate		c) Limiting	x
Further comments on relative priority and on availability of resources (see further comments below)					
175. Has your country established programmes for scientific and technical education and training in measures for the identification, conservation and sustainable use of biological diversity and its components (12a)?					
a) no					
b) early stages of development					x
c) advanced stages of development					
d) programmes in place					
176. Has your country provided support to other Parties for education and training in measures for the identification, conservation and sustainable use of biological diversity and its components (12a)?					
a) no					
b) yes					x
177. Does your country promote and encourage research which contributes to the conservation and sustainable use of biological diversity (12b)?					
a) no					
b) yes - limited extent					x
c) yes - significant extent					
178. Does your country promote and cooperate in the use of scientific advances in biological diversity research in developing methods for conservation and sustainable use of biological resources (12c)?					
a) no					
b) yes - limited extent					x
c) yes - significant extent					
If a developed country Party -					
179. Does your country's implementation of the above activities take into account the special needs of developing countries?					
a) no					
b) yes, where relevant					

Further comments on implementation of this Article

There are important achievements in the field of environmental education policy and experiences. The country has made advances in the subject of environmental research and education, but the information is dispersed and does not cover the needs of the territorial entities. Although the country makes efforts to strengthen the meeting of the demand, there are deficiencies in the quality of the information that is made available. In addition, on

the higher levels, policy decisions do not appreciate the importance of research in the area of biodiversity, and, although there are independent efforts, we need overall guidance on a national level and a strategic plan.

With regard to the available resources, it is necessary to point out that technical and budget support is required for the subject of education and creating awareness and for strategies of communication, especially for depressed zones and buffer areas of protected zones.

Incentives should be found for the publication and wider dissemination of investigations, to avoid overlapping efforts and lack of coordination. With regard to the problem of training, we must also remember that it has been partially implemented in some areas, but we still lack lines of investigation and structured programs, since training does not always respond to the needs of scientific and technical data. In addition, incentives should be found for improving the quality of training and of systematizing and disseminating it, as well as extending it to all sectors.

In the Amazon region, some institutions are working to encourage indigenous communities to make their own investigations. Given that there is an enormous local knowledge about forests and natural resources in general, supporting investigation by these agents is fundamental, as is an interdisciplinary investigation (for example, anthropological-biological) that allows traditional knowledge to play a role in the formulation of protection and management policies. In this sense, there is a shortage of investigation of local knowledge and training in its recuperation and dissemination. 45.

As with the other limitations on investigation and training, there is a need for more coordination among investigators, students, institutes and CAR's. There is a lack of basic knowledge about the subject of inventories and there is no financing of studies that involve it. In addition, there are gaps between the investigation phase and the continuity or processes that lead to the conservation and sustainable use of biodiversity. There is a further lack of incentives for the educational sector, since programs are dismantled and resources are cut back. We should create indicators that allow us to measure the impact of the resources invested in investigation in relation to knowledge of the subject.

Some particular advances stand out. 46

174 - To what extent are the resources available adequate for meeting the

45 Cenibanano: traditional knowledge is an important aspect, but the resources for investigation are restricted and fundamentally depend on research projects financed by institutions like Colciencias. For training, there is support of the SENA (National Apprenticeship Service) for projects like the Banatura one.

It is necessary to establish a portfolio for the training of personnel in the management being given to native species in other countries and thus be able to adopt strategies for their optimum use.

46 The von Humboldt Institute is doing important work on a data base.

University of Tolima: Study programs that support activities of research and training.

obligations and recommendations made?

The economic resources are insufficient for the biodiversity existing in the country. In addition, many studies or investigations remain on paper and are not extended to the community. You find that people no longer want to be asked questions, since they face so many unresolved questions. The focus of research that mainly seeks to be published and not applied is based on the fact that the parameters of grading used by Colciencias do not give sufficient priority to applied research. The social impact of investigations should be an important parameter in the evaluation that Colciencias makes of research groups.

175 - Has your country established programmes for scientific and technical education and training in measures for the identification, conservation and sustainable use of biological diversity and its components (12a)?

There is a boom in environmental subjects in the country, which has led to a proliferation of specialized studies, master's degrees and other post-graduate courses in biology, natural sciences and ecology, among others. Nevertheless, the contents of the curricula for some essential subjects like the ecology of animal populations, landscape ecology, etc. are not always adequate.

También entidades no académicas - en el sentido estricto- ofrecen espacios de capacitación y educación⁴⁷.

177 - Does your country promote and encourage research which contributes to the conservation and sustainable use of biological diversity (12b)?

The economic resources are insufficient for the biodiversity existing in the country. In addition, many studies or investigations remain on paper and are not extended to the community. You find that people no longer want to be asked questions, since they face so many unresolved questions. The focus of research that mainly seeks to be published and not applied is based on the fact that the parameters of grading used by Colciencias do not give sufficient priority to applied research. The social impact of investigations should be an important parameter in the evaluation that Colciencias makes of research groups.

Colciencias has a leading role in the country with regard to this subject. In the period between 2000 and 2002 it financed 86 research projects in several

⁴⁷ Von Humboldt Institute: processes of research/training with partnering regional and local entities and also with the involvement of regional universities, NGO's and independent researchers.

Omacha: realizes scientific and technical training courses on a national and international level and trains co-researchers.

⁴⁸ Amount financed by Colciencias : \$ 6.752'751.400; Counterpart funds \$ 10.408'529.972; Total amount of the projects: 17.161'281.372

⁴⁹. See Colciencias website: www.colciencias.gov.co, entering the GrupLAC site.

of the programs of the National System of Science and Technology whose subject matter is related to biotechnology, genetic resources, terrestrial ecosystems and those of continental waters, marine and coastal, agricultural, forest and other biological diversity⁴⁸. Through Colciencias there is access to information about the research groups that work in these fields in the country, their makeup, scientific output, etc⁴⁹.

178. Does your country promote and cooperate in the use of scientific advances in biological diversity research in developing methods for conservation and sustainable use of biological resources (12c)?

With regard to this point, we could mention the incorporation of new fishing technologies that reduce impacts of marine biodiversity.

Article 13 Public education and awareness

180. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?					
a) High		b) Medium	x	c) Low	
181. To what extent are the resources available adequate for meeting the obligations and recommendations made?					
a) Good		b) Adequate		c) Limiting	x
Further comments on relative priority and on availability of resources (see further comments below)					
182. Does your country promote and encourage understanding of the importance of, and the measures required for, the conservation of biodiversity (13 ^a) through media?					
a) no					
b) yes - limited extent					x
c) yes - significant extent					
183. Does your country promote and encourage understanding of the importance of, and the measures required for, the conservation of biodiversity (13 ^a) through the inclusion of this topic in education programmes?					
a) no					
b) yes - limited extent					x
c) yes - significant extent					
184. Does your country cooperate with other States and international organizations in developing relevant educational and public awareness programmes (13b)?					
a) no					
b) yes - limited extent					x
c) yes - significant extent					

Decision IV/10. Measures for implementing the Convention [part]

185. Are public education and awareness needs covered in the national strategy and action plan?	
a) no	
b) yes - limited extent	

c) yes - significant extent	x
186. Has your country allocated appropriate resources for the strategic use of education and communication instruments at each phase of policy formulation, implementation and evaluation?	
a) limited resources	x
b) significant but not adequate resources	
c) adequate resources	
187. Does your country support initiatives by major groups that foster stakeholder participation and that integrate biological diversity conservation matters in their practice and education programmes?	
a) no	x
b) yes	
188. Has your country integrated biodiversity concerns into education strategies?	
a) no	
b) early stages of development	x
c) advanced stages of development	
d) yes	
189. Has your country made available any case-studies on public education and awareness and public participation, or otherwise sought to share experiences?	
a) no	
b) yes	x
190. Has your country illustrated and translated the provisions of the Convention into any local languages to promote public education and awareness raising of relevant sectors?	
a) not relevant	x
b) still to be done	
c) under development	
d) yes	
191. Is your country supporting local, national, sub-regional and regional education and awareness programmes?	
a) no	
b) yes - limited extent	x
c) yes - significant extent	
<i>If a developing country Party or Party with economy in transition -</i>	
192. When requesting assistance through the GEF, has your country proposed projects that promote measures for implementing Article 13 of the Convention?	
a) no	
b) yes	x

Decision V/17. Education and public awareness

193. Does your country support capacity-building for education and communication in biological diversity as part of the national biodiversity strategy and action plans?	
a) no	
b) limited support	x
c) yes (please give details)	

Further comments on implementation of this Article

There are initiatives and early stages of development on a formal, informal, technical and awareness-building level, with respect to the conservation and sustainable use of biodiversity. The development of strategies for raising public awareness within the framework of the implementation of the Convention has centered on the optimization of the Clearing-house Mechanism, which has successfully promoted the exchange of information among investigators and those interested in the subject. In addition, there are independent initiatives by several entities on a governmental and non-governmental level which deal with the subject of biodiversity. The activities of dissemination, education and creating awareness are centered on specific themes, but they are carried out in a mass way to take maximum advantage of the meager resources that are available. However, the relation between these initiatives and the implementation of article 13 has not been evaluated. The work of dissemination of the BDC done by the Ministry of Environment, Housing and Territorial Development within the framework of the elaboration of this project may be regarded as an advance.

There are experiences by environmental entities.⁵⁰

Despite the above-mentioned advances, there are difficulties in application. Even though most of the efforts towards the conservation of biodiversity involve a component of educating and making communities more aware, the existing programs are uncoordinated.

180. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?

It has a middling priority.

181. To what extent are the resources available adequate for meeting the obligations and recommendations made?

The budgets are meager, so that the factor of long-term continuity and

⁵⁰: In its program of capacity-building, the WWF addresses the subject of training, taking into account criteria of conservation and sustainability. Some of these areas:

Biological Diversity

Territorial ordering and planning

Ecotourism

Productive systems: the management of natural resources like crafts, piangua clams, game, forestry management, among others is also taken into account. This management is done from a point of view which allows for the economic stability of families, based on criteria of sustainability.

51 Project for the "Incorporation of the Environmental Dimension in Basic and Intermediate Education in the Rural, Small Urban and Urban Zones of the Country". Through this project, jointly developed with the Ministry of National Education, encouragement has been given to the formulation of school environmental projects that will be placed within the context of local, regional and national projects for the subject of environment and development.

The fundamental objective of this project is to support the formation and construction of participation processes for the strengthening and consolidation of Environmental Education, through School Environmental Projects (PRAES), the mechanism through which the dynamics in the field of environmental education are formulated in an institutional context, starting with the school and contributing to the construction of alternative solutions to local environmental problems, in which agents like the following participate:

Government entities, NGO's, trade bodies and the community in general. To date 289 PRAE's in the primary and secondary schools of 14 departments have been established and approved. Likewise, through these projects Inter-institutional Technical Committees have been consolidated, made up of the

Departmental Secretaries of Education, the Autonomous Regional Corporations, NGO's, Community Action Boards, Universities, the private sector, teachers, parents associations and students. The objective of the Committees is to include environmental education in the plans of territorial ordering and in all other plans that derive from local or departmental planning. In this context, CIDEAS have been established in 18 departments.

Environmental Education Policy: Within the framework of the joint agenda developed between the Ministry of Environment, Housing and Territorial Development and the Ministry of Education, the Policy of Environmental Education was formulated, which was approved by the National Environmental Council on July 16, 2002.

The Policy represents a conceptual and normative framework that seeks to guide actions in the educational-environmental field that have been undertaken in the country and incorporate the construction of a culture of environmental ethics as a mediator in the relations between society-human being-nature, from the perspective of contributing to sustainable development. In this Policy the strategies and challenges of environmental education are clearly identified for formal, non-formal and informal environmental education. Among these challenges there are: The implementation of the CIDEA on the departmental and municipal level; advancing development plans for environmental education and positioning them within the departmental development plan; overcoming weaknesses in the training of teachers; developing investigative proposals in environmental education; accompanying environmental education programs and projects aimed at strengthening decentralization and regional autonomy in this field. At the present time, the guidelines established by the Policy are being implemented in the different ambits of action of the National Environmental System.

52 von Humboldt Institute: support for the creation of amateur bird-watchers associations, for the observation of birds aimed at education and the conservation of such species (<http://www.humboldt.org.co/rnoa>).

permanence cannot be ensured, though it is fundamental to the educational processes. We face the usual dilemma of having to choose between research and investigation when resources are invested, even though both fields are complementary.

What is more, clear lines of financing for establishing campaigns of awareness of this subject are not seen. Equally, educational capacity is not stimulated and it is thwarted by lack of access to resources and information. Although some progress has been made in promoting a series of policies and steps like the PRAES, we observe a lot of stagnation and backwardness, due to the lack of investment in this field.

182. Does your country promote and encourage understanding of the importance of, and the measures required for, the conservation of biodiversity (13^a) through media?

There are programs of environmental education and training, for which strategies of mass communication and socialization are used, with the aim of encouraging the participation of the different agents committed to the preservation of biodiversity.

183. Does your country promote and encourage understanding of the importance of, and the measures required for, the conservation of biodiversity (13^a) through the inclusion of this topic in education programmes?

An important advance of the country is the fact that the recently-approved National Policy on Environmental Education exists, which sets forth the need for encouraging the inclusion of educational strategies and actions aimed at acquiring knowledge about, managing and conserving the systems of natural protected areas in the projects for environmental education and incorporating the problems of biodiversity. In formal education, through the School Environmental Projects - PRAES - that are being developed in different regions of the country (Ministry of National Education, 2002). Some particular achievements in environmental education stand out, within the framework of the functions of the Ministry of Environment, Housing and Territorial Development. 51

184 - Does your country cooperate with other States and international organizations in developing relevant educational and public awareness programmes (13b)?

There has been no cooperation with other countries on educational subjects. International cooperation has been successful in some areas: measures should be taken to make it more extensive.

186 - Has your country allocated appropriate resources for the strategic use of education and communication instruments at each phase of policy formulation, implementation and evaluation?

The assigning of resources by the entities to the work of public awareness is not specifically oriented to the development of the subject of biodiversity in the framework of the Convention, but is mixed with other subjects relevant to the environment, in which the conservation of sources of water for human and agricultural consumption, deforestation and the disposal of solid wastes have priority.

⁵³ Go to [http:// www.humboldt.org.co/chmcolombia](http://www.humboldt.org.co/chmcolombia)

187. Does your country support initiatives by major groups that foster stakeholder participation and that integrate biological diversity conservation matters in their practice and education programmes?

Efforts have been very limited and restricted: they have not been widely disseminated, so that participation is not possible. However, there are initiatives by the civil society and the research institutes 52.

188. Has your country integrated biodiversity concerns into education strategies?

There are the PRAES, but due to the lack of context and a failure to understand national, regional and local environmental problems, high schools (educational institutions) have limited themselves to complying with the requisite with a very shortsighted outlook that is restricted to strictly internal problems, like dealing with the solid wastes produced by the high school. In order to overcome this limitation, we suggest encouraging their capacity to see relations from a systemic point of view, understanding the relationship between cause and effect and creating educational processes that build knowledge. It is important to invest in this, since it offers the possibility of creating future generations who are versed in the environment and have a responsible attitude towards it.

190. Has your country illustrated and translated the provisions of the Convention into any local languages to promote public education and awareness raising of relevant sectors?

There have been no efforts to translate the provisions of the Convention into indigenous languages. There are some dispersed experiences with the subject of biodiversity on the part of a number of indigenous groups, as in the case of the protection of fauna in the Upper Guajira.

The text of the Convention has been published twice, through the Ministry of Environment, Housing and Territorial Development and the Humboldt Institute and the Clearing-house Mechanism of the Convention has made efforts to distribute it in local communities. In this sense, the celebration of Biodiversity Day has played a leading role in bringing the subject to the attention of various sectors of different localities. 53

Despite the above, no translations of the Convention on Biological Diversity have been made into the different dialects and languages used in the national territory, but its translation into local languages and contexts is strongly needed.

Article 14 Impact assessment and minimizing adverse impacts

194. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?					
a) High		b) Medium	x	c) Low	
195. To what extent are the resources available adequate for meeting the obligations and recommendations made?					
a) Good		b) Adequate		c) Limiting	x
d) Severely limiting					
Further comments on relative priority and on availability of resources					
196. Is legislation in place requiring an environmental impact assessment of proposed projects likely to have adverse effects on biological diversity (14 (1a))?					
a) no					
b) early stages of development					
c) advanced stages of development					x
d) legislation in place					
e) review of implementation available					
197. Do such environmental impact assessment procedures allow for public participation (14(1a))?					
a) no					
b) yes - limited extent					x
c) yes - significant extent					
198. Does your country have mechanisms in place to ensure that the environmental consequences of national programmes and policies that are likely to have significant adverse impacts on biological diversity are duly taken into account (14(1b))?					
a) no					
b) early stages of development					x
c) advanced stages of development					
d) fully compliant with current scientific knowledge					

199. Is your country involved in bilateral, regional and/or multilateral discussion on activities likely to significantly affect biological diversity outside your country's jurisdiction (14(1c))?	
a) no	
b) yes - limited extent	
c) yes - significant extent	x
200. Is your country implementing bilateral, regional and/or multilateral agreements on activities likely to significantly affect biological diversity outside your country's jurisdiction (14(1c))?	
a) no	
b) no, assessment of options in progress	x
c) some completed, others in progress	
b) yes	
201. Has your country mechanisms in place to notify other States of cases of imminent or grave danger or damage to biological diversity originating in your country and potentially affecting those States (14(1d))?	
a) no	
b) early stages of development	
c) advanced stages of development	
d) mechanisms in place	x
e) no need identified	
202. Has your country mechanisms in place to prevent or minimize danger or damage originating in your State to biological diversity in other States or in areas beyond the limits of national jurisdiction (14(1d))?	
a) no	
b) early stages of development	
c) advanced stages of development	
d) fully compliant with current scientific knowledge	x
e) no need identified	
203. Has your country national mechanisms in place for emergency response to activities or events which present a grave and imminent danger to biological diversity (14(1e))?	
a) no	
b) early stages of development	
c) advanced stages of development	x
d) mechanisms in place	
204. Has your country encouraged international cooperation to establish joint contingency plans for emergency responses to activities or events which present a grave and imminent danger to biological diversity (14(1e))?	
a) no	
b) yes	x
c) no need identified	

Decision IV/10. Measures for implementing the Convention [part]

205. Has your country exchanged with other Contracting Parties information and experience relating to environmental impact assessment and resulting mitigating measures and incentive schemes?	
a) no	
b) information provided to the Secretariat	
c) information provided to other Parties	
d) information provided on the national CHM	x
206. Has your country exchanged with other Contracting Parties information on measures and agreements on liability and redress applicable to damage to biological diversity?	
a) no	x
b) information provided to the Secretariat	
c) information provided to other Parties	
d) information provided on the national CHM	

Decision V/18. Impact assessment, liability and redress

207. Has your country integrated environmental impact assessment into programmes on thematic areas and on alien species and tourism?	
a) no	
b) partly integrated	x
c) fully integrated	
208. When carrying out environmental impact assessments does your country address loss of biological diversity and the interrelated socio-economic, cultural and human-health aspects relevant to biological diversity?	
a) no	
b) partly	x
c) fully	
209. When developing new legislative and regulatory frameworks, does your country have in place mechanisms to ensure the consideration of biological diversity concerns from the early stages of the drafting process?	
a) no	
b) in some circumstances	x
c) in all circumstances	
210. Does your country ensure the involvement of all interested and affected stakeholders in a participatory approach to all stages of the assessment process?	
a) no	
b) yes - in certain circumstances	x
c) yes - in all cases	

211. Has your country organised expert meetings, workshops and seminars, and/or training, educational and public awareness programmes and exchange programmes in order to promote the development of local expertise in methodologies, techniques and procedures for impact assessment?	
a) no	
b) some programmes in place	x
c) many programmes in place	
d) integrated approach to building expertise	
212. Has your country carried out pilot environmental impact assessment projects, in order to promote the development of local expertise in methodologies, techniques and procedures?	
a) no	
b) yes (please provide further details)	x
213. Does your country use strategic environmental assessments to assess not only the impact of individual projects, but also their cumulative and global effects, and ensure the results are applied in the decision making and planning processes?	
a) no	
b) to a limited extent	x
c) to a significant extent	
214. Does your country require the inclusion of development of alternatives, mitigation measures and consideration of the elaboration of compensation measures in environmental impact assessment?	
a) no	
b) to a limited extent	
c) to a significant extent	x
215. Is national information available on the practices, systems, mechanisms and experiences in the area of strategic environmental assessment and impact assessment?	
a) no	x
b) yes (please append or summarise)	

Further comments on implementation of this Article

Yes, it is implemented, although more consideration is given to development than conservation. There are some initiatives on a regional level. .54

54

There are studies of environmental impacts on marine ecosystems, for example, impacts on cetaceans.

Corpocaldas: Mitigation, compensation and minimization of impacts on strategic ecosystems caused by agricultural activities.

CIOH: Studies of ballast waters.

Colombian banana sector: promotes better agricultural practices on the farms of the banana sector. It has formulated environmental management plans which identify environmental impacts, including impacts on biodiversity and propose mitigation measures.

196 - Is legislation in place requiring an environmental impact assessment of proposed projects likely to have adverse effects on biological diversity (14(1a))?

The established legislation includes: Decree No. 1753 of 1994, Decree No. 1728 of 2002 and Decree No. 1180 of 2003 of the Ministry of Environment, Housing and Territorial Development.

It is an instrument of technical reference, to make evaluations of environmental impact and studies of environmental alternatives of some sectors, which is not necessarily linked to impacts on biodiversity. This implies certain limitations on its application in some sectors for the specific case of biodiversity loss or intervention. However, it provides a good starting point, and can be adjusted to a wider use associated with impacts on biodiversity and its components. It is focused on contamination instead of conservation factors.

The Humboldt Institute, through the Andes Project and specifically, within the framework of the Intersectorial Coordination component of that project, has begun to realize an initiative to identify the way in which sectorial policies have affected biodiversity, in order to establish, on that basis, agreements and commitments with the relevant decision-making levels in each sector that will allow biodiversity to be taken into account in the formulation of sectorial policies, plans and programs. The first effort of this kind has been done with the agricultural sector.

197- Do such environmental impact assessment procedures allow for public participation (14(1a))?

Title VII of Decree 1180 of 2003 establishes the obligation to engage in a Prior Consultation with traditional indigenous and Afro-Colombian communities.

Law 99 of 1993 established the right to hold public hearings and make prior consultations with indigenous and Afro-Colombian communities, when it is required. In addition, the terms of reference for the elaboration of environmental impact studies allow the communities affected by the projects to participate in the determination of the impacts and the definition of measures of environmental management.

198 - Is your country involved in bilateral, regional and/or multilateral discussion on activities likely to significantly affect biological diversity outside your country's jurisdiction (14(1c))?

Yes, in accordance with the organic planning law and Law 99 of 1993 the sectors have formulated plans of sectorial expansion (electricity, mining, ports, highways, railways), which include the environmental component and as a consequence, the biodiversity variable.

In addition, for the past few years, the Ministry has won agreement on inter-ministerial agendas, which include subjects like strategic evaluations, early warning systems for development projects with strong impacts, environmental guides to good practices, among others. Strategic evaluation is just beginning to be developed in the country.

Some private-sector businesses have made a number of recommendations, as follows:

To define a concerted strategy for the management of impacts on biodiversity with the sectors and the environmental authority, with the joint participation of the entities and agencies responsible for the study and conservation of biodiversity in Colombia.

This strategy should include the elaboration of standardized methods for the

characterization of biodiversity and the evaluation of impacts.

Different kinds of incentives should be included within the strategy, so that the different companies take an interest in acquiring knowledge about and protecting biological diversity.

199 - Is your country involved in bilateral, regional and/or multilateral discussion on activities likely to significantly affect biological diversity outside your country's jurisdiction (14(1c))?

The V Regional Workshop on biodiversity preparatory to the elaboration of the Regional Biodiversity Strategy for the Tropical Andean countries (Decision 523 of the Andean Community of Nations), held in Bogotá, Colombia, enabled the participants to share knowledge about the tools which each country utilizes to measure environmental impacts on biodiversity. On the basis of this information, a SWOT analysis of mega-projects and biodiversity in the region was made. That analysis allow three strategic objectives to be defined: i) strengthening of regional environmental institutions, ii) co-responsibility and participation of the agents in decision-making y iii) consolidation of a responsible environmental management, accompanied by an effective regional territorial ordering, an integrated handling of information and the reparation of environmental deficits.

Law 356 of 1997, which approves the protocol relative to the areas and wild flora and fauna specially protected under the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region - Decree number 2701 of 2000, without evident implementations.

There is a need for greater technical and scientific exchange.

203 - Has your country national mechanisms in place for emergency response to activities or events which present a grave and imminent danger to biological diversity (14(1e))?

There is an office for the prevention of disasters which takes emergency measures related to disasters, but the environmental component is not adequately dealt with.

In a similar fashion, the Humboldt Institute is advancing with the design of an Early Warning System that reports on the effects on biodiversity that may result from major projects or activities undertaken by three of the country's economic sectors: agriculture, mining and energy, and infrastructure and transport. This would have to consider effects on the biodiversity of strategic ecosystems, even when they reach beyond the frontiers of the country.

There is a National Contingency Plan for spills of hydrocarbons and harmful substances.

205 - Has your country exchanged with other Contracting Parties information and experience relating to environmental impact assessment and resulting mitigating measures and incentive schemes?

Information provided to other Parties. Exchange of information about the evaluation of infrastructure mega-projects, within the framework of the regional biodiversity strategy of the Tropical Andean countries..

The country has participated in the different meetings of the IAIA, with representation by the government and the productive sectors. However, these experiences have not only focused on the subject of biodiversity: the approach covers environmental matters as a whole.

207 - Has your country integrated environmental impact assessment into programmes on thematic areas and on alien species and tourism?

Yes, the legislation stipulates an environmental impact study for development projects that require an environmental license, for projects that affect national parks and for the introduction of exotic wild species.

208 - When carrying out environmental impact assessments does your country address loss of biological diversity and the interrelated socio-economic, cultural and human-health aspects relevant to biological diversity?

One of the goals of the Humboldt Institute within the framework of the Andes Project is to ensure that the Environmental Impact Studies for environmental licenses include criteria that allow for the integration of biodiversity. In a similar manner it seeks to ensure that the Strategic Environmental Evaluation applied to productive sectors takes socio-economic, cultural and health aspects into account.

210 - Does your country ensure the involvement of all interested and affected stakeholders in a participatory approach to all stages of the assessment process?

Community participation in the process of awarding environmental licenses only applies in cases where there are popular legal suits (*acciones populares*) against the project and when there is prior consultation with indigenous and Afro-Colombian communities. However, these communities do not participate in all stages of the evaluation process. Decree 1180 of 2003. Title VII.

211 - Has your country organised expert meetings, workshops and seminars, and/or training, educational and public awareness programmes and exchange programmes in order to promote the development of local expertise in methodologies, techniques and procedures for impact assessment?

V Regional Workshop on Biodiversity and training workshops on the level of the Ministry of Environment, Housing and Territorial Development.

Courses to exchange information and harmonize methodologies and techniques of evaluation are periodically held for the members of the National Environmental System, particularly those who work for the CAR's. These joint exercises are coordinated by national experts and in most cases, count upon the support of international experts from different agencies or countries.

212 - Has your country carried out pilot environmental impact assessment projects, in order to promote the development of local expertise in methodologies, techniques and procedures?

One of the aims of the Andes Project has to do with adjusting environmental licenses to serve as a regulatory environmental instrument for sectorial productive activities. It is intended that this instrument, which regulates the contents of the environmental impact studies for any type of project that requires it, should include considerations about the specific affects which such projects have on biodiversity.

The Ministry of Environment, Housing and Territorial Development does not have knowledge of this matter but we are aware of certain cases in which environmental impact studies on biodiversity have been done to measure the effect on biodiversity of exotic species in general and specifically, for the evaluation of wetlands.

213 - Does your country use strategic environmental assessments to assess not only the impact of individual projects, but also their cumulative and global effects, and ensure the results are applied in the decision making and planning processes?

The electricity sector has been a pioneer in the application of the Strategic Environmental Application. It used it to determine the effect of its activities on the environment. In addition, in the description of the programs of investment for the renovation of public administration, specifically in what has to do with decentralization and territorial development, the National Development Plan 2002-2004, "Towards a Communitarian State," establishes the implementation of a program related to territorial ordering and strategic environmental evaluation in the rural field. This Development Plan regards the rural and environmental components as a fundamental part of the Plans for Territorial Ordering, subjects that also require evaluation and support and demand continuity and updating.

In the year 2003 the country began to work with the methodology of the strategic environmental evaluation, with a pilot program in the electricity sector. Next year it will include the highway sector and 4 subsectors of agricultural and stock-raising production. Other processes of sectorial evaluation had been employed in the past, but they had followed other methodologies.

214 - Does your country require the inclusion of development of alternatives, mitigation measures and consideration of the elaboration of compensation measures in environmental impact assessment?

Mitigation measures, as well the need for an Environmental Diagnosis of Alternatives, form part of the contents of the Environmental Impact Study. However, measures of mitigation are not considered within its norms and do not necessarily include indemnities.

The methodology for evaluating impacts needs to be standardized. In many cases, compliance is more a matter of paperwork than a serious effort to evaluate, monitor and follow-up impacts.

Furthermore, there are not efficient procedures for the handling of the accumulated impacts on biodiversity caused by major development projects (dams, mining, highways, etc) and urban developments, nor is there an identification of those responsible for ensuring that such projects have minimum adverse impacts. In this sense, officials need to be trained to identify and deal with adverse impacts and assume a broad view of the problems that goes beyond specific regulations.

The National Environment System must have a permanent interaction on the subject of impacts on biodiversity. It is responsible for evaluating the environmental viability of development projects and granting environmental licenses and for these purposes counts upon teams of professionals in the different disciplines, both in the Ministry of Environment, Housing and Territorial Development, and in each of the CAR's.

Many impacts involve different development sectors, which makes it difficult to assign responsibility for impacts. The policy is not clear in this sense. There is a great concern over the subject of the fumigation of illicit crops.

While the impacts produced by oil spills are evaluated, there is no determination of those who are responsible for indemnities.

Article 15 Access to genetic resources

216. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?							
a) High		b) Medium		c) Low			x
217. To what extent are the resources available adequate for meeting the obligations and recommendations made?							
a) Good		b) Adequate		c) Limiting		d) Severely limiting	x
Further comments on relative priority and on availability of resources							
218. Has your country endeavoured to create conditions to facilitate access to genetic resources for environmentally sound uses by other Contracting Parties (15(2))?							
a) no							
b) yes - limited extent						x	
c) yes - significant extent							
219. Is there any mutual understanding or agreement in place between different interest groups and the State on access to genetic resources (15(4))?							
a) no						x	
b) yes - limited extent							
c) yes - significant extent							
220. Has your country an open participation planning process, or any other process in place, to ensure that access to resources is subject to prior informed consent (15(5))?							
a) no							
b) early stages of development						x	
c) advanced stages of development							
d) processes in place							
221. Has your country taken measures to ensure that any scientific research based on genetic resources provided by other Contracting Parties is developed and carried out with the full participation of such Contracting Parties (15(6))?							
a) no measures						x	
b) some measures in place							
c) potential measures under review							
d) comprehensive measures in place							
222. Has your country taken measures to ensure the fair and equitable sharing of the results of research and development and the benefits arising from the commercial and other use of genetic resources with any Contracting Party providing such resources (15(7))?							
a) no measures						x	
b) some measures in place							
c) potential measures under review							
d) comprehensive measures in place							
If so, are these measures							
a) Legislation						x	
b) Statutory policy or subsidiary legislation							

c) Policy and administrative measures	
---------------------------------------	--

Decision II/11 and Decision III/15. Access to genetic resources

223. Has your country provided the secretariat with information on relevant legislation, administrative and policy measures, participatory processes and research programmes?	
a) no	x
b) yes, within the previous national report	
c) yes, through case-studies	
d) yes, through other means (please give details below)	
224. Has your country implemented capacity-building programmes to promote successful development and implementation of legislative, administrative and policy measures and guidelines on access, including scientific, technical, business, legal and management skills and capacities?	
a) no	x
b) some programmes covering some needs	
c) many programmes covering some needs	
d) programmes cover all perceived needs	
e) no perceived need	
225. Has your country analysed experiences of legislative, administrative and policy measures and guidelines on access, including regional efforts and initiatives, for use in further development and implementation of measures and guidelines?	
a) no	x
b) analysis in progress	
c) analysis completed	
226. Is your country collaborating with all relevant stakeholders to explore, develop and implement guidelines and practices that ensure mutual benefits to providers and users of access measures?	
a) no	
b) yes - limited extent	x
c) yes - significant extent	
227. Has your country identified national authorities responsible for granting access to genetic resources?	
a) no	
b) yes	x
228. Is your country taking an active role in negotiations associated with the adaptation of the International Undertaking on Plant Genetic Resources for Food and Agriculture?	
a) no	
b) yes	x

Decision V/26. Access to genetic resources

229. Has your country designated a national focal point and one or more competent national authorities to be responsible for access and benefit-sharing arrangements or to provide information on such arrangements?	
a) no	x
b) yes	
c) yes, and Executive Secretary notified	
230. Do your country's national biodiversity strategy, and legislative, administrative or policy measures on access and benefit-sharing, contribute to conservation and sustainable use objectives?	
a) no	
b) to a limited extent	x
c) to a significant extent	
Parties that are recipients of genetic resources	
231. Has your country adopted administrative or policy measures that are supportive of efforts made by provider countries to ensure that access to their genetic resources is subject to Articles 15, 16 and 19 of the Convention?	
a) no	
b) other arrangements made	
c) yes	x
232. Does your country co-operate with other Parties in order to find practical and equitable solutions supportive of efforts made by provider countries to ensure that access to their genetic resources is subject to Articles 15, 16 and 19 of the Convention, recognizing the complexity of the issue, with particular consideration of the multiplicity of prior informed consent considerations?	
a) no	
b) yes (please provide details)	x
233. In developing its legislation on access, has your country taken into account and allowed for the development of a multilateral system to facilitate access and benefit-sharing in the context of the International Undertaking on Plant Genetic Resources?	
a) no	x
b) legislation under development	
c) yes	
234. Is your country co-ordinating its positions in both the Convention on Biological Diversity and the International Undertaking on Plant Genetic Resources?	
a) no	
b) taking steps to do so	
c) yes	x
235. Has your country provided information to the Executive Secretary on user institutions, the market for genetic resources, non-monetary benefits, new and emerging mechanisms for benefit sharing, incentive measures, clarification of definitions, <i>sui generis</i> systems and "intermediaries"?	
a) no	x
b) some information provided	
c) substantial information provided	

236. Has your country submitted information on specific issues related to the role of intellectual property rights in the implementation of access and benefit-sharing arrangements to the Executive Secretary?	
a) no	x
b) yes	
237. Has your country provided capacity-building and technology development and transfer for the maintenance and utilization of ex situ collections?	
a) no	
b) yes to a limited extent	x
c) yes to a significant extent	

Further comments on implementation of this Article

In Colombia there is no system for the follow-up or monitoring of access to genetic resources. After analyzing the information provided by some regional agencies, it may be inferred that there is little knowledge about the national norms that govern access to genetic resources - the application of decision 391 and related norms -, which causes the stagnation of the subject. Thus, we may see that we have a legal framework for this subject but it does not have a real social impact. In this sense and given the limited knowledge about genetic resources, it is suggested that a wider dissemination be made of the existing administrative, legislative and political measures and the corporations establish action plans and specific lines of research for this area. ⁵⁵ On this level, the participation of Colciencias stands out, as the leading institution in the encouragement of scientific and technological activities, insofar as it promotes and supports investigations aimed at the characterization and sustainable use of biodiversity and the conservation of genetic resources. It is responsible for seeing that these investigations comply with the norms in force.

Despite the above-mentioned problems, there have been some achievements in the field of access to genetic resources:

The agricultural sector shows important advances in research into the management and exploitation of genetic information. In line with the different research needs of and market pressures on foods and medicaments, investigations that search for new bioactive substances have been carried out. There has also been a wide recognition of the uses of genetic resources in the cosmetics industry.

Difficulties in implementation:

The absence of professionals and experts in the subject and the lack of adequate information systems about the geographical location of local communities and ethnic groups, endemic genetic resources, genetic resources

⁵⁵ On a regional level, within their development plans the CAR's regard the identification of genetic resources as a critical variable for development, however, the assigning of resources is not sufficient.

The Universidad Externado de Colombia (University) is working on the relation between intellectual property and traditional knowledge, with reflections on law 391 of the Andean Community of Nations.

BMZ and WWF: Provide resources.

in danger of extinction, inventories, etc. These factors are being analyzed by a research group from the Humboldt Institute⁵⁶, which is currently designing a technical proposal for a policy on access to genetic resources, as a response to the impracticality of the regime of access to genetic resources in Colombia.

218. Has your country endeavoured to create conditions to facilitate access to genetic resources for environmentally sound uses by other Contracting Parties (15(2))?

In order to create conditions to facilitate access, by other contracting parties, to genetic resources for environmentally sound use, Colombia signed the FAO Treaty on Genetic Resources for Food and Agriculture. The ratification of this Treaty is currently under consideration by the Colombian Congress.

219. Is there any mutual understanding or agreement in place between different interest groups and the State on access to genetic resources (15(4))?

With regard to this aspect, Decision 391 has not worked: there is a need for research and adequate norms. In addition, there is a lack of trained professionals.

221. Has your country taken measures to ensure that any scientific research based on genetic resources provided by other Contracting Parties is developed and carried out with the full participation of such Contracting Parties (15(6))?

Possible measures are being prepared.

229. Has your country designated a national focal point and one or more competent national authorities to be responsible for access and benefit-sharing arrangements or to provide information on such arrangements?

In accordance with the norms on access to genetic resources, the Ministry of Environment is responsible for:

"regulating, in conformance with the law, the obtention, use, management, investigation, import, export, as well as the distribution and commerce, of species and genetic stocks of wild fauna and flora; regulate the import, export and commerce of such genetic material, establish mechanisms and procedures for control and vigilance, and make the necessary arrangements to claim payment for or acknowledgement of the rights or royalties owed to the nation by reason of the use of genetic material".⁵⁷ In addition, national coordination by the Ministry of Environment, Housing and Territorial Development supports the research institutes in this sense.

⁵⁶. Corpocaldas has given collections to the Alexander von Humboldt Institute, as well as to the local museums of universities, like the Natural History Museum and Herbarium of the University of Caldas.

⁵⁷ Law 99 of 1993, number 21, article 5.

230. Do your country's national biodiversity strategy, and legislative, administrative or policy measures on access and benefit-sharing, contribute to conservation and sustainable use objectives?

The aspects dealt with in the existing legislative measures are described, as follows:

Norms on access to genetic resources:

a. With regard to genetic resources, sentence 2 of article 81 of the Political Constitution of 1991 declares that the State is the only entity authorized to regulate the utilization, import or export of the country's genetic resources.

b. In a similar way, article 2 of Law 99 of December, 1993 establishes the creation of the Ministry of Environment as the guiding body for the management of the environment and renewable natural resources and gives it, among other things, the responsibility for defining the regulations to which the conservation, protection, management, use and exploitation of the nation's renewable natural resources and environment will be subjected, with the aim of guaranteeing a sustainable development and for regulating:

"in conformance with the law, the obtention, use, management, investigation, import, export, as well as the distribution and commerce, of species and genetic stocks of wild fauna and flora; regulate the import, export and commerce of such genetic material, establish mechanisms and procedures for control and vigilance, and make the necessary arrangements to claim payment for or acknowledgement of the rights or royalties owed to the nation by reason of the use of genetic material".

c. In accordance with the above, Decision 391 of the Commission of the Cartagena Agreement relative to the Common Regime on Access to Genetic Resources entered into force on July 17, 1996, the date of its publication in the official gazette of the Agreement. Andean Decision 391 is the first regional juridical framework which regulates access to genetic resources and their derivative products: it is worth noting that it does this in such a way that, in addition to establishing the procedure which must be followed to achieve access to such resources, its principles respect those found in the Convention on Biological Diversity, and within that framework, it obviously recognizes and values the rights and decision-making faculties of communities with regard to their traditional knowledge, innovations and practices that are associated with genetic resources and their derivative products.

d. To expedite Andean Decision 391 of 1996, the Colombian government issued Decree 730 of March 14, 1997, which designated the Ministry of Environment as the Competent National Authority, in accordance with the terms of and for the effects established by Decision 391 of the Cartagena Agreement's Commission on the Common Regime on Access to Genetic Resources. In accordance with that decree, the Ministry of Environment is responsible for issuing the internal administrative regulations needed for the fulfillment of said decision; receives, processes and authorizes or rejects applications for access to genetic resources and negotiates and signs the respective contracts for access that result; supervises and controls compliance with the conditions of the contracts for access and establishes the consequent mechanisms of follow-up and evaluation that are needed, among other things.

e. The Ministry of Environment issued Resolution No. 0620 of July 7, 1997. The above-mentioned resolution delegated a series of functions related to

this matter to internal branches of the Ministry and established the internal procedure for processing the applications for access to genetic resources and their derivative products, in such a way that the jurisdiction of each internal branch of this Ministry over the procedures that must be followed in this matter when an application is made is clearly stipulated.

- b. With the aim of attaining more clarity about the juridical regime of the domain applicable to genetic resources, the Ministry of Environment asked for the legal opinion of a Colombian High Court, the Tribunal of Judgement and Civil Service of the Council of State ("la Sala de Consulta y Servicio Civil del Consejo de Estado"), which was resolved through a sentence given in August, 1997 (docket number 977, presiding magistrate: Cesar Hoyos Salazar), which concluded that.

"The juridical regime of property applicable to genetic resources, of real or potential utility, is that established for goods under the public domain, in a general form in the Political Constitution, and in a particular form, in Decision 391 of the Commission of the Cartagena Agreement, Decree-Law 2811 of 1974, Law 165 of 1994 and the legal provisions for the matter that will be issued in the future.

The juridical treatment of genetic resources is not the same which Colombian legislation gives to non-renewable natural resources, because these have a special legal regime, which does not mean that its norms are also applied to renewable natural resources. On the contrary, there is a National Code for Renewable Natural Resources and provisions which amplify and complement it.

The genetic resource may be given a juridical treatment of property that is independent of that laid down for the biological resource. Although the latter embraces the former, so long as they form a unit or are integrated, the ecological function imposed on private property and the national interest guarantee the public property of the nation and once they are separated each one is subject to its own juridical regime".

Finally, in the name of constructing a conceptual, normative and operative framework for this matter that will allow us to adequately apply Decision 391 of 1996 (of the Cartagena Agreement) and the Convention on Biological Diversity on this matter, the Ministry of Environment signed an agreement with the National University of Colombia, which is expected to provide us, in the near future, with sounder criteria that will allow us to continue to develop our functions in this matter, concretely, with regard to policy guidelines, and also to design a regulatory framework that regulates the integral development of the subject of access to genetic resources, their derivative products, the protection of traditional knowledge and the intellectual rights associated with biodiversity, which includes: aspects to be regulated, legal and technical bases for the recognition and evaluation of the intangible component associated with the genetic resource or its derivative products; legal foundations for the acknowledgement and confidential treatment of the data and information presented within the process of access and in the execution of contracts; the legal nature of the different types of access contracts, including their modification, suspension, rescission or cancellation; mechanisms for the follow-up and evaluation of contracts and possible mechanisms and protocols for the distribution of benefits obtained from the access.

This decision covers the five Andean countries: Bolivia, Colombia, Ecuador, Peru and Venezuela.

The CAR's and the institutes of scientific investigation affiliated and linked to the Ministry of Environment, Housing and Territorial Development do not have the power to issue or reject permits for access to genetic resources. However, the latter have carried out several investigations on the impacts which the norms on access to genetic resources have had on scientific research in the country. For example, the one done by the von Humboldt Institute.

232. Does your country co-operate with other Parties in order to find practical and equitable solutions supportive of efforts made by provider countries to ensure that access to their genetic resources is subject to Articles 15, 16 and 19 of the Convention, recognizing the complexity of the issue, with particular consideration of the multiplicity of prior informed consent considerations?

Yes, through consultations with different agents in the private sector, like the pharmaceutical industry, and with organized communities.

237. Has your country provided capacity-building and technology development and transfer for the maintenance and utilization of ex situ collections?

To a limited extent, although the benefits for the country of ex situ centers are still not clear.

Article 16 Access to and transfer of technology

238. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?					
a) High		b) Medium	x	c) Low	
239. To what extent are the resources available adequate for meeting the obligations and recommendations made?					
a) Good		b) Adequate		c) Limiting	x
Further comments on relative priority and on availability of resources (see further comments below)					
240. Has your country taken measures to provide or facilitate access for and transfer to other Contracting Parties of technologies that are relevant to the conservation and sustainable use of biological diversity or make use of genetic resources and do not cause significant damage to the environment (16(1))?					
a) no measures					
b) some measures in place				x	
c) potential measures under review					
d) comprehensive measures in place					
241. Is your country aware of any initiatives under which relevant technology is transferred to your country on concessional or preferential terms (16(2))?					
a) no					
b) yes (please give brief details below)				x	
242. Has your country taken measures so that Contracting Parties which provide genetic resources are provided access to and transfer of technology which make use of those resources, on mutually agreed terms (16(3))?					
a) not relevant					
b) relevant, but no measures					

c) some measures in place	x
d) potential measures under review	
e) comprehensive measures in place	
If so, are these measures	
a) Legislation	
b) Statutory policy or subsidiary legislation	
c) Policy and administrative arrangements	x
243. Has your country taken measures so that the private sector facilitates access to joint development and transfer of relevant technology for the benefit of government institutions and the private sector of developing countries (16(4))?	
a) no measures	
b) some measures in place	
c) potential measures under review	
d) comprehensive measures in place	x
If so, are these measures	
a) Legislation?	
b) Statutory policy and subsidiary legislation?	
c) Policy and administrative arrangements?	x
244. Does your country have a national system for intellectual property right protection (16(5))?	
a) no	
b) yes	x
245. If yes, does it cover biological resources (for example, plant species) in any way?	
a) no	
b) yes - limited extent	x
c) yes - significant extent	

Decision III/17. Intellectual property rights

246. Has your country conducted and provided to the secretariat case-studies of the impacts of intellectual property rights on the achievement of the Conventions objectives?	
a) no	x
b) some	
c) many	

Further comments on implementation of this Article

It has a middling priority and adequate resources for its development are not available. Another problem in its implementation is that it is difficult to regulate.

Public and private investment in scientific, technical and technological development has been inversely proportional to Colombian biodiversity. For that reason there is a need for advances within the framework of the Convention that would give a more concrete expression to the obligations

undertaken by the developed countries with regard to the transference of technology and technological cooperation, including biotechnology.

Despite the above, the country has shown an interest in projects of a biotechnological character, such as molecular biology or the genetic handling or manipulation of organisms

The Network for Sustainable Development has a technological network that is adequate and sufficient for the implementation of activities and the gathering and dissemination of information, but access to it is limited because of the Colombian population's lack of new technologies.

Finally, it is worth stressing that the flow of and access to information from other countries should be increased.

240- Has your country taken measures to provide or facilitate access for and transfer to other Contracting Parties of technologies that are relevant to the conservation and sustainable use of biological diversity or make use of genetic resources and do not cause significant damage to the environment (16(1))?

Some measures have been established, like Law 740 of 2002, which ratified the Cartagena Protocol on the safety of modern biotechnology; Resolution 3492 of December 22, 1998 and Agreement 13 of December 22, 1998 - both issued by the ICA- which regulates genetic resources for agriculture and food, such as the introduction of live modified organisms of agricultural use.

In addition to the above, advances have been made in the implementation of the CITES Convention and the commitments undertaken with the WTO for sanitary and phyto-sanitary measures that prevent the ingress to or exit from the country of biological material which presents risks to animal, plant and human health.

In the marine sector there is transference of technology for the breeding of bivalves in their natural environment in semi-intensive ways; pamphlets aimed at artisanal fishermen and transference of technology to reduce the impact of dragnet fishing.

Furthermore, in Colombia the CHM, whose focal point is the Humboldt Institute, is understood as a mechanism of technical cooperation and not only one for the exchange of information. For this reason a second phase of the development of this mechanism has been activated, aimed at providing or facilitating access to the analyses, techniques, methods, guides, strategies and other instruments which are being developed, for the purpose of helping the nation to implement the three objectives of the Convention.

Colombia has been contributing, in an indirect way, to the fulfillment of the three objectives of the Convention, through the provision of technical assistance to some neighboring countries in the design and operation of the Clearing-house Mechanism (Bolivia) and strategies of sustainable biotrade (Bolivia, Ecuador).

There are other important experiences on a regional level and in the research institutes. .58

58 Coramazonía has technologies available to interested parties, publications on a local and regional level and training courses.

Other measures that provide information relevant to the conservation and sustainable use of biodiversity are the publications and research reports

The seminars, workshops, scientific meetings and resulting publications have been effective instruments for the transfer of technology to the member countries of the Andean Community and, recently, to the Group of Like-Minded Megadiverse Countries.

For the past few months Colombia has been organizing its participation in the second phase of the Biodiversity Strategy of the Tropical Andean Countries (Decision 523 of 2002), aimed at the design and formulation of an "Action Plan" and a "portfolio of projects" within the Andean subregional ambit. These two instruments are currently being prepared.

241 - Is your country aware of any initiatives under which relevant technology is transferred to your country on concessional or preferential terms (16(2))?

Although they are not extensive there are some other experiences that may be considered advances in this sense. This is the case with the program of national agricultural supply - PROAGRO - and the strengthening of the Productive Forestry Chains by means of international technical cooperation that is realized with the participation of international experts on the subjects of forestry protection (phytosanitary states of pests and diseases in the specific flora of native forestry species) and forestry genetics.

242 - Has your country taken measures so that Contracting Parties which provide genetic resources are provided access to and transfer of technology which make use of those resources, on mutually agreed terms (16(3))?

Some measures have been established through Decision 391 of 1996, which regulated access to genetic resources in the member countries of the Andean Community.

However, as a recent investigation by the Humboldt Institute has shown, the national application and operation of this decision has not, in practice, allowed for the giving of a legal access to genetic resources in Colombia and, in the end, the country has not benefited from access to technologies, including biotechnologies, that promote the fulfillment of the Convention's three objectives.

For the above reasons, on a national level the perception is that the country is in the stage of preparing possible measures.

It would thus seem that some adjustments of this decision are needed, in order to facilitate its application and open the way to the application of the other two concomitant decisions: Decision 486 of 2000 on industrial property (technologies protected by intellectual property rights) and Decision 345 of 1993 on the rights over those responsible for plant obtentions (private technologies of phyto-improvement).

Other legislative measures that have been established are:

In addition to Andean Decisions 391 of 1996 and 486 of 2000, there is Law 99 of 1993, which creates the National Environmental System and makes the Alexander von Humboldt Institute responsible for the task of carrying out a national inventory of biodiversity and undertaking basic and applied research

that are permanently produced by the Humboldt Institute. These contributions may be obtained directly through the Information Service on the website of the CHM.

into the genetic resources of national flora and fauna and supporting regional and local entities through technical advice and the transference of technology.

Constitutional policies or subsidiary legislation.

Article 81 of the Colombian Constitution gives the state the task of regulating the ingress and exit of genetic resources and their utilization, in accordance with the national interest.

Political and administrative measures:

In the National Biodiversity Policy, the instrument for the development and transference of technology is regarded as a central aspect of the research related to the conservation and sustainable use of biodiversity.

The Policy states that, while the Ministry of Environment, Housing and Territorial Development is responsible for establishing mechanisms to facilitate access, by research and private-sector entities, to leading-edge technologies, other government agencies, like the Ministry of Agriculture, will promote research aimed at the development and adaptation of technologies needed to transform non-sustainable systems of production into sustainable ones.

The Policy also specifies that academic, governmental and business sectors will advance projects that allow for the transference of technologies, and in particular biotechnologies, for the conservation and sustainable use of biodiversity, with an emphasis on agricultural and pharmaceutical uses.

244 - Does your country have a national system for intellectual property right protection (16(5))?

Yes, it exists but it is not a consolidated system and it does not apply to traditional knowledge. However, the country counts upon Andean Decision 486 of the year 2000.

245 - If yes, does it cover biological resources (for example, plant species) in any way?

Yes, to a large extent. Decision 486 regulates questions of industrial property (patents, author's rights, business secrets, among others). This legislation, which is obligatory for the member countries of the Andean Community, explicitly links the granting of intellectual property rights to the compliance with subregional and national norms on access to genetic resources (Decision 391 of 1996) and, eventually, norms that would protect traditional knowledge.

Decision 486 does not regard as an invention "the whole or parts of live beings as they are found in nature, natural biological processes, biological material existing in nature or that which may be isolated, including the genome or germplasm of any natural live being".

This Decision excludes patents on plants, animals and essentially biological procedures for the production of plants and animals that are not non-biological or microbiological procedures. The latter provision is in harmony with the obligations laid down in Article 27.3 b of the Andean Agreement on intellectual property rights. It is worth noting that, for the protection of plants, Andean Decision 345 on a common regime for the obtentors of new plant varieties applies.

246 - Has your country conducted and provided to the secretariat case-studies of the impacts of intellectual property rights on the achievement of the Conventions objectives?

There are no monographic studies as such, nor have any been provided to the

Secretariat. There has been no systematic evaluation of the effects of intellectual property rights on the attainment of the objectives of the Convention.

Article 17 Exchange of information

247. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?					
a) High	X	b) Medium		c) Low	
248. To what extent are the resources available adequate for meeting the obligations and recommendations made?					
a) Good		b) Adequate		c) Limiting	X
d) Severely limiting					
Further comments on relative priority and on availability of resources					
249. Has your country taken measures to facilitate the exchange of information from publicly available sources (17(1))?					
a) no measures					
b) restricted by lack of resources					
c) some measures in place					X
d) potential measures under review					
e) comprehensive measures in place					
If a developed country Party -					
250. Do these measures take into account the special needs of developing countries (17(1))?					
a) no					
b) yes - limited extent					
c) yes - significant extent					
251. If so, do these measures include all the categories of information listed in Article 17(2), including technical, scientific and socio-economic research, training and surveying programmes, specialized knowledge, repatriation of information and so on?					
a) no					
b) yes - limited extent					X
c) yes - significant extent					

Article 18 Technical and scientific cooperation

252. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?					
a) High		b) Medium	X	c) Low	
253. To what extent are the resources available adequate for meeting the obligations and recommendations made?					
a) Good		b) Adequate		c) Limiting	X
d) Severely limiting					
Further comments on relative priority and on availability of resources					

254. Has your country taken measures to promote international technical and scientific cooperation in the field of conservation and sustainable use of biological diversity (18(1))?	
a) no measures	
b) some measures in place	x
c) potential measures under review	
d) comprehensive measures in place	
255. Do the measures taken to promote cooperation with other Contracting Parties in the implementation of the Convention pay special attention to the development and strengthening of national capabilities by means of human resources development and institution building (18(2))?	
a) no	
b) yes - limited extent	x
c) yes - significant extent	
256. Has your country encouraged and developed methods of cooperation for the development and use of technologies, including indigenous and traditional technologies, in pursuance of the objectives of this Convention (18(4))?	
a) no	
b) early stages of development	x
c) advanced stages of development	
d) methods in place	
257. Does such cooperation include the training of personnel and exchange of experts (18(4))?	
a) no	
b) yes - limited extent	x
c) yes - significant extent	
258. Has your country promoted the establishment of joint research programmes and joint ventures for the development of technologies relevant to the objectives of the Convention (18(5))?	
a) no	
b) yes - limited extent	x
c) yes - significant extent	

Decision II/3, Decision III/4 and Decision IV/2. Clearing House Mechanism

259. Is your country cooperating in the development and operation of the Clearing House Mechanism?	
a) no	
b) yes	x
260. Is your country helping to develop national capabilities through exchanging and disseminating information on experiences and lessons learned in implementing the Convention?	
a) no	
b) yes - limited extent	x
c) yes - significant extent	

261. Has your country designated a national focal point for the Clearing-House Mechanism?	
a) no	
b) yes	x
262. Is your country providing resources for the development and implementation of the Clearing-House Mechanism?	
a) no	
b) yes, at the national level	
c) yes, at national and international levels	x
263. Is your country facilitating and participating in workshops and other expert meetings to further the development of the CHM at international levels?	
a) no	
b) participation only	x
c) supporting some meetings and participating	
264. Is your CHM operational	
a) no	
b) under development	
c) yes (please give details below)	x
265. Is your CHM linked to the Internet	
a) no	
b) yes	x
266. Has your country established a multi-sectoral and multi-disciplinary CHM steering committee or working group at the national level?	
a) no	x
b) yes	

Decision V/14. Scientific and technical co-operation and the clearinghouse mechanisms (Article 18)

267. Has your country reviewed the priorities identified in Annex I to the decision, and sought to implement them?	
a) not reviewed	
b) reviewed but not implemented	
c) reviewed and implemented as appropriate	x

Further comments on implementation of these Articles

Although there are mechanisms for exchanging information and access systems, the autonomous regional corporations are unaware of these mechanisms of scientific and technical cooperation and there is a need for greater participation by the institutions. In addition, while there is a growing exchange of information, they do not reach a proper level because of the scarcity of resources.

There are problems with the availability of the information for which access is sought. In addition, there is a lack of support for the creation of a system of access to national data bases and networks of scientific

communities, which would simplify terms and permit an easy access for decision makers. A data base on international cooperation is being constructed, but there is a need for another which would include all of the information about what is done with the resources from state and private cooperation.

An additional difficulty comes from the fact that activities are not disseminated. For this reason, we should arrange that investigators make the results of their research known, through a wide dissemination and in this way avoid the growth of copying. It is also important to encourage exchanges, since the institutions wish to give but not to receive information. Although there is a good level of exchange among experts on a personal level, in general there is a need for improvement in this area.

A number of particular achievements stand out.⁵⁹

254. Has your country taken measures to promote international technical and scientific cooperation in the field of conservation and sustainable use of biological diversity (18(1))?

Although there are agreements on cooperation with the governments of the United States of America, European nations and some Asian ones, the situation of public order in the country is considered to be a difficulty for cooperation, since it has, to a large extent, limited visits by foreign missions or researchers who wish to exchange experiences and technologies with their national counterparts. As a consequence of this, at the present time training courses on the exploration and evaluation of biological diversity are scarce.

It is worth mentioning the role of the Latin American Botanical Network as an important source for Colombians of help and cooperation with foreign entities, with the aim of forming trained scientists in different areas.

255. Do the measures taken to promote cooperation with other Contracting Parties in the implementation of the Convention pay special attention to the development and strengthening of national capabilities by means of human resources development and institution building (18(2))?

Postgraduates studies are offered by the INVEMAR, through an agreement with European universities.

259. Is your country cooperating in the development and operation of the Clearing House Mechanism?

The Clearing-house Mechanism in Colombia began its activities at the end of 1999. Since then it has become a tool of support and consultation for national and foreign investigators interested in Colombian biodiversity.

Up to the year 2002 the implementation of the Clearing-house Mechanism in Colombia was achieved with the support of international cooperation (specifically through a project financed by the German GTZ agency). Beginning this year (2003), the financing of the Mechanism is coming from national resources, through the Ministry of Environment, Housing and Territorial Development, although these resources are pretty limited and do

⁵⁹ We count upon the participation of scientific research networks with access to the exchange of information about the germplasm of musaceas, the integrated management of pests, biological control, etc.

not guarantee the continuity of the Mechanism. This Mechanism counts on a series of activities within a framework of cooperation among researchers. 60

In 2003, the CHM published a report on "Updating the state of research into biodiversity and scientific and technical cooperation in Colombia". 61

260. Is your country helping to develop national capabilities through exchanging and disseminating information on experiences and lessons learned in implementing the Convention?

Support has been found for some activities of a bilateral and multilateral character aimed at the strengthening of the national investigative capacity, which include participation in programs like the CYTED (Ibero-American program on science and technology for development).

In terms of international scientific-technical cooperation, support has been found for some activities relating to the participation of some groups in research networks, paid research leaves and short courses, mainly. 62

264. Is your CHM operational?

Yes, it is functioning.

60 CHM Colombia: In the year 2000, the CHM Colombia established the National Directory of Investigators of Biodiversity in Colombia, which to date (2003) has gathered together information from more than 2000 researchers and 500 entities that work in the field of Biodiversity in Colombia. This data base is completely interactive, with possibilities of open consultation for all users of the website of the Clearing-house Mechanism. In addition, this page is a permanent source of information for investigators, with up to date material of interest for researchers: job possibilities, fellowships, events, news and events related to the subject of biodiversity. The CHM page further offers a series of links with the documentation centers and libraries of research centers, which allows for on-line bibliographical consultations.

The Colombian Facilitation Mechanism has also supported regional events in the country. In the year 2002 it held the First Regional Meeting on Biodiversity and Development in Antioquia and the Coffee Zone: the CHM provided the infrastructure and development of the Regional Node, which joined investigators in the regions involved into a Sub-directorate.

With the Humboldt Institute, the CHM Colombia celebrated the first and second "Biodiversity Day": the former in Villa de Leyva, Boyacá (2001) and the latter in Filandia and Quimbaya, Quindío (2002). This activity took place in the framework of an atmosphere of cooperation among researchers and the exchange of information and experiences with the community.

61 Krieger, Katharina and Juan Esteban Osorio (Editors) 2003. *State of research on biodiversity and scientific and technical cooperation in Colombia*. Von Humboldt-GTZ. Bogotá, Colombia.

62 CHM Colombia: In 2002 advised on the design and operation of the Facilitation Mechanism for Bolivia, following the parameters and functioning of the Colombian experience.

Article 19 Handling of biotechnology and distribution of its benefits

268.What is the relative priority afforded to implementation of this Article and the associated decisions by your country?							
a) High		b) Medium	x	c) Low			
269.To what extent are the resources available adequate for meeting the obligations and recommendations made?							
a) Good		b) Adequate	x	c) Limiting		d) Severely limiting	
Further comments on relative priority and on availability of resources (see further comments below)							
270.Has your country taken measures to provide for the effective participation in biotechnological research activities by those Contracting Parties which provide the genetic resources for such research (19(1))?							
a) no measures							
b) some measures in place							
c) potential measures under review						x	
d) comprehensive measures in place							
If so, are these measures:							
a) Legislation						x	
b) Statutory policy and subsidiary legislation							
c) Policy and administrative measures						x	
271.Has your country taken all practicable measures to promote and advance priority access on a fair and equitable basis by Contracting Parties to the results and benefits arising from biotechnologies based upon genetic resources provided by those Contracting Parties (19(2))?							
a) no measures							
b) some measures in place						x	
c) potential measures under review							
d) comprehensive measures in place							

Decision IV/3. Issues related to biosafety and Decision V/1. Work Plan of the Intergovernmental Committee for the Cartagena Protocol on Biosafety

272.Is your country a Contracting Party to the Cartagena Protocol on Biosafety?	
a) not a signatory	
b) signed, ratification in progress	
c) instrument of ratification deposited	x

Further comments on implementation of this Article

The country has advanced with the formulation of a National Biotechnology Policy for the field of biotechnological development, but it has still not been adopted and much less does it count on resources destined for that end. Greater developments are foreseen, in accordance with the stipulations of the current National Development Plan.

In its program for the conservation and sustainable use of environmental goods and services for the strategy of environmental sustainability, the

National Development Plan speaks of encouraging biotechnology on the basis of biodiversity and the management of biosafety, including the formulation of a policy for biotechnology and the regulation of hazards associated with the introduction, mobilization and genetic manipulation of live organisms. Equally, it lays emphasis on the material covered by biotechnology, taking into account that the country has an immense patrimony in biodiversity material and genetic resources that could be exploited through the numerous opportunities that modern biotechnology provides today. In that way, it proposes a strengthening of the national capacity to improve and apply the legal framework; and the development of a strategy to inform and educate public opinion about the benefits and risks associated with biotechnology. 63

Taking into account that biotechnology is an inter-institutional matter, a committee has been formed with representatives of the Ministry of Environment, Housing and Territorial Development; Agriculture; Health; and Commerce. It is coordinated by the former. Taking into account the stipulations of the National Development Plan and the need to create capacity for the national implementation of the Cartagena Protocol, an Inter-institutional Group was established to define a National Action Plan for Biosafety: it is coordinated by the Colombian Agriculture and Stock-raising Institute (ICA). To develop the Plan, the Inter-institutional working group on Biosafety designed and created a project entitled "the Development of capacities to implement the Cartagena Protocol on Biosafety in Colombia", which will come into effect in 2003 and has four main objectives

1. The development of the legislative framework and mechanisms of coordination for decision-making.
2. The establishment of nuclei of capacity in Biosafety in the agencies responsible for decision-making.
3. The establishment of a Biosafety Clearing House Mechanism.
4. The establishment of nodes of technical excellence for the investigation, evaluation and handling of risks related to the activities of introduction, transport, investigation, research, production, use and commercialization of Genetically Modified Organisms, in accordance with the provisions of the Cartagena Protocol. 64

The development of biotechnology in the regions is only beginning. In some manner, this should be understood as the result of the weakness of the culture surrounding research into genetic resources. Biotechnology arises and advances in accordance with the requirements of research into genetic resources and in the latter field, the predominating methods are of a traditional character and there are few incursions into the field of

63. Responsibility for Biotechnology safety is in the hands of the Ministries of Environment, Housing and Territorial Development; Agricultural and Rural Development; and Social Protection.

64 The project was approved by the Council of the GEF and the Alexander von Humboldt Institute will be the executing agency that will coordinate the development of the activities that are laid down. In order to ensure the correct execution of the project, an inter-institutional group was formed that works on a technical level and on a vice-ministerial level. It is made up of the Ministry of Environment, Housing and Territorial Development; the Ministry of Agriculture and Rural Development; the Ministry of Commerce, Industry and Tourism; the Ministry of Social Protection; the ICA, INVIMA, CIAT and Colciencias.

65 The Orinoco region currently confronts a problem related to biotechnological products like genetically modified organisms, specifically, transgenic crops. In line with their agricultural practices, the inhabitants of that prairie region are using products like maize and soya beans to expand the agricultural frontier. The transgenic varieties of these two crops, mainly those known as BT and RR, probably those of the highest growth, in terms of cultivated areas, on a world level. The current debate has to do with the contradiction between national policies which promote the adoption of transgenic crops and the opinions of investigators and teachers who work in the region, for whom transgenic crops are clearly not the solution to the agricultural problems of the country. It is particularly heated in the case of entities like "la Libertad" office of Corpoica, among others. The skilled personnel who work for them believe that, in addition to raising production costs, such crops represent a little-appreciated danger to the stability of the region's phyto-genetic resources. However, considering that their adoption is a state policy, they are forced into hasty discussions to determine how they should be used.

For some sectors in Colombia biotechnology further widens the breach between the developed countries and the developing ones. Despite its clear agricultural and stock-raising vocation, the Orinoco region still lacks research programs to determine whether biotechnology offers the means to achieve an improvement in the activities that are carried out there and we have basically become consumers of a technology which, on many occasions, is transferred within the context of private-sector companies (as in the case of artificial insemination) or, (as in the case of seeds and technological packages of transgenics) we are consumers of private-sector products, without receiving an aggregate social value.

66 Currently, the Ministry of Environment, Housing and Territorial Development; the Ministry of Social Protection; the Ministry of Agriculture and Rural Development; the Ministry of Commerce, Industry and Tourism.

67 Colombia presented this program to the World Bank in order to apply for resources from the Global Environmental Facility (GEF), with the aim of strengthening Colombia's capacity to implement the basic objectives of the Cartagena Protocol, including the evaluation, administration and potential hazards of GMO's.

The GEF approved a contribution of US\$1,000,000 (one million dollars) for the execution of the project, which will work in four areas:

Strengthening of the legislative framework and operational mechanisms for the management of biosafety in Colombia.

The creation of capacities and establishment of an operational system for the management and monitoring of risks.

The establishment of a biosafety data base in Colombia: "Biosafety Clearing-House Mechanism" (BCH).

The formation of centers of excellence: a network for the investigation, evaluation and monitoring of risks.

68 The project was financed by the OAS and Chile (as the coordinating country), Peru and Canada also participated. In Colombia, Colciencias, the Colombian Agriculture and Stock-raising Institute (ICA) and the TECNOS Foundation participated.

The first phase focussed on the evaluation and regulatory policies and systems in Chile, Peru and Colombia: the identification of needs; and the holding of a series of seminar-workshops in the three countries, which counted upon an important collaboration from outstanding foreign experts.

alternative technologies: thus, the development of biotechnology lags behind. Some specific regional cases stand out.⁶⁵ With regard to institutional achievements, the work of Colciencias and the GEF stand out. Colciencias, through its office for the National Biotechnology Program, within the framework of the Cartagena Protocol and national norms on biosafety, has realized the following activities:

Participation in the "Workshop on the national normative framework in biosafety matters, with respect to genetically modified organisms (GMO's)", organized by the Ministry of Environment, Housing and Territorial Development. The objective of the workshop was to discuss the Ministry's proposal for a "Project for a national normative framework in biosafety matters, with respect to genetically modified organisms".

At the current time a publication with the results of the project is being prepared and the outline of a proposal for continuing the work begun in this project has been submitted to the consideration of the OAS.

270. ¿Has your country taken measures to provide for the effective participation in biotechnological research activities by those Contracting Parties which provide the genetic resources for such research (19(1))?

While there have been some legislative developments, there is still little clarity about the mechanisms needed to ensure the effective participation in activities of research into biotechnology by the contracting parties of countries like Colombia, which provide genetic resources for such

In the second phase, which began in March, 2003, the project has been developing in a number of countries in Central America and the Caribbean.

⁶⁹

The study carried out by Colombia identifies the institutions and organizations associated with the formulation of bio-safety regulations, the implementation of regulatory systems and the process of evaluating and handling risks derived from the use of GMO's in the sectors of human health, agriculture, farm animals, foods and the environment. A comparison was made of the Colombian regulations in force and the provisions of the Biosafety Protocol and gaps in national norms that need to be filled in order to comply with the requirements of the Protocol were identified. An analysis was made of the interpretation and utilization of the precautionary principle, and, finally, there was a review of the experiences and methodologies employed in other countries for the evaluation of the socio-economic impacts, deriving from the use of **GMO's**, on the conservation and sustainable use of biodiversity, especially with relation to the value which it has for indigenous and local communities, with the objective of proposing a methodology applicable to the case of Colombia.

The same institutions that represent Colombia in the project held a workshop for government officials, particularly for members of the institutions responsible for biosafety legislation, the members of the National Technical Committees on agricultural and farm animal biosafety and members of the academic and productive sectors. The main objective of the workshop was to inform and open spaces for discussion between government bodies, the academic sector and the productive sector.

investigations

With regard to this question, it is thought that some measures have been established, as is the case with Andean Decision 391, Article 17 of which reads:

"Applications and contracts of access, and, where necessary, accessory contracts, will include such conditions as: a. The

participation of citizens of the subregion in the activities of investigation into genetic resources and their derivative products and the associated intangible component: b. Support for investigations within the jurisdiction of the member country in which the genetic resource originates or in another of the subregion which contributes to the conservation and sustainable use of biological diversity; c. The strengthening of mechanisms for the transference of knowledge and technologies, including biotechnologies, that are culturally, socially and environmentally safe and secure."

271. Has your country taken all practicable measures to promote and advance priority access on a fair and equitable basis by Contracting Parties to the results and benefits arising from biotechnologies based upon genetic resources provided by those Contracting Parties (19(2))?

With regard to a priority access to the results and benefits derived from biotechnology being given to the parties which provide the genetic resources, it is worth noting that, in accordance with investigations carried out by the von Humboldt Institute, while there has been an advance in the development of legislative frameworks on a subregional level, these have not found a practical application.

272. Is your country a Contracting Party to the Cartagena Protocol on Biosafety?

Yes, it is a Party.

Participation in the Intersectorial Work Group, created in June, 2001 and made up of the Ministries of Environment, Health, Agriculture and Rural Development, and Foreign Commerce, 66, and Colciencias and the CIAT, in which all of the entities responsible for the vigilance and control of GMO's participate. Its mission is to elaborate a proposal that will allow for plans, programs and projects for the biosafety of GMO's and their derivatives to act in a joint and harmonious way. It is worth highlighting one of the group's results: a proposal for an "Inter-ministerial Action Plan for the Biosafety of GMO's and their derivatives", a document which proposes the formulation of a decree to create an Intersectorial Commission on Bio-safety.

The Program actively participated with the Intersectorial Work Group in the formulation of the project: "Capacity Building to Implement the Cartagena Protocol" 67

The Program is a member of the directive committee and technical committee of the Interministerial Group on Biosafety, which must execute the GEF project.

The Program coordinated in Colombia the project: "Bio-safety regulations in Latin America and the Caribbean within the framework of the International Bio-safety Protocol". 68

The project will generally help to identify the weaknesses and needs surrounding the implementation of the

biosafety protocol in each participating country. It will also enable the countries to coordinate activities for a better implementation of the protocol on a regional level. The results will be shared with the rest of the region's countries, facilitating the development of other projects both in the public and the private sector. 69

Article 20 Financial resources

273.What is the relative priority afforded to implementation of this Article and the associated decisions by your country?					
a) High		b) Medium	x	c) Low	
274.To what extent are the resources available adequate for meeting the obligations and recommendations made?					
a) Good		b) Adequate		c) Limiting	x
Further comments on relative priority and on availability of resources (see further comments below)					
275.Has your country provided financial support and incentives in respect of those national activities which are intended to achieve the objectives of the Convention (20(1))?					
a) no					
b) yes - incentives only					
c) yes - financial support only					
d) yes - financial support and incentives					x
<i>If a developed country Party -</i>					
276.Has your country provided new and additional financial resources to enable developing country Parties to meet the agreed incremental costs to them of implementing measures which fulfil the obligations of the Convention, as agreed between you and the interim financial mechanism (20(2))?					
a) no					
b) yes					
<i>If a developing country Party or Party with economy in transition -</i>					
277.Has your country received new and additional financial resources to enable you to meet the agreed full incremental costs of implementing measures which fulfil the obligations of the Convention (20(2))?					
a) no					
b) yes					x
<i>If a developed country Party -</i>					
278.Has your country provided financial resources related to implementation of the Convention through bilateral, regional and other multilateral channels (20(3))?					
<i>If a developing country Party or Party with economy in transition -</i>					
279.Has your country used financial resources related to implementation of the Convention from bilateral, regional and other multilateral channels (20(3))?					
a) no					
b) yes					x

Decision III/6. Additional financial resources

280. Is your country working to ensure that all funding institutions (including bilateral assistance agencies) are striving to make their activities more supportive of the Convention?	
a) no	
b) yes - limited extent	x
c) yes - significant extent	
281. Is your country cooperating in any efforts to develop standardized information on financial support for the objectives of the Convention?	
a) no	x
b) yes (please attach information)	

Decision V/11. Additional financial resources

282. Has your country established a process to monitor financial support to biodiversity?	
a) no	
b) procedures being established	x
c) yes (please provide details)	
283. Are details available of your country's financial support to national biodiversity activities?	
a) no	
b) not in a standardized format	x
c) yes (please provide details)	
284. Are details available of your country's financial support to biodiversity activities in other countries?	
a) not applicable	
b) no	x
c) not in a standardized format	
d) yes (please provide details)	
Developed country Parties -	
285. Does your country promote support for the implementation of the objectives of the Convention in the funding policy of its bilateral funding institutions and those of regional and multilateral funding institutions?	
a) no	
b) yes	
Developing country Parties -	
286. Does your country discuss ways and means to support implementation of the objectives of the Convention in its dialogue with funding institutions?	
a) no	
b) yes	x
287. Has your country compiled information on the additional financial support provided by the private sector?	
a) no	x

b) yes (please provide details)	
288.Has your country considered tax exemptions in national taxation systems for biodiversity-related donations?	
a) no	
b) not appropriate to national conditions	
c) exemptions under development	
d) exemptions in place	x

Further comments on implementation of this Article

The national budget is tight: the average environmental investment between 1998-2002 only amounted to 0.27% of the Gross Internal Product, according to the data supplied by the National Planning Department.

Furthermore, new institutional reforms have reduced contributions to the environmental sector from the National Mineral Royalties Fund: this funding is being given, instead, to basic hygiene, health and education, which are the priorities of the current government.

Some institutions' incapacity to create and present projects leaves the sensation that there are not sufficient resources for many of the country's environmental agencies. However, in recent years Colombia has received multilateral aid, which has been reflected in the increase of biodiversity projects.

According to data provided by the International Affairs group of the Ministry of Environment, Housing and Territorial Development, the assigning and managing of resources for Colombia in the field of biodiversity has been significant, which is seen in the following information:

Although there is no overall accounting for biodiversity projects, between 1992 and 2001 investments close to USD\$ 47 million have been made to finance more than 12 projects for the protection of strategic ecosystems and biodiversity. Of this total, 40 million dollars come from international cooperation. Another 38 million dollars have been used to finance forestry projects, of which 12 million dollars have been national counterpart funds. We would also have to include the financing of the project for the Ciénaga Grande de Santa Marta (marshlands), at a value of close to 30 million dollars. An approximate figure for the total investment in national projects related to the conservation, sustainable use and acquisition of knowledge of biodiversity would be on the order of 1,656,000,000 dollars in the period of 1969-1997.

The GEF financed the first phase of the Biopacific project (Conservation of the biodiversity of the Colombian biogeographical zone of the Chocó), between 1993 and 1997, with a donation of US\$9 million.

The following projects, now in their final phase, were assigned more than 50 million dollars:

- "Conservation and Sustainable Use of the Biodiversity of the Colombian Andes".
- "System of Protected Marine and Coastal Areas of the Caribbean and the Pacific".
- Sustainable Use of Biodiversity in the Western Flank of the Serranía del Baudó".
- "Conservation and Sustainable Development of the Mataven Forest of the Amazonía".
- "Community Program for the Conservation of the Naya".
- "Biosphere Reserve of the Caribbean Archipelago: Regional System for a Protected Marine Area".

The GEF and the UNDP currently have the following projects:

- "Conservation of Biodiversity in the ecosystems of paramo and mountain forests of the Colombian Massif", with resources of 4 million dollars. This project is being developed with the Parks Unit and seeks to promote the conservation of biodiversity in the Colombian Massif through the establishment of a system of national, regional and private protected areas.

- "Second National Report on the Implementation of the Convention on Biological Diversity", with resources of US\$ 83, 350.
- "Project 8j", with resources of US\$64,150.
- "NCSA Project", 174,000 dollars: 144,000 dollars from the GEF and 30,000 dollars counterpart funding from the Ministry of Environment, Housing and Territorial Development.

The GTZ is in the process of approving a projected presented by the Ministry of Environment, Housing and Territorial Development, together with the National University of Colombia and the WWF, on the "Strengthening of capacity for action in Biosafety", with resources of 200,000 dollars.

It is also worth noting that the research centers and universities are the main beneficiaries of the resources provided by the state. Other centers are financed and supported by specific trade bodies and their mission includes the resolution of problems that specifically affect their members. Among these there stand out the research centers for coffee producers (CENICAFÉ), sugar cane producers (CENICAÑA), potato producers (FEDEPAPA), rice producers (FEDEARROZ), barley producers (CORPOCEBADA) and banana producers (CENIBANANO). Their main strength lies in their capacity to directly interact with users and producers, thus reducing the breach between problems and their solutions.

Parallel to this, the Ministry of Environment, Housing and Territorial Development has analyzed the feasibility of promoting a risk-capital fund for the financing of green markets. On the basis of studies of Colombian biodiversity, a broad range of products that could be commercialized in the green markets of Europe and the United States have been identified.

In 2002, 130 million pesos were devoted to this.

In 2003, 475 million pesos are available for this purpose, including the national budget and funding from international cooperation.

Some research institutes are financed with resources from the Bank of Investment Projects of the Fund for Environmental Investment (FONAM), entities like COLCIENCIAS, agreements with Autonomous Regional Corporations and national and international entities: financing also comes from scientific convocations.

Other mechanisms of financing are international cooperation and national funds, like the Initiative for the Americas and the National Compensations Fund of the Autonomous Regional Corporations, among others.

280 - Is your country working to ensure that all funding institutions (including bilateral assistance agencies) are striving to make their activities more supportive of the Convention?

The country has utilized financial resources related to the application of the Convention through bilateral, regional and multilateral channels, but in reality they have been few.

288 - Has your country considered tax exemptions in national taxation systems for biodiversity-related donations?

There are exemptions but they depend on the environmental good.

The exemptions fall within the framework of Law 29 of 1990 and are valid for all investments in science and technology, including investigations related to Biological Diversity.

Tax incentives specifically refer to tax deductions and exemptions from VAT.

Article 21 Financial mechanism

289. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?					
a) High		b) Medium	x	c) Low	
290. To what extent are the resources available adequate for meeting the obligations and recommendations made?					
a) Good		b) Adequate		c) Limiting	x
Further comments on relative priority and on availability of resources (see further commentaries below)					
291. Has your country worked to strengthen existing financial institutions to provide financial resources for the conservation and sustainable use of biological diversity?					
a) no					
b) yes					x

Decision III/7. Guidelines for the review of the effectiveness of the financial mechanism

292. Has your country provided information on experiences gained through activities funded by the financial mechanism?	
a) no activities	x
b) no, although there are activities	
c) yes, within the previous national report	
d) yes, through case-studies	
e) yes, through other means (please give details below)	

Further comments on implementation of this Article

The GEF has been a fundamental support for the obtaining of financial resources of international cooperation in Colombia.

Article 23 Conference of the Parties

293. How many people from your country participated in each of the meetings of the Conference of the Parties?	
a) COP 1 (Nassau)	3*
b) COP 2 (Jakarta)	2*
c) COP 3 (Buenos Aires)	3*
d) COP 4 (Bratislava)	4*
e) COP 5 (Nairobi)	2*

***From the Ministry of Environment, Housing and Territorial Development**

Decision I/6, Decision II/10, Decision III/24 and Decision IV/17. Finance and budget

294.Has your country paid all of its contributions to the Trust Fund?	
a) no	x
b) yes	

Decision IV/16 (part) Preparation for meetings of the Conference of the Parties

295.Has your country participated in regional meetings focused on discussing implementation of the Convention before any meetings of the Conference of the Parties?	
a) no	
b) yes (please specify which)	x
If a developed country Party -	
296.Has your country funded regional and sub-regional meetings to prepare for the COP, and facilitated the participation of developing countries in such meetings?	
a) no	
b) yes (please provide details below)	

Decision V/22. Budget for the programme of work for the biennium 2001-2002

297.Did your country pay its contribution to the core budget (BY Trust Fund) for 2001 by 1 st January 2001?	
a) yes in advance	
b) yes on time	
c) no but subsequently paid	
d) not yet paid	
298.Has your country made additional voluntary contributions to the trust funds of the Convention?	
a) yes in the 1999-2000 biennium	
b) yes for the 2001-2002 biennium	
c) expect to do so for the 2001-2002 biennium	
d) no	x

Further comments on implementation of this Article

--

Article 24 Secretariat

299. Has your country provided direct support to the Secretariat in terms of seconded staff, financial contribution for Secretariat activities, etc?	
a) no	
b) yes	x

Further comments on implementation of this Article

<p>One contribution to the Secretariat has been that Dr. Fernando Casas, representing the GRULAC, acted as the vice president of COP 6. This support has taken the concrete form of specific commentaries on the preparatory documents of the SBSTTA 8 and the meeting of the MYPOW. In both cases Dr. Casas has counted upon the help of the researchers and analysts of the von Humboldt Institutes for such subjects on the Agenda as the transference of technological cooperation and access to and distribution of benefits.</p> <p>Also important has been Colombia's support, through the von Humboldt Institute, for ensuring that the GRULAC representative on the Bureau informs all members of the group about the activities, suggestions and proposals that emanate from the Bureau or the Secretariat. To develop this activity, the von Humboldt Institute, has opened a specialized window in the website of the CHM, so that the members of the GRULAC may receive information and better contribute to the work of the Secretariat of the Biodiversity Convention.</p> <p>Equal support was given to the Secretariat when the presidency of the SBSTTA of the Convention was held by Dr. Cristian Samper Kutsbach. For the celebration of the VII meeting of the group of experts on biosafety and the I ExCoP of the Convention, held in Cartagena de Indias, Colombia, the Ministry of Foreign Relations and the Ministry of Environment, Housing and Territorial Development provided full technical and financial support to the Secretariat for the successful holding of both meetings.</p>
--

Article 25 Subsidiary body on scientific, technical and technological advice

300. How many people from your country participated in each of the meetings of SBSTTA?	
a) SBSTTA I (Paris)	
b) SBSTTA II (Montreal)	
c) SBSTTA III (Montreal)	
d) SBSTTA IV (Montreal)	
e) SBSTTA V (Montreal)	

Further comments on implementation of this Article

--

Article 26 Reports

301. What is the status of your first national report?	
a) Not submitted	
b) Summary report submitted	
c) Interim/draft report submitted	
d) Final report submitted	x
If b), c) or d), was your report submitted:	
by the original deadline of 1.1.98 (Decision III/9)?	x
by the extended deadline of 31.12.98 (Decision IV/14)?	
Later (please specify date)	

Decision IV/14 National reports

302. Did all relevant stakeholders participate in the preparation of this national report, or in the compilation of information used in the report?	
a) no	x
b) yes	
303. Has your country taken steps to ensure that its first and/or second national report(s) is/are available for use by relevant stakeholders?	
a) no	x
b) yes	
If yes, was this by:	
a) informal distribution?	
b) publishing the report?	
c) making the report available on request?	
d) posting the report on the Internet?	

Decision V/19. National reporting

304. Has your country prepared voluntary detailed thematic reports on one or more of the items for in-depth consideration at an ordinary meeting of the parties, following the guidelines provided?	
a) no	
b) yes - forest ecosystems	x
c) yes - alien species	
d) yes - benefit sharing	

Further comments on implementation of this Article

The elaboration of the first country report was led by the Ministry of Environment, Housing and Territorial Development, through the contracting of a consultant who compiled and edited the information and supervised its printing. The document was not distributed in the country.

The Ministry of Environment, Housing and Territorial Development, as the

focal point, has been responsible for the coordinating and submitting three thematic reports: on mountains, protected areas and the transference of technology. In some cases, participation has been through the CHM, although it is not a systematic process of consultation. At the present time the elaboration of a thematic report on forestry biodiversity is being prepared and the Humboldt Institute and the Ministry of Agriculture are preparing a country report on agro-biodiversity.

Decision V/6. Ecosystem approach

305. Is your country applying the ecosystem approach, taking into account the principles and guidance contained in the annex to decision V/6?	
a) no	
b) under consideration	
c) some aspects are being applied	x
d) substantially implemented	
306. Is your country developing practical expressions of the ecosystem approach for national policies and legislation and for implementation activities, with adaptation to local, national, and regional conditions, in particular in the context of activities developed within the thematic areas of the Convention?	
a) no	
b) under consideration	
c) some aspects are being applied	x
d) substantially implemented	
307. Is your country identifying case studies and implementing pilot projects that demonstrate the ecosystem approach, and using workshops and other mechanisms to enhance awareness and share experience?	
a) no	
b) case-studies identified	
c) pilot projects underway	x
d) workshops planned/held	
e) information available through CHM	
308. Is your country strengthening capacities for implementation of the ecosystem approach, and providing technical and financial support for capacity-building to implement the ecosystem approach?	
a) no	
b) yes within the country	x
c) yes including support to other Parties	
309. Has your country promoted regional co-operation in applying the ecosystem approach across national borders?	
a) no	x
b) informal co-operation	
c) formal co-operation (please give details)	

Inland water ecosystems

Decision IV/4. Status and trends of the biological diversity of inland water ecosystems and options for conservation and sustainable use

310. Has your country included information on biological diversity in wetlands when providing information and reports to the CSD, and considered including inland water biological diversity issues at meetings to further the recommendations of the CSD?	
a) no	
b) yes	x
311. Has your country included inland water biological diversity considerations in its work with organizations, institutions and conventions affecting or working with inland water?	
a) no	
b) yes	x
If a developing country Party or Party with economy in transition -	
312. When requesting support for projects relating to inland water ecosystems from the GEF, has your country given priority to identifying important areas for conservation, preparing and implementing integrated watershed, catchment and river basin management plans, and investigating processes contributing to biodiversity loss?	
a) no	
b) yes	x
313. Has your country reviewed the programme of work specified in annex 1 to the decision, and identified priorities for national action in implementing the programme?	
a) no	
b) under review	
c) yes	

**Decision V/2. Progress report on the implementation of the programme of work on the biological diversity of inland water ecosystems
(implementation of decision IV/4)**

314. Is your country supporting and/or participating in the River Basin Initiative?	
a) no	
b) yes	x
315. Is your country gathering information on the status of inland water biological diversity?	
a) no	
b) assessments ongoing	x
c) assessments completed	
316. Is this information available to other Parties?	
a) no	x
b) yes - national report	
c) yes - through the CHM	
d) yes - other means (please give details below)	
317. Has your country developed national and/or sectoral plans for the conservation and sustainable use of inland water ecosystems?	

a) no	
b) yes - national plans only	x
c) yes - national plans and major sectors	
d) yes - national plans and all sectors	
318. Has your country implemented capacity-building measures for developing and implementing these plans?	
a) no	
b) yes	x

Decision III/21. Relationship of the Convention with the CSD and biodiversity-related conventions

319. Is the conservation and sustainable use of wetlands, and of migratory species and their habitats, fully incorporated into your national strategies, plans and programmes for conserving biological diversity?	
a) no	
b) yes	x

Further comments on implementation of these decisions and the associated programme of work

In the past few years (between 1999 and 2003) the country has endeavored to implement this work program: studies of wetlands have been made in order to identify RAMSAR sites and that Treaty was ratified. The National Policy on Inland -Continental Wetlands was formulated and financing has been sought from international bodies.⁷⁰ There is implementation through isolated efforts in each of the natural regions of Colombia. ⁷¹

However, it is evident that the priority given to investment in this work program varies in accordance with the different regions of the country.

For the high Andean moors programs in the Andean region, it is adequate, while it is average for the mangrove ecosystems for the Atlantic and Pacific coasts. But investment in the Orinoco and Amazon is meager.

Priority should be given to coordination and interaction among the different

⁷⁰ WWF-FAO-UNDP, among others

⁷¹ Studies of marshlands in the Caribbean prairie-Mompox Depression

Work program on wetlands of the Orinoco - University of Los Llanos

Ordering of the San Vicente wetland, overflow zone of the river Ariari - Cormacarena

Omacha: a decade of research on river dolphins (*toninas*). Investigations of ichthyic populations in the ports of the rivers Meta and Orinoco. Evaluations of populations in the rivers Inírida and Guaviare. Work with giant otters, manatees, manatees, tortoises and caimans.

National University - Arauca and the Civil Society: Process of recuperating wetlands in the Department of Arauca

Program for tree-covered walks for wetlands - Mayor's Office, Leticia

Program for Aquatic ecosystems - Sinchi

groups which work on a local, regional, national and international level. On a regional level, above all, it is important to take the social component into account and acknowledge the interests of the different groups: for this reason the creation of programs of public communication, education and awareness are fundamental, as well as the participation of local and indigenous

Communities and socioeconomic and cultural evaluations.⁷²

The country must advance towards a better knowledge of the composition, structure and functioning of the ecosystems of continental waters, in order to encourage an evaluation of their economic importance. In this regard, efforts should be directed to the definitions, testing and standardization of the methodologies for such evaluation in the tropical region.

311:

No policy exists which allows for the recognition of the intrinsic value of the biodiversity of the continental aquatic systems in a national context. However, there are regional efforts, as in the case of the Plans for Territorial Ordering (POT) and other studies

Considerations about biodiversity are included, but with restrictions: they are limited to commercial species, species of multinational interest and specifically those in danger of extinction which do not always represent the diversity of continental waters. Some species of aquatic plants associated with the ecosystems of continental waters are also being taken into consideration.

⁷² The Program for Aquatic Ecosystems of the Sinchi Institute considers participation to be part of its working philosophy in lines of research (Sinchi, 2001)

⁷³ Especially the working model developed by the Program for Aquatic Ecosystems of the Sinchi, in conjunction with the National Institute of Development of Peru (INADE), has already shown its effectiveness in the frontier management of shared river basins. It finds legal support in Decree No. 1729 of 6 August of 2002, which regulates Part XIII, Title 2, Chapter III of Decree-Law 2811 of 1974 on hydrographic basins, and partially in number 12 of article 5 de Law 99 of 1993.

⁷⁴ Studies by the Sinchi Institute which identify problems and inconsistencies in the Colombian Amazon, especially for the groups of fishes. See: Fabr e et al (eds.), 2000.

⁷⁵ Corpomojana: Projects on commercial species.
Corpourab : processes of agreements with business groups and other regional agents for the conservation of aquatic fauna and flora in sectors of wetlands, as well as for not shedding dredging material into rivers

⁷⁶ Recuperation of urban wetlands.

⁷⁷ CAR del Quind o: Ha apoyado monitoreos de aves acu ticas (29 especies) asociadas al r o La Vieja. Has supported monitoring of aquatic birds (29 species) associated with La Vieja river.

Experience in areas of importance for the conservation of birds. AICAS.

Work of the Calidris Foundation.

314:

Our country does participate, although the emphasis is on forestry-type aspects and restocking with native species, and, to a lesser extent, aquatic diversity. In this respect there is a Policy on River Basins which should help to advance the integration of the existing regional and sectorial efforts, since a national effort of this kind is only beginning. In addition, some work is currently being done in the binational river basins of the Orinoco and Amazon. In the latter there is an emphasis on the conservation of migratory species that may travel between departments or from one country to another and binational regulations and agreements have advanced.⁷³

315:

Yes, information about this subject is compiled but not in an extensive way. Identification, classification and reports of extinction are insufficient. There are shortages of information about the regions. One difficulty for Colombian researchers is that many data have not been referenced, which obliges them to consult studies that are done abroad

It is evident that a great interest in biodiversity and its conservation has arisen recently (Meffe & Carroll, 1997), but it is generally focused on large-sized species or those which represent some degree of economic benefit (Pérez, Fabré et al (eds.), 2000). By contrast, "microorganisms" have been left out of this inventory.

In the case of ichthyofauna the available data comes from studies carried out by institutes⁷⁴ and corporations and the individual efforts of researchers, which means that it is limited. On lotic waters there is information for the Andean region, but less about the Atlantic region.

In the Colombian Amazon region work is being done on a base line process, which is one of the most important tools for gathering up to date information on different variables and thus determine the present state of the strategic aquatic ecosystems of the region through environmental indicators of a biological, ecological, cultural and social kind.

There are gaps of information on the maps and the lists of endangered species mention large animals but ignore small ones, despite the fact that many of the latter are also endangered. In a similar fashion, the inventories on the subject of continental waters made by the von Humboldt Institute are very elementary. There is information about birds, fishes and large mammals, but there is little information about micro-organisms.

In any case it is important to emphasize that the "red books" represent a constant process of investigation which is expected to fill in the remaining gaps.

317:

There is the National Plan for Biodiversity and the Action Plan for the 21st Century - on the implementation of the Policy --, which includes all of the biodiversity of Colombian territory, including that of continental waters, and is being implemented in the regions. Nevertheless, this program needs to be more widely disseminated and implemented.

The country also has a National Program for Research into Marine and Coastal Biodiversity - PNIBM - 2001-2010, which **includes** a national plan for continental and marine bio-prospecting.

318:

Plans have been elaborated, but they need to be implemented. However, some isolated efforts have been made. 75

319:

Yes, the subjects of the conservation and sustainable use of wetlands have been incorporated, thanks to the Ramsar Convention, but both are in the stage of formulation. They need to be implemented and effective decisions must be made to solve urgent problems. 76 There is also an urgent need to compile an extensive inventory of the wetlands of Colombia, since most of its biotic wealth lies in these ecosystems. In this regard, there have been some interesting regional experiences. 77

Marine and coastal biological diversity

Decision II/10 and Decision IV/5. Conservation and sustainable use of marine and coastal biological diversity

320. Does your national strategy and action plan promote the conservation and sustainable use of marine and coastal biological diversity?	
a) no	
b) yes - limited extent	x
c) yes - significant extent	
321. Has your country established and/or strengthened institutional, administrative and legislative arrangements for the development of integrated management of marine and coastal ecosystems?	
a) no	
b) early stages of development	x
c) advanced stages of development	
d) arrangements in place	
322. Has your country provided the Executive Secretary with advice and information on future options concerning the conservation and sustainable use of marine and coastal biological diversity?	
a) no	x
b) yes	
323. Has your country undertaken and/or exchanged information on demonstration projects as practical examples of integrated marine and coastal area management?	
a) no	
b) yes - previous national report	
c) yes - case-studies	x
d) yes - other means (please give details below)	
324. Has your country programmes in place to enhance and improve knowledge on the genetic structure of local populations of marine species subjected to stock enhancement and/or sea-ranching activities?	

a) no	x
b) programmes are being developed	
c) programmes are being implemented for some species	
d) programmes are being implemented for many species	
e) not a perceived problem	
325.Has your country reviewed the programme of work specified in an annex to the decision, and identified priorities for national action in implementing the programme?	
a) no	
b) under review	x
c) yes	

Decision V/3. Progress report on the implementation of the programme of work on marine and coastal biological diversity (implementation of decision IV/5)

326.Is your country contributing to the implementation of the work plan on coral bleaching?	
a) no	
b) yes	x
c) not relevant	
327.Is your country implementing other measures in response to coral bleaching?	
a) no	x
b) yes (please provide details below)	
c) not relevant	
328.Has your country submitted case-studies on the coral bleaching phenomenon to the Executive Secretary?	
a) no	x
b) yes	
c) not relevant	

Further comments on implementation of these decisions and the associated programme of work

Through the Institutes of the SINA⁷⁸ responsible for basic and applied research into these ecosystems advances have been made in this work program. We count on the National Policy for Ocean and Coastal Zones and with sources of international cooperation interested in the subject. However, it has a middling priority and the resources are insufficient in comparison to the extent of the country's seas and coasts. Activities of research, conservation and sustainable use of marine and coastal biological diversity do not manage to cover the Caribbean coast, the Pacific coast and the archipelago of San Andrés, Providencia and Santa Catalina.

320:

⁷⁸ INVEMAR and the IIAP

Yes, the country promotes the conservation and sustainable use of marine and coastal biodiversity through the implementation of its national environmental

79 In the Unit for the Integrated Management of the Guapi-Iscuandé (there is a publication about this, done by INVEMAR-CRC-Corponariño and IIAP, available in the INVEMAR); Coastal Environmental Unit for the río Sinú-golfo de Morrosquillo and the Coastal Environmental Unit of the Darién (there are unpublished reports about the latter two in the INEMAR), the Caribbean Environment Unit (Archipelago of San Andrés, Providencia y Santa Catalina), whose results served for the establishment of the area as Sea Flower Biosphere Reserve.

80 Delta of the river San Juan and delta of the river Baudó.

81 Quantification of the incidental effects of fishing in industrial and family-type fishing enterprises; measures of management leading to the sustainable use of fish resources (INVEMAR, Javeriana University). Colombia forms part of the Inter-American Tropical Tuna Commission, which is carrying out actions to minimize the impact of incidental catches on dolphins.

Design of marine reserves for the conservation of biodiversity (INVEMAR, CORALINA, Special Administrative Unit of the System of National Natural Parks - UAESPNN, CORPAMAG).

Fishery indicators of the effect of fishing on marine biodiversity (INVEMAR)

Effects of introduced species (for example, Tilapia in the Ciénaga Grande de Santa Marta) (INVEMAR)

National plans for the management and conservation of some groups of especially vulnerable fauna (for example, marine turtles)

Plans for the monitoring of marine and coastal biodiversity (INVEMAR, Javeriana University, CORALINA).

Proposal submitted to the International Maritime Organization and its committee for the protection of the marine environment for declaring the Isla Malpelo a specially sensitive zone (Resolution MEPC 97[47] 8 March 2002- DIMAR).

Strategic plan for the protection of the marine, coastal and fluvial environment (2002-2006) (DIMAR)

Declaration of two biosphere reserves under the MAB program of the UNESCO: Ciénaga Grande de Santa Marta and Seaflower (Archipelago of San Andrés and Providencia).

Studies of base lines in marine ecosystems (UNIVERSITIES, INVEMAR, CORALINA, CORPOGUAJIRA, CVS).

Creation and publications of CITES Red Books and guide on endangered species of marine organisms (INVEMAR-Ministry of Environment, Housing and Territorial Development)

Design and formulation of the National Program for Researches into Marine Biodiversity and action plan 2001-2010 (INVEMAR-Ministry of Environment, Housing and Territorial Development).

82 Corpoguajira, Coralina, Carsucre, Corporación del Valle del Sinú, Carsucre.

policy for the sustainable development of the oceanic spaces and coastal and insular zones of Colombia -PNAOCI - and its action plan, established by CONPES resolution 3164.

This policy was established as a response to the commitments acquired by Colombia within the Biodiversity Convention in the year 2000 and the general objective is to "work for a sustainable development of oceanic spaces and coastal zones that helps to contribute to the improvement of the quality of life of the Colombian population and the harmonious development of productive activities and the conservation and preservation of marine and coastal ecosystems and resources".

Within the framework of the PNACOI, the National Program of Research into marine and coastal biodiversity was established for the country, under which current research is carried out.

Studies aimed at acquiring knowledge about and conserving the marine and coastal biological diversity of the integral planning regions and management units of the PNAOCI⁷⁹ have also been carried out. Likewise two estuary areas of the Colombian Pacific have been nominated for Ramsar sites. 80

The CONPES 3164 (action plan of the PNAOCI) is intended to carry out an inventory of marine and coastal resources and characterize marine and coastal ecosystems and resources by coastal environmental units, a task which has been done by the INVEMAR, in conjunction with the CAR's which have responsibilities for marine and coastal zones and other research institutes, like the IIAP.

Finally, there are scattered efforts, represented by the formulation of research projects aimed at the conservation and sustainable use of marine and coastal biodiversity. 81

321:

Yes, they are in advanced stages of development. There exist plans for territorial ordering, plans for the regional management of protected areas, plans for regional environmental management and national policies for the management of coastal zones, and areas of conservation have been declared for marine and coastal areas.

Declarations of reserves and management plans have been implemented in the CAR's and research institutes⁸²

The coastal component has been involved within the territorial ordering plans -POT - and the plans of regional environmental management -PGAR -, for juridical reasons the marine component has not been included.

The "RedCostera" or Coastal Network was established, made up originally of the CAR's with coastal responsibilities; the Colombian Ocean Commission -CCO- and research institutes in marine and coastal subjects and their researchers. This institutional arrangement will allow for advances in the integrated ordering of marine and coastal ecosystems. Likewise, the National Committee for the Integrated Management of Oceanic Spaces and Coastal Zones, as the maximum authority responsible for guiding the formulation and integration of sectorial policies leading to the ordering and sustainable development of marine and coastal zones.

322:

Since 2001 the INVEMAR has participated in the global forum on seas and coasts organized by the UNESCO, which gathers together different international institutions and agencies, like the Biodiversity Convention, Climate Change Convention and the agency for Maritime Law. Through such

forums consultancy and information is given about Colombian marine and coastal subjects. Within the forum, for example, the report on seas and coasts that was done for the Johannesburg Summit was prepared, which gave priority to research into and the conservation and sustainable use of the marine biodiversity of the participating countries.

The environmental institutions make recommendations to the Ministry of Environment, Housing and Territorial Development about actions aimed at the conservation of threatened species (red books) and ecosystems. In a similar manner there is a National Report by all of the environmental entities, the Annual Report on the state of marine and coastal resources (INVEMAR), the DIMAR receives information and in turn supplies information to the Marine Environment Protection Committee (IMO) and there is a National Report to the CPPS on the introduction of exotic marine species to Colombia and the problems of ballast waters.

323:

Through the MAVDT, INVEMAR and the Coralina and CVC CAR's, the country forms part of the international network for training in the integrated management of coastal zones - COASTMAN. Through this entity methodologies and practical experiences for the ordering and integrated management of marine and coastal zones are exchanged with countries like Chile, Ecuador, Peru and Mexico in Latin America and Indonesia, Vietnam and the Philippines on the Asian Continent.

On the basis of the dissemination of the *"National Environmental Policy for the oceanic spaces and coastal and island zones of Colombia"* (PNAOCI) three demonstration pilot programs began: one in the Archipelago of San Andrés, Providencia and Santa Catalina (Caribbean islands) ("Sea Flower" Biosphere Reserve); another in the Coastal Environmental Unit for the river Sinú-Gulf of Morrosquillo (the continental Caribbean); and another in the Unit for the Integrated Management of the complex of the mouths of the Guapi-Iscuandé (Pacific region), all of which served for the establishment and implementation of regional and local strategies for the Integrated Management of Coastal Zones in the country and whose results will act as a feedback for the practical implementation of the policy and create methodological guidelines to approach the subject. At the moment a diagnostic and characterization of the United for the Integrated Management of the Darien is being created and disseminated.

324:

No, but scattered efforts are being made.

328:

They have been done but have not yet been presented.

Agricultural biological diversity

Decision III/11 and Decision IV/6. Conservation and sustainable use of agricultural biological diversity

329.Has your country identified and assessed relevant ongoing activities and existing instruments at the national level?	
a) no	
b) early stages of review and assessment	x
c) advanced stages of review and assessment	
d) assessment completed	
330.Has your country identified issues and priorities that need to be addressed at the national level?	
a) no	
b) in progress	x
c) yes	
331.Is your country using any methods and indicators to monitor the impacts of agricultural development projects, including the intensification and extensification of production systems, on biological diversity?	
a) no	
b) early stages of development	x
c) advanced stages of development	
d) mechanisms in place	
332.Is your country taking steps to share experiences addressing the conservation and sustainable use of agricultural biological diversity?	
a) no	
b) yes - case-studies	
c) yes - other mechanisms (please specify)	x
333.Has your country conducted case-studies on the issues identified by SBSTTA: i) pollinators, ii) soil biota, and iii) integrated landscape management and farming systems?	
a) no	
b) yes - pollinators	x
c) yes - soil biota	x
d) yes - integrated landscape management and farming systems	x
334.Is your country establishing or enhancing mechanisms for increasing public awareness and understanding of the importance of the sustainable use of agrobiodiversity components?	
a) no	
b) early stages of development	x
c) advanced stages of development	
d) mechanisms in place	
335.Does your country have national strategies, programmes and plans which ensure the development and successful implementation of policies and actions that lead to sustainable use of agrobiodiversity components?	
a) no	

b) early stages of development	<input checked="" type="checkbox"/>
c) advanced stages of development	<input type="checkbox"/>
d) mechanisms in place	<input type="checkbox"/>
336. Is your country promoting the transformation of unsustainable agricultural practices into sustainable production practices adapted to local biotic and abiotic conditions?	
a) no	<input type="checkbox"/>
b) yes - limited extent	<input checked="" type="checkbox"/>
c) yes - significant extent	<input type="checkbox"/>
337. Is your country promoting the use of farming practices that not only increase productivity, but also arrest degradation as well as reclaim, rehabilitate, restore and enhance biological diversity?	
a) no	<input type="checkbox"/>
b) yes - limited extent	<input checked="" type="checkbox"/>
c) yes - significant extent	<input type="checkbox"/>
338. Is your country promoting mobilization of farming communities for the development, maintenance and use of their knowledge and practices in the conservation and sustainable use of biological diversity?	
a) no	<input type="checkbox"/>
b) yes - limited extent	<input checked="" type="checkbox"/>
c) yes - significant extent	<input type="checkbox"/>
339. Is your country helping to implement the Global Plan of Action for the Conservation and Sustainable Utilization of Plant Genetic Resources?	
a) no	<input type="checkbox"/>
b) yes	<input checked="" type="checkbox"/>
340. Is your country collaborating with other Contracting Parties to identify and promote sustainable agricultural practices and integrated landscape management?	
a) no	<input type="checkbox"/>
b) yes	<input checked="" type="checkbox"/>

Decision V/5. Agricultural biological diversity: review of phase I of the programme of work and adoption of a multi-year work programme

341. Has your country reviewed the programme of work annexed to the decision and identified how you can collaborate in its implementation?	
a) no	
b) yes	x
342. Is your country promoting regional and thematic co-operation within this framework of the programme of work on agricultural biological diversity?	
a) no	
b) some co-operation	x
c) widespread co-operation	
d) full co-operation in all areas	
343. Has your country provided financial support for implementation of the programme of work on agricultural biological diversity?	
a) no	
b) limited additional funds	x
c) significant additional funds	
If a developed country Party -	
344. Has your country provided financial support for implementation of the programme of work on agricultural biological diversity, in particular for capacity building and case-studies, in developing countries and countries with economies in transition?	
a) no	
b) yes within existing cooperation programme(s)	
b) yes, including limited additional funds	
c) yes, with significant additional funds	
345. Has your country supported actions to raise public awareness in support of sustainable farming and food production systems that maintain agricultural biological diversity?	
a) no	
b) yes, to a limited extent	x
c) yes, to a significant extent	
346. Is your country co-ordinating its position in both the Convention on Biological Diversity and the International Undertaking on Plant Genetic Resources?	
a) no	
b) taking steps to do so	
c) yes	x
347. Is your country a Contracting Party to the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade?	
a) not a signatory	
b) signed - ratification in process	x
c) instrument of ratification deposited	
348. Is your country supporting the application of the Executive Secretary for observer status in the Committee on Agriculture of the World Trade Organisation?	

a) no	x
b) yes	
349. Is your country collaborating with other Parties on the conservation and sustainable use of pollinators?	
a) no	x
b) yes	
350. Is your country compiling case-studies and implementing pilot projects relevant to the conservation and sustainable use of pollinators?	
a) no	x
b) yes (please provide details)	
351. Has information on scientific assessments relevant to genetic use restriction technologies been supplied to other Contracting Parties through media such as the Clearing-House Mechanism?	
a) not applicable	
b) no	x
c) yes - national report	
d) yes - through the CHM	
e) yes - other means (please give details below)	
352. Has your country considered how to address generic concerns regarding such technologies as genetic use restriction technologies under international and national approaches to the safe and sustainable use of germplasm?	
a) no	
b) yes - under consideration	x
c) yes - measures under development	
353. Has your country carried out scientific assessments on <u>inter alia</u> ecological, social and economic effects of genetic use restriction technologies?	
a) no	x
b) some assessments	
c) major programme of assessments	
354. Has your country disseminated the results of scientific assessments on <u>inter alia</u> ecological, social and economic effects of genetic use restriction technologies?	
a) no	x
b) yes - through the CHM	
c) yes - other means (please give details below)	
355. Has your country identified the ways and means to address the potential impacts of genetic use restriction technologies on the <u>in situ</u> and <u>ex situ</u> conservation and sustainable use, including food security, of agricultural biological diversity?	
a) no	x
b) some measures identified	
c) potential measures under review	
d) comprehensive review completed	

356.Has your country assessed whether there is a need for effective regulations at the national level with respect to genetic use restriction technologies to ensure the safety of human health, the environment, food security and the conservation and sustainable use of biological diversity?	
a) no	
b) yes - regulation needed	x
c) yes - regulation not needed (please give more details)	
357.Has your country developed and applied such regulations taking into account, <u>inter alia</u> , the specific nature of variety-specific and trait-specific genetic use restriction technologies?	
a) no	x
b) yes - developed but not yet applied	
c) yes - developed and applied	
358.Has information about these regulations been made available to other Contracting Parties?	
a) no	x
b) yes - through the CHM	
c) yes - other means (please give details below)	

Further comments on implementation of these decisions and the associated programme of work

Colombian productive sectors are working on the inclusion of plans and programs with criteria for the conservation and sustainable use of biodiversity, as well as the assigning of resources and the participation of indigenous and local communities. A trend towards the assimilation of the importance of conservation through changes in land use has been observed, supported by the research institutes of the different entities. 83

The work of the palm sector should also be emphasized, because of the investments it has made in the implementation and use of clean technologies with low impacts on different terrestrial and aquatic ecosystems, its low consumption of chemical products and the high value given to biodiversity in the recuperation of significant natural areas within its properties, which function as special natural areas and biological corridors that ensure a greater diversity and activity of natural populations and help to strengthen the same processes of biological control in the plantations of oil palms. These strategies have led to the establishment to date of 5,000 hectares of oil palms in the northern zone of the country which are certified as organic crops. It is also important to stress the role of CENIPALMA in the processes of research and transference of technology that it **realizes** in cooperation with the agricultural departments of the companies, in order to maintain the status and importance of biological diversity in plantations of oil palm.

83 CENIBANO investigates different aspects of agricultural biodiversity and biodiversity in general, in the search for varieties of bananas that are more resistant to pests and diseases. It likewise searches for natural predators of pests and agents that cause diseases (e.g. native fungi).

The trend towards the use and conservation of agricultural biodiversity in the country has centered on useful collections and germplasm banks or *ex situ* collections for food and agriculture, with an emphasis on commercial species. These banks face limitations related to the processes of characterization and evaluation and the protection, recuperation and valuation of related traditional knowledge.

Furthermore, just as happens with the national system of germplasm banks for the management of zoogenetic resources, we count on a tripartite agreement, between the Ministry of Agriculture, Corpoica and the IICA, for the maintenance and conservation of the native races of cows, pigs, sheep and goats found in the different agro- ecosystems of the country. This agreement allows for access to relatively limited resources for the carrying out of the strategies of management for the conservation of the genetic variability of the different germplasm banks.

84 Corpoica: Biotechnology Project for small producers; Pacofo Program for community agroforestry; Work with NGO's (Semillas Foundation, Network for Peasant-Farmer Strategies; tours and markets of local seeds.

DAMA: technical assistance for agriculture and stock-raising of a sustainable tendency in the rural areas of the Capital District.

85 i) Pollinators: Some studies on apicultural flora by the National University of Medellín

ii) Soil biota: studies of variation in microorganisms of agro-forestry productive system, done by the University of Córdoba and Corpoica. The Javeriana University's line of research into agricultural microbiology; some studies by the University of

Tolima, as well as a recent event on soils and microbiology held by the International Center for Tropical Agriculture; and studies of microorganisms aimed at creating agricultural materials for biological control and bio-fertilizers, done by Corpoica.

iii) Integrated ordering of landscapes and agricultural systems: line of research and characterization of rural and coffee-growing landscapes by the Humboldt Institute; ordering of la Mojana realized by Corpoica and studies by the DAMA.

86 Corpoica Caribe: Studies that incorporate local knowledge and have created a data base.

87 IICA: 2 Seeds Fairs in Rionegro and Sonson, Antioquia, 2003.

88 The collections referred to are: Cotton, information on 307 accessions; maize, data on 2050 accessions; potato, minimum variables of 839 accessions; plantain and banana, variables of 135 accessions; and soy beans, information on 1,203 materials.

89 Cuyes (domesticated guinea pigs), *chigüiros* (capybaras), native races and milk bovines; GEF Sylvopastoral Project (Nicaragua, Costa Rica, Colombia).

90 Bogotá Botanical Garden: Floral visitors *Bombus spp* (HYM:APIDAE) in *Espeletia argentea*, dominant species in patches of remnants of vegetation in the Cruz Verde paramo, Bogotá, D.C

Projects for African palm with a pollinator brought from Africa.

Banatura Program: Program for the social and environmental management of the Colombian banana sector.

In this field the country faces the following challenges: ensure that ecological practices have an influence on the practices of peasant-farmer and other communities; assign adequate resources for *in situ* conservation; carry out an inventory of erosion, genetic loss or sub-utilization of peasant-farmer or indigenous economies; create investigations of the economic value of wild species

It is worth underlining that technologies for the restriction of genetic uses are unknown in the country. Only a few experts are familiar with the subject and it has not been incorporated in the making of policy decisions, thus no instrument to deal with it has been established and much less have its possible implications been evaluated. However, the subject will have to be evaluated in the legal and normative development foreseen for the National Biosafety Plan.

329:

They are in the early stages of analysis and evaluation, though the linked efforts of different governmental and inter-sectorial agencies.

330:

It is underway. It is expected that the formulation of the Project for the Conservation and Sustainable Use of Agricultural Biodiversity will contribute integrated elements of national, regional and local priorities.

332:

Yes, to a limited extent, through specific mechanisms like training programs, seminars, courses and workshops in which experiences both in production and research are exchanged 84 and experiences of participatory investigation are strengthened.

333:

There have been some specific initiatives but they do not comprise national monographic studies. 85 There are programs but their impact is limited, since they are only in the early stages of development.

There has been progress in the integrated ordering of agricultural landscapes and systems in aspects other than monographic studies, such as Law 388 of 1997 on territorial ordering and the consequent development of territorial ordering plans.

334:

They are in the early stages of development.

There have been some initiatives on sustainable agricultural and stock-raising products aimed at consumers, as well as posters, informative bulletins and scattered efforts by NGO's, but massive instruments for making the public more aware of the subject are unknown. Public awareness about the advantages of agricultural biodiversity and sustainable productive systems is growing.

335:

There are policies that can be indirectly associated with the objectives of the Convention's pluriannual program on agro-biodiversity. However, at present the country does not have national strategies and programs and plans through which the application of the Agricultural Biodiversity program would be ensured. Nevertheless, the formulation of the project for the conservation and sustainable use of agro-biodiversity expects to contribute integrated

elements of national, regional and local priorities.

336:

Yes, to a limited extent. The main advances are in aspects related to the sustainable management of bio-physical factors (water and soil) and biological control. It is worth mentioning the programs on minimum tilling and direct sowing, the programs for the integrated management of pests, and the program on ecological agriculture, among others.

Each region needs to develop training courses with the authorities of the agricultural sector, with the aim of implementing policies that guarantee the sound use of natural resources and a sustainable production.

337:

Yes, to a limited extent: the main advances are in aspects related to the ecological agricultural and stock-raising program.

There are several initiatives that incorporate the regeneration, rehabilitation, restoration and improvement of biological diversity, such as the programs related to agro-forestry and sylvo-pastoral alternatives, minimum or conservation tilling, the integrated management of pests and diseases, the development of bio raw materials, the process of modernizing cattle-raising, among other contributions, mainly developed by Corpoica, Conif and CIPAV and some trade bodies, research institutes and NGO's. It is worth mentioning the work done by the Ministry of Environment, Housing and Territorial Development and the SAC on the formulation of environmental guides that incorporate components of fauna and flora. There also initiatives like the CVC's on the conservation of coffee zones. The von Humboldt Institute has been working on tools for the conservation and sustainable use of biodiversity in cattle-rearing and coffee-growing landscapes. However, the scope of such initiatives is minor, compared to the scale of national problems.

338:

Yes, to a limited extent⁸⁶. We note scattered actions in the field, mostly done by NGO's. But in the face of the dimension

of the programmatic proposals for solving specific problems, they do not respond to the challenges, nor acquire the span needed to solve the problem.

Seeds Fairs⁸⁷, have been held, in which materials and knowledge are exchanged and seeds have entered the Colombian state system of germplasm banks for food and agriculture: 1370 accessions of different species have been registered.

339:

The advances made by the country are limited compared to the dimension of the World Action Plan. Only the objective of *ex situ* conservation has been developed with a particular emphasis. The aspects in which connections exist between this Convention program and the action plan in Colombia:

Maintenance of *ex situ* collections: Through its own efforts the country has entered the world plan for the conservation and sustainable use of

phylogenetic resources. With regard to *ex situ* activities, it has been implementing the System of Germplasm Banks for food and agriculture, which is managed by Corpoica through a tripartite agreement, signed in accordance with the law on Science and Technology, between the Ministry of Agriculture and Rural Development, the Colombian Institute of Agriculture and Stock-raising (the state agency responsible for the germplasm banks) and Corpoica, which manages these banks. The system has a Base Bank, with facilities for long-term conservation in which there are currently 12,000 accessions of different species; active collections with cold-storage rooms for mid-term storage, which allows for a storage of about 14,000 accessions between the base bank and active collection; and field collections, with around 4,600 accessions. For the field collections, there are security duplicates that represent around 70% of the material, which are guarded in satellite field banks and in *in vitro* conditions. In a similar way, monitoring activities were carried out on the viability of 2,884 materials with orthodox seeds and the routine conservation of field accessions conserved *in vitro*.

Likewise, during the year 2002, monitoring activities were carried out on the viability of 2884 materials with orthodox seed and the routine conservation of field accessions conserved *in vitro*.

Regeneration of accessions maintained *ex situ*: In the year 2002, 4428 accessions of species with storageable seeds and 1262 accessions of field collections with short life cycles were renewed. In addition, 339 duplicates of the field collections maintained *in vitro* were subcultivated.

Collecting: In the year 2002, 374 new accessions of diverse species for food and agriculture were obtained through field collecting activities.

Expansion of *ex situ* conservation activities: As mentioned in the section of the maintenance of *ex situ* collections, the System of Banks undertakes activities of conserving materials with recalcitrant seeds and of vegetative propagation, which include the field and *in vitro* conservation of these kinds of collections.

In the area of the utilization of phylogenetic resources:

Expansion of the Characterization, Evaluation and number of nuclear collections: Through efforts realized up to the year 2002 by the Colombian state system of Germplasm Banks for Food and Agriculture, a preliminary evaluation has been made of 12,304 accessions: 5,385 with a morphological characterization (qualitative variables), 880 with a molecular characterization, 210 with an isoenzymatic evaluation, 67 with a physiological evaluation and 892 with a chemical evaluation (related to the potential for processing).

Pre-improvement and increase of the genetic base: With the materials in the banks processes of domestication have been developed for the Andean "lulo" fruit plant (*Solanum quitoense* Lam), whose offspring provided the first improved clone of this species, derived from inter-specific hybridization ("La Selva" lulo).

A gene resistant to antrachnosis in the fruit of the "tomate de árbol" fruit plant (*Cyphomandra betacea* (*Solanum betaceum*), Cav. Sendt) was identified in a related species and inter-specific hybrids were obtained to transfer the

characteristic. Antrachnosis is the most limiting problem of this species.

Se ha implementado una base genética amplia para el desarrollo de la especie andina lulo a partir de hibridación interespecífica de los mejores materiales de la colección con 7 accesiones de la especie relacionada *Solanum hirtum* (Solanaceae, sección Lasiocarpa)

A wide genetic base has been implemented for the development of the Andean "lulo" species on the basis of an inter-specific hybridization of the best materials in the collection, with 7 accessions of the related species, *Solanum hirtum* (Solanaceae, section Lasiocarpa).

In the area of the development of institutional capacity:

Development of ample information systems: A data base - "Digital Germplasm Banks" - was placed on the website of Corpoica, which has information on the minimum variables of five collections, 88, with the aim of encouraging a wide utilization of the same.

Expansion of training and educational activities: Officials of the System have implemented and taught courses on "Genetic Resources" (undergraduate and postgraduate level) and "Legal and Political Aspects of Genetic Resources" (context course) at the Medellín campus of the National University of Colombia.

340:

Yes, but with a limited coverage.

The subject of agro-biodiversity was included in the Regional Biodiversity Strategy of the Andean Community of Nations as one of the strategic themes to be developed. For this purpose the ACN Agrobiodiversity report was formulated. However, there is no constant strategy of south-south or similar cooperation.

There are some scattered initiatives in regional stock-raising programs. . 89

341:

Yes, it is in the early stages of development, so that its scope is limited. The formulation of the project for the Conservation and Sustainable Use of Agro-biodiversity expects to contribute integrated elements of national, regional and local priorities. It is limited to technicians and entities.

342:

There is some cooperation, but it needs to be further developed to specifically respond to the Work Program on Agro-Biodiversity. However, the subject of agro-biodiversity was included in the Regional Biodiversity Strategy of the Andean Community of Nations as one of the strategic themes to be developed. Other initiatives are undertaken through the IICA, Prociandinos and Procitrópicos.

346:

Yes, the inter-ministerial group coordinated by the Chancellery exists and we count on the international treaty on phytogenetic resources: the main advances are in aspects related to the ecological program for agriculture and stock-raising.

The country's commitment is particularly related to the *ex situ* conservation and sustainable use of agricultural biodiversity.

There are discussions among the parties responsible for the decision, the FAO's International Treaty on Plant Genetic Resources for Food and Agriculture and the Convention on Biological Diversity.

350:

Such efforts are just beginning. Agro-ecological practices are promoted in some regions and institutional programs are developed, but there is no massive project to encourage sustainable agriculture.

Reports on zoogenetic and phylogenetic resources have been presented to the international community.

Forest biological diversity

Decision II/9 and Decision IV/7. Forest biological diversity

359. Has your country included expertise on forest biodiversity in its delegations to the Intergovernmental Panel on Forests?	
a) no	
b) yes	x
c) not relevant	
360. Has your country reviewed the programme of work annexed to the decision and identified how you can collaborate in its implementation?	
a) no	
b) under review	x
c) yes	
361. Has your country integrated forest biological diversity considerations in its participation and collaboration with organizations, institutions and conventions affecting or working with forest biological diversity?	
a) no	
b) yes - limited extent	x
c) yes - significant extent	
362. Does your country give high priority to allocation of resources to activities that advance the objectives of the Convention in respect of forest biological diversity?	
a) no	
b) yes	x
For developing country Parties and Parties with economies in transition -	
363. When requesting assistance through the GEF, is your country proposing projects which promote the implementation of the programme of work?	
a) no	
b) yes	x

Decision V/4. Progress report on the implementation of the programme of work for forest biological diversity

364. Do the actions that your country is taking to address the conservation and sustainable use of forest biological diversity conform with the ecosystem approach?	
a) no	
b) yes	x
365. Do the actions that your country is taking to address the conservation and sustainable use of forest biological diversity take into consideration the outcome of the fourth session of the Intergovernmental Forum on Forests?	
a) no	
b) yes	x
366. Will your country contribute to the future work of the UN Forum on Forests?	
a) no	
b) yes	x
367. Has your country provided relevant information on the implementation of this work programme?	
a) no	
b) yes - submission of case-studies	x
c) yes - thematic national report submitted	
d) yes - other means (please give details below)	
368. Has your country integrated national forest programmes into its national biodiversity strategies and action plans applying the ecosystem approach and sustainable forest management?	
a) no	
b) yes - limited extent	
c) yes - significant extent	x
369. Has your country undertaken measures to ensure participation by the forest sector, private sector, indigenous and local communities and non-governmental organisations in the implementation of the programme of work?	
a) no	
b) yes - some stakeholders	x
c) yes - all stakeholders	
370. Has your country taken measures to strengthen national capacities including local capacities, to enhance the effectiveness and functions of forest protected area networks, as well as national and local capacities for implementation of sustainable forest management, including restoration?	
a) no	
b) some programmes covering some needs	x
c) many programmes covering some needs	
d) programmes cover all perceived needs	
e) no perceived need	
371. Has your country taken measures to implement the proposals for action of the Intergovernmental Forum on Forests and the Intergovernmental Panel on Forests on valuation of forest goods and services?	
a) no	

b) under consideration	x
c) measures taken	

Biological diversity of dry and sub-humid lands

Decision V/23. Consideration of options for conservation and sustainable use of biological diversity in dryland, Mediterranean, arid, semi-arid, grassland and savannah ecosystems

372. Has your country reviewed the programme of work annexed to the decision and identified how you will implement it?	
a) no	
b) under review	
c) yes	x
373. Is your country supporting scientifically, technically and financially, at the national and regional levels, the activities identified in the programme of work?	
a) no	
b) to a limited extent	x
c) to a significant extent	
374. Is your country fostering cooperation for the regional or subregional implementation of the programme among countries sharing similar biomes?	
a) no	
b) to a limited extent	
c) to a significant extent	x

Further comments on implementation of these Decisions and the associated programme of work

The Ministry of Environment, Housing and Territorial Development, in conjunction with the Autonomous Regional Corporations, has been supporting projects aimed at the protection of micro-basins through protective plantations and barriers of vegetation, as well as the execution of projects for ecological restoration in the protected areas selected by the Regional System of Protected Areas - SIRAP --, with the aim of encouraging the natural regeneration and recuperation of ecosystems. Initiatives have also been undertaken by the academic sector and NGOs.⁹¹

⁹¹ The Tropical Forestry Center - CFT - of the University of Tolima: within the framework of its Research Plan (institutionalized in 1995), the Center supports the policy of doing thorough studies of vegetation, which include a study of the natural forests of the Pacific platform of the Cauca Valley and of Colombia in general. At the present time, the CFT is directing studies of the successional dynamics of intervened second- and primary-growth forests in the region: likewise, together with private-sector companies and the indigenous communities of the lower basin of the river San Juan it is studying guadalupe ecosystems. In the lower Calima river basin it is undertaking silvicultural trials of open-air plantations in which the *Aceite María* species stands out by virtue of its growth and development

WWF - Colombia: Work in the zone of the rivers of the Colombian Pacific on the sustainable use of biodiversity in general, which includes the vegetal component.

Working group on voluntary forestry certification in Colombia: leader in the Andean region.

92 In the Atlantic region, knowledge of forestry biological diversity has been acquired in an indirect form, through the Plans for Territorial Ordering and the characterization of the ecosystems of mangrove forests, desert zones and dry tropical forests.

93 The Guajira is the area where the largest amount of dry tropical forests are found, but at the same time it has shown increased deforestation.

94 Atrato (lower, middle and upper basin), Chocó (Urabá), Buenaventura (lower basins of the rivers San Juan and Calima); Nariño (Satinga, Barbacoas, El Charco, Sala Honda and Tumaco); Guaviare (San José); Amazonas; the desertified regions of the west of the Department of el Huila; the east of the Department of el Tolima; the dry forests of the Valley of Cauca, Magdalena and the Santanderes.

95 Corpoguajira: work is currently being carried out on protective barriers, the protection of forest areas and the cleaning up of sectors of aqueducts, with resources from the GreenPlan.

96 DIMAR: Study of the characterization of coastal zones, identified by the four main components, which include soils, aquatic ecosystems, vegetal ecosystems and geomorphological and geological structure. CVS, CRA and CORPOMOJANA Corporations: characterizations with an ecosystem focus of the areas under its administration.

Subdirectorato of ecosystems of the Ministry of Environment, Housing and Territorial Development, through the International Tropical Timber Agreement, of which Colombia, as a producer country, is a signatory: sustainable use of tropical timbers.

97 Information taken from the report on the "1st National Day for increasing awareness on the subject of desertification and drought"; Ministry of Environment, Housing and Territorial Development - Directorate of Ecosystems. Bogotá, February 2003.

98 Medellín Herbarium (National University): In Antioquia the first phase of a study of the flora of dry forests is being carried out. A national effort to homologate the taxonomic information is necessary, in order to have more certainty when it comes to identifying priorities in the conservation of threatened species. Financial support should be sought and a commitment to conservation by owners of private property who possess surviving areas of original vegetation in these live zones.

Sciences Faculty of the Nueva Granada Military University, program for Applied Biology: Study of the terrestrial malacofauna of the savanna of Bogotá.

Dentro de la problemática del país en este tópico se cuenta la introducción de especies exóticas y reforestación con las mismas; un mayor interés en la reforestación encaminada a la regulación hídrica que ha generar procesos de recuperación de la DBF y la presión sobre los bosques naturales por la extracción de maderas preciosas.

Among the problems facing the country in this respect are the introduction of and reforestation with exotic species and the pressure exerted on natural forests by the extraction of precious woods. There is a need for more interest in reforestation aimed at hydric regulation that would create processes for recuperating forestry biodiversity and relieve the pressure on natural forests affected by the extraction of precious timbers.

With regard to the above-mentioned pressure on natural forests, the CAR's exert measures of control, but not with the required effectiveness, perhaps because their respective areas of jurisdiction are limited.

361:

Yes, to a limited extent. We count upon the participation of institutions and agreements, as well as the integration with national and international institutes.

In addition, we have integrated mechanisms of support from institutions and organizations like the IICA, GTZ, FAO, ONFI, BIRF, Netherlands, JICA, USAID, UNDP and others. They have provided resources and have implemented programs for the development of forestry activities in the country. Of these institutions, the resources assigned by the GTZ, the International Tropical Timber Organization and the Netherlands have focussed on the subject of knowledge about the diversity of flora in the country's forests.

The agreements which integrate the participation of such institutions in Colombia are the Convention on Biological Diversity, the International Tropical Timber Agreement, the Desertification Convention, the Climate Change Convention and the Agreement on Foreign Trade.

Being short term, the programs and agreements which have been established are not sufficient to acquire specific and validated information in the different strategic ecosystems and regions of the country. For this reason some regions need to initiate this kind of research into forestry biological diversity and studies in other regions should be strengthened. 92

362:

On a national level high priority is given to forestry policy. Among other initiatives there are the forestry incentive certificates and the the program of family forest rangers.

Although the assignation of resources is not high, some resources have been assigned to basic and applied research, as in the case the Green Plan, the establishment of zones of forest reserves, the use and sustainable management of strategic ecosystems of the country, like mangrove forests, guandal forests, humid tropical forests and dry tropical forests.

Most of the experiences which have taken place in dry forests have been in the regions of the valleys of the Magdalena and Cauca rivers and to a lesser extent in the Caribbean zone, which should be given more priority. 93

The resources granted for the use and conservation of forest ecosystems have mainly been destined for the regions of the Pacific Coast, 94 while on the Atlantic coast there have been few contributions from public and private

entities, NGO's and communities.

The forestry projects in ecosystems like those of the marshes, mangrove forests and dry tropical forests, as well as those of the Sierra Nevada de Santa Marta, have resulted in a general knowledge of the presence and variety of forestry species that are found there. Likewise, most of the Autonomous Corporations of the Coast have been assigned funds from the Green Plan.95

364:

Yes, a small proportion. It has been done for some ecosystems of the country, but not for all of the existing ecosystems. There is very little knowledge of forestry flora in these ecosystems. In some cases, it is limited to a quick making of inventories or characterizations. These may be useful, but they are not sufficient to cover the functional aspect of ecosystems and thus ensure that the conservation measures which are adopted are effective in the long term.

Furthermore, the studies usually focus on a diagnosis of commercial timber species, not the wide scope of potential or prmissory species in the forestry sector, although a number of CAR's have made efforts in the latter direction.

There are more studies about the ecosystemic functioning of tropical forests than of the dry tropical forest: the latter is the least known and protected ecosystem.

368:

The National Program for Forests or National Plan of Forestry Development (PNDF, 2000), has been collateral to environmental and productive objectives and the objectives of the country's industry and trade as well as the planning done by the state. Nevertheless, forestry biological diversity is not specified in the National Action Plan for Biodiversity. It is regarded as an intrinsic component.

The efforts that have been realized are represented in the territorial ordering through municipalities guide the use of soils and the conservation of forestry regions, and also in the work of the DIMAR, the CAR's (which are legally obliged to declare zones of forestry ordering), and the Ministry of Environment, Housing and Territorial Development.96

369:

Yes, with some of the interested parties and with a limited coverage, as in the case of the mechanisms which are integrating the participation of all sectors around national initiatives, like that for the productive forestry chain, community participation in the adequate use of forests and the implementation of criteria and indicators for a sustainable forestry ordering.

In some regions this happens where it is of mutual benefit to the NGO's, private sector and indigenous or Afro-American communities, as is the case in the upper, middle and lower basin of the river Atrato, the lower basin of the river San Juan and the five forestry zones which Corponariño administers in the Pacific region. The same situation applies in the regions of the Guaviare, Amazonas and Caquetá, where some programs in this areas have been implemented that count upon the participation of local communities and involve both natural forests and plantations.

In the Atlantic coast, programs have been carried out which integrate those

working on reforestation, cattle farmers, NGO's, communities and indigenous councils in specific regions of the dry lower basin of the Magdalena and the southern part of the Department of Bolívar. Work is also being done in mangrove forests and marshes. However, a neglect of the forestry resources of the Caribbean zone has been observed.

370:

There are some programs that cover some needs

The answer has three components, each of which is answered, as follows
The UAESPNN has a national network which allows the state to identify, delimit and evaluate the environmental, social and economic conditions of the protected forest zones of the country.

Sustainable forestry ordering has been implemented in the form of a pilot project in the regions of Olaya Herrera, Department of Nariño and in the Department of Putumayo, in compliance with the agreement which the country has, as a timber producer, with the International Tropical Timber Organization. These activities are not carried out within the framework of the Biodiversity Convention. However, there are other regions of the country which are important and strategic for the establishment of mechanisms of ordering.

As a matter of priority, the country should undertake a zoning of forests throughout its territory before realizing a forest ordering. The first step would be the characterization of Units of forest Ordering and the next, of Units of Forestry Management, which would have associated plans for Forest Ordering that include the characterization of flora and fauna.

Before the passing of Law 70 on collective lands, the management and ordering of forests was carried out by private-sector forestry companies, which had to comply with criteria of sustainability, mainly due to the great areas of the concessions granted to them. These studies have been published in the country.

At the present time, the granting of property rights over these lands to Afro-Colombian, indigenous and peasant-farmer communities has occasioned a change in the use of forestry ecosystems to very small units of exploitation, which are not covered by the ordering plan. This leads to a poor control of forests and reduces the possibility of attaining a sustainable management of ecosystems whose wealth of biota makes them important to the country.

Nowdays plans for forest ordering developed by communities do not exist in all regions of the country, since they have a low capacity for realizing and implementing such plans. This situation limits the possibility of ensuring the natural regeneration of forests.

Biological Diversity in arid and sub-humid zones 97:

The Work Program on arid and sub-humid zones is found in the National Against Plan for Combating Desertification and the Management of Ecosystems in Dry Zones of Colombia (PAN - being formulated), through the Program for the Conservation and Sustainable Utilization of Biological Diversity, which includes goals and actions to be developed on the part of the entities responsible for this subject.

In the face of biodiversity loss in dry and semi-humid ecosystems on a world level, the BDC imposes certain commitments which require complementary efforts between the Desertification and Climate Change Conventions, among

others, in order to be nationally implemented. To achieve this, the forming of groups of experts in interdisciplinary fields stands out as one of the methods of joint actions. There should be also be options of programatic designs that linked the objectives and expected results for the conservation of biodiversity and soils with the country's sectorial and macroeconomic policies.

There is a provisional work program in these ecosystems, which has a component of evaluations and focussed actions in response to identified needs and there are individual actions by universities and botanical gardens.98

Decision V/20. Operations of the Convention

375.Does your country take into consideration gender balance, involvement of indigenous people and members of local communities, and the range of relevant disciplines and expertise, when nominating experts for inclusion in the roster?	
a) no	
b) yes	x
376.Has you country actively participated in subregional and regional activities in order to prepare for Convention meetings and enhance implementation of the Convention?	
a) no	
b) to a limited extent	x
c) to a significant extent	
377.Has your country undertaken a review of national programmes and needs related to the implementation of the Convention and, if appropriate, informed the Executive Secretary?	
a) no	x
b) under way	
c) yes	

Please use this box to identify what specific activities your country has carried out as a DIRECT RESULT of becoming a Contracting Party to the Convention, referring back to previous questions as appropriate:

Colombia's adherence to the Convention has enabled it to create a national awareness, become involved in the processes of developing an adequate management of these resources, strengthen very specific aspects which had been little investigated (exotic species, transgenics, the search for bioactive substances, among others) and to advance towards the sustainable utilization of the natural resources of a megadiverse country. As a direct consequence of being a contracting party of the Convention, the country participates in multilateral cooperation projects and has a national Policy, Strategy and Action Plan for Biological Diversity.

The country has had access to important resources of cooperation for biodiversity projects, among which is found the GEF-Andes project of the von Humboldt Institute.

The Colombian Network for Sustainable Development subscribes to this agreement and acts as a social tool for disseminating information about the subject and building awareness of sustainable development in the conservation and sustainable use of the resources which the nation possesses. Since its foundation, it has provided information about the work about the member organizations of the network. The country as such has specialized institutes dedicated to the taxonomic study of biological diversity, as well as the mechanisms and human resources needed to obtain and analyze data.

375:

Progress has been made towards the goal suggested by the question. That is, towards an interdisciplinary participation with a wide social base. But, in concrete terms, the naming of experts lies with the Ministry of Foreign Relations, which takes into account the curriculum vitae submitted by applicants. On a national level, it is the competent authority for choosing the members of delegations to any international event. Any accreditation of experts who travel outside of the country on an official mission or form part of a national delegation involves a process of approbation through a presidential decree, in the case of experts from state entities, and of a justification of the trip and its capacity to assume all costs, on the part of non-government entities. In these conditions the balance of sexes and interdisciplinary considerations are governed by the realities of budget and opportunity.

376:

A limited scope. Usually, in the preparatory GRULAC meetings of the COP's, a person chosen by the Ministry of Foreign Relations attends: he or she may be from any entity, depending on the central themes that will be discussed. Once again, it is worth underlining that the Ministry of Foreign Relations is the national entity that defines the Colombian delegations at any international event.

In subregional activities devoted to improving the application of the Convention, like those which are organized in the framework of the "CAAAM" (the Andean Committee of Environmental Authorities), participation has been wider and more intense. This was the case in the process of designing and formulating a biodiversity strategy for the tropical countries of the Andes (Bolivia, Colombia, Peru and Colombia), in which there was a wide preparatory participation by different sectors, representing the government, the NGO's, the indigenous communities, universities and business bodies.

On another level of preparation and regional coordination, Colombia has been particularly active in the meetings of the Group of Like-Minded Megadiverse Countries (LMMC). In addition, through non-governmental institutional initiatives, several institutes have actively collaborated in the thematic preparation of meetings, as in the case of the Humboldt Institute, which has provided informational and analytic documents that have served as a support in the deliberations of this group in matters of common interest.

Other activities have played a functional role in preparing Colombia to discuss subjects on the agenda of the different COP's. This has been the case for the presidential declarations of the Andean Community, the declarations of the presidents and heads of state of the Group of Río and the meetings of the Group of Non-aligned Countries.

377:

This is being realized: progress is being made in the institutions and bodies directly concerned with biodiversity, like the research institutes, universities and some offices of the Ministry of Environment, Housing and Territorial Development. However, the extension of this analysis to sectors of the economy and society that are directly related (agriculture, public health, local communities) or indirectly related (foreign trade, infrastructure and transport, energy and mining) is still precarious. Even more distant is the task of interrelating different sectors in the National Development Plan, whose central axis is biodiversity.

Some specific efforts related to the implementation of the Convention are: the thematic reports, the First National Report presented in 1998 and the present II National Report

Please use this box to identify joint initiatives with other Parties, referring back to previous questions as appropriate:

Due to the great importance of increasing awareness and knowledge of the biological diversity which Colombia possesses, the Network for Sustainable Development has established an agreement with the international NGO ECOPLAN for undertaking an informative-educational project on a national level, which consists of a publication (magazine-newspaper) aimed at involving urban and rural sectors in this subject and that of sustainable development, since their access to new technologies is highly limited.

Please use this box to provide any further comments on matters related to national implementation of the Convention:

The wording of these questions is based on the Articles of the Convention and the decisions of the Conference of the Parties. Please provide information on any difficulties that you have encountered in interpreting the wording of these questions

With regard to filling out the questionnaire, the overall opinion of the delegates was that it is difficult to understand, since the questions are put in a confusing way and in some cases the translation is not faithful to the English meaning of the question. Among the specific difficulties are:

Some questions contain two or more statements that require a response, which means that although one part may be fulfilled, you cannot respond in the affirmative because the others are not. This type of poll is very complicated for the institutions that respond for the first time.

Some respondents are not familiar with the text of the Convention on Biological Diversity.

The formulation of the questions and, in some cases, their translation are confusing. In some sections the questions are neither clear nor direct, so that they do not allow for very specific responses. The format is not complicated for the institutions who are fully conversant with the Convention. The format does not allow the institutions to cover matters that are relevant and complementary to the themes of the Convention.

Others participants believe, on the contrary, that the questions are clear and that the difficulty has to do with evaluating the exact state of national progress in a specific aspect. There should be room for open-ended answers, so that it would be possible to establish intermediate positions, showing the weaknesses and strengths of the country.

The format inquires about plans and programs, but it does not specify what kind of plan or program, which lends itself to different interpretations and may lead to subjective results.

Indicators showing the reality of the country's marine and coastal biodiversity should be introduced, since the questionnaire focuses on policies but does not allow for a clear view of how they are being applied to the needs of the country.

There are fewer questions about continental waters than marine and coastal ones, which reflects an overall ignorance of these ecosystems.

There is a lack of knowledge about some of the subjects dealt with in the format, as is the case of pluriannual Programs.

The format is too narrow and does not necessarily adjust to the country's possibilities of answering them. In addition, it is thought that the choice of the questions is biased and does not seem to allow for a profound analysis of advances in the thematic areas where the country could show major progress.

If your country has completed its national biodiversity strategy and action plan (NBSAP), please give the following information:

Date of completion:	The National Biodiversity Policy was completed in 1997 and the technical proposal of the National Biodiversity Action Plan was completed in 1998.		
If the NBSAP has been adopted by the Government			
By which authority?	Ministry of Environment, Housing and Territorial Development		
On what date?	The outlines of the National Biodiversity Policy were adopted in the national environmental council of 1996.		
If the NBSAP has been published please give			
Title:	National Biodiversity Policy Biodiversity: 21 st Century: Technical proposal for the formulation of national biodiversity action plan		
Name and address of publisher:	Authors of Policy: Ministry of Environment, Housing and Territorial Development . National Planning Directorate. Von Humboldt Institute. BIODIVERSITY ACTION PLAN: Maria Claudia Fandiño, Von Humboldt Institute and Paola Ferreira		
ISBN:	POLICY: does not have an ISBN BIODIVERSITY ACTION PLAN: 958-96529-4-8		
Price (if applicable):			
Other information on ordering:			
If the NBSAP has not been published			
Please give full details of how copies can be obtained:			
If the NBSAP has been posted on a national website			
Please give full URL:			
If the NBSAP has been lodged with an Implementing Agency of the GEF			
Please indicate which agency:	United Nations Environment Program		
Has a copy of the NBSAP been lodged with the Convention Secretariat?			
Yes		No	

Please provide similar details if you have completed a Biodiversity Country Study or another report or action plan relevant to the objectives of this Convention

In 1998 the first National Report on the State of Biodiversity in Colombia-1997 was published. The report is made up of 3 volumes.

The first volume is a compilation of the existing information about diversity on the ecosystemic level, species (threatened and endemic) and genetic agrobiodiversity. The second volume presents the main direct and indirect causes of biodiversity loss in the country and the third volume covers the national capacity for the conservation and sustainable use of biodiversity in Colombia. This report also contains a map of Colombian ecosystems, on a 1:1500000 scale.

More than 90 investigators from research entities, non-government organizations, universities, among others, participated in its publication. Thematic reports have been presented on protected areas, mountains and technology transfer.

Among other policies, those for forests, wetlands and marine and coastal zones stand out. For the development of the National Biodiversity Policy the country counts upon the National Biodiversity Strategy and its Action Plan, the National Report on the State of Diversity (INSEB) and the I Report on implementation to the BDT.

Please provide details of any national body (e.g. national audit office) that has or will review the implementation of the Convention in your country

The focal point of the Biological Diversity Treaty in Colombia is the Chancellery.

The Ministry of Environment, Housing and Territorial Development is the body that acts as the focal point for the scientific, technical and technological assessment of the Convention, as well as the national center of coordination on the subject of access to genetic resources and distribution of their benefits.

The Institute of Natural Sciences of the National University of Colombia the focal point in Colombia for the global initiative on taxonomy.

The Alexander von Humboldt Institute is the focal point of the Clearing-house Mechanism for the scientific and technical cooperation of the treaty - CHM

Likewise, the Ministry has promoted the formation of a National Environmental System, which, among other aims, seeks to consolidate information and knowledge about the different ecosystems and the different species which the country possesses.

Appendixes

Appendix 1 list of participants in the project

See attach document in excel "List"

Appendix 2 Trends

See attach document in excel "Trends"

Explanation for the trends⁹⁹:

⁹⁹ By Andrés Ramón, engineer of the Biodiversity Information System of the Alexander von Humboldt Institute.

Some entities answered 100% of the questions. Each question has several and not of the entities answered each number.

If all of the entities answered a number, the result of this would be 100% of affirmative answers for that number. Following this reasoning, if all answered each number affirmative and if there are four numbers there would be 400% at the end.

Since everyone did not answered all of the numbers and some answered more that one number in a question. The final sum does not always amount to 100%. It only gives the percentage of affirmative answers for each number.

Other sources of information consulted by the participating institutions for the preparation of the report:

- Information available in the Sub-directorate of Environmental Heritage of the Autonomous Regional Corporation for Cundinamarca (CAR). Agreement 244/2001: Management plan for the recuperation and handling of the remnants of wetlands of the high plains region of Cundinamarca and Boyacá - laguna de la Herrera, Neuta- Tierra Blanca and Pedro Palo.

Reports on the activities of the Subdirectorato of the Administration of Natural Resources - 2002, of the Autonomous Regional Corporation for the defense of the tableland of Bucaramanga (Corporación Autónoma Regional para la defensa de la meseta de Bucaramanga - CDMB)

Different publications, investigations and agreements undertaken by the Autonomous Regional Corporation for the Center of Antioquia (Corporación Autónoma Regional del Centro de Antioquia -CORANTIOQUIA)

Information from the Secretary of Agriculture and internal branches of the Autonomous Regional Corporation of Urabá (Corporación Autónoma Regional de Urabá - CORPOURABÁ)

The environmental legislation in force

"Methodologies of the Characterization of wild flora and fauna in the ecosystems of high moors and mist forests". Mario Avellaneda.

Study of the characterization of wild flora and fauna in "la Honda" micro-basin.

Lists of live species and herbarium collection. Eloy Valenzuela Botanical Garden

United Nations Convention on Biological Diversity (Law 165 of 1994)

Cartagena Biosafety Protocol

National Program on Science and Technology

National Biodiversity Policy

COLCIENCIAS national convocation , 2002-2003
Diagnosis of the Biodiversity of the Orinoco region

Regional Environmental Management Plan, Corporinoquía

Agenda of Systematics XXI Century

Wetlands Program, Ministry of Environment, Housing and Territorial Development

Inter-institutional discussion on the Policy of Adoption of Transgenic Crops - Corpoica, La Libertad, Villavicencio

Alvarado Forero, H. y Gutiérrez B. F de P. 1997. Especies hidrobiológicas continentales introducidas, trasplantadas y su distribución en Colombia. En: M.E. Chaves y N. Arango (eds). 1998. Informe Nacional sobre el Estado de la Biodiversidad de Colombia. Instituto Humboldt, Ministerio del Medio Ambiente y PNUMA, 1998. 3 Vol. Bogota Colombia.

Alvarado Forero, H. and Gutiérrez B. F de P. 1997. "Introduced and transplanted continental hydro-biological species and their distribution in Colombia". In: M.E. Chaves and N. Arango (eds). 1998. National Report on the State of Biodiversity in Colombia. Humboldt Institute, Ministry of Environment and UNEP, 1998. 3 Vol. Bogotá Colombia.

- Alvarado Forero, H. y Gutiérrez B. F de P. 2002. Especies hidrobiológicas continentales introducidas, trasplantadas y su distribución en Colombia. Ministerio del Medio Ambiente, RAMSAR, CVC. 2002. Bogota Colombia.

Alvarado Forero, H. and Gutiérrez B. F de P. 2002. "Introduced and transplanted continental hydro-biological species and their distribution in Colombia". Ministry of Environment, RAMSAR, CVC. 2002. Bogotá Colombia.

Biodiversity, history of vegetation and analysis of anthropic effects on the wetlands of the Savanna of Bogotá, Colombia. CAR-University of Amsterdam Agreement.

Revegetation for the recuperation and protection of strategic zones of the valley of the River Magdalena. Agreement 071/2001, 076/2001. CAR - Ministry of Environment, Housing and Territorial Development.

Environmental Management of the Courses of the main sources that supply the rural and municipal aqueducts in the jurisdiction of the CAR. Agreement 081/2001. CAR- Ministry of Environment, Housing and Territorial Development.

32 investigators belonging to the different programs and lines of investigation of the Humboldt Institute participated in the elaboration of the present report. These investigators consulted the Institute's internal reports as well as documents in its Center of Documentation in the cases when a bibliographical substantiation was required. The following aspects of this process should be taken into account:

The Program for Biodiversity Inventories has three lines of investigation: Characterization of Ecosystems, Characterization of Species and a Biodiversity Information system, which includes the creation and handling of alpha-numerical and geographic information.

The Program on the Biology of Conservation has 3 lines of investigation: focal species (endangered, endemic and invasive), the conservation of biodiversity in rural landscapes, and protected areas.

The Program on the Use and Valuation of Biodiversity has 3 lines of investigation: traditional knowledge, valuation and equity, and biotrade /use of fauna and flora.

The Program on Policy and Legislation has the following lines of investigation: development of the biodiversity policy, which includes regional action plans for biodiversity and intersectorial policy; follow-up of the biodiversity policy, which includes the definition of the system of indicators for the follow-up of the biodiversity policy; international agreements, which includes the facilitation mechanism of the Biodiversity Convention and the coordination of the CITES scientific authority.

The preparatory process for the elaboration of the information presented by the Institute was realized through a meticulous revision of the information contained in the website of the Network for Sustainable Development

This search basically revealed that the information contained in the site is rather limited, above all with regard to research documents, taxonomy and other elements needed for a truly profound study and recognition of the Convention and the subject in question.

Other related information utilized by the Humboldt Institute was:

- Results of the GIS Project of the Humboldt Institute, which was overseen by Milton Romero

Results of the BIOPACIFICO/WWF Project, overseen by Milton Romero
Results of the Humboldt Institute's Project on Environmental Indicators, overseen by Néstor Ortíz.

Results of the Humboldt Institute's Project on Indicators for the Biodiversity Policy, overseen by Guillermo Rudas.

Law 299, by which botanical gardens, by virtue of their mission, will make use of non-contaminating technologies for the development of their processes of investigation and applications of the same.

Text of the Convention on Biological Diversity and the Cartagena Protocol.

Bibliographies on the subject, such as:

-
- The Red Books on the Endangered and Extinct Species of Colombia published by the Von Humboldt Institute, the Institute of Environmental Studies (IDEAM), the Ministry of Environment, Housing and Territorial Development, the Institute of Natural Sciences of the National University of Colombia, Conservation International, the INVEMAR, with the support of different international organisms
-

- Biological and Cultural Diversity; Challenges and Proposals from Latin America. Prepared by the Ad Hoc Group, ILSA, The "Semillas" Group, IGEA and the WWF, among others.
- In addition, a consultation was made of the research projects currently under development in the thematic areas of in - situ and ex - situ conservation at the "José Celestino Mutis" Botanical Garden.

Bibliography:

R.ALVAREZ- Alvarez-León, R. 1997. *Bibliografía sobre el conocimiento de los ecosistemas de manglar en Colombia*. Proy. PD 171/91 Rev. 2 (F) Fase I. *Conservación y Manejo para el Uso Múltiple y el Desarrollo de los Manglares en Colombia*, MMA / OIMT. Santa Fe de Bogotá D. C. (Colombia). *Inf. Técnico*, 9: 1-169 .

Alvarez-León, R. 2000. *Los manglares colombianos y su capacidad productiva en términos de materia orgánica, pesquería y acuicultura*. *UBJTL-Geotrópica*, 5: 41-46.

Alvarez-León, R. 2003. *Los manglares de Colombia y la recuperación de sus áreas degradadas: revisión bibliográfica y nuevas experiencias*. *Rev. Maderas y Bosques*, 9 (1): (en prensa)

Guevara-Mancera, O. A. 1998. *Manual para la restauración de los bosques de manglar en áreas degradadas del Pacífico colombiano*. Proyecto PD 171/91 Rev. 2 Fase II (Etapa 1) *Conservación y Manejo para el Uso Múltiple y el Desarrollo de los Manglares en Colombia*, MMA / ACOFORE / OIMT, Santa Fe de Bogotá D. C. (Colombia), 16 p.

Guevara-Mancera, O. A. & F. Pinto-Nolla. 1998. *Monitoreo y caracterización de aguas de los manglares del Pacífico colombiano*. PD 171/91 Rev. 2 Fase II (Etapa I) *Conservación y Manejo para el Uso Múltiple de los Manglares de Colombia*, MMA / ACOFORE / OIMT. Santa Fe de Bogotá D. C. (Colombia). *Inf. Técnico*, 27: 1-37.

Guevara-Mancera, O. A., H. Sánchez-Páez, G. O. Murcia-Orjuela, H. E. Bravo-Pazmiño, F. Pinto-Nolla & R. Alvarez-León. 1998. *Conservación y uso sostenible de los manglares del Pacífico colombiano*, In : Sánchez-Páez, H., O. A. Guevara-Mancera & R. Alvarez-León (eds.) *Proy. PD 171/91 Rev. 2 Fase II (Etapa I) Conservación y Manejo para el Uso Múltiple y el Desarrollo de los Manglares de Colombia*, MMA / ACOFORE / OIMT. Santa Fe de Bogotá D. C. (Colombia), 178 p.

IAvH / MMA. 1999. *Bases Técnicas para la Conservación y Uso Sostenible de los Humedales Interiores*. Inst. Invest. Biol. Alexander von Humboldt / Ministerio del Medio Ambiente. Santa Fe de Bogotá D. C. (Colombia).

MMA. 1998^a. *Lineamientos de la Política Nacional de Ordenamiento Integrado de las Zonas Costeras*. Ministerio del Medio Ambiente. Santa Fe de Bogotá D. C. (Colombia).

MMA. 1998^b. *Política Nacional de Biodiversidad*. Ministerio del Medio Ambiente. Santa Fe de Bogotá D. C. (Colombia).

MMA. 1999^a. *Programa para la Implementación del Plan Estratégico de la Restauración y el Establecimiento de Bosques en Colombia -Plan Verde 1999-2002*. Ministerio del Medio Ambiente. Santa Fe de Bogotá D. C. (Colombia).

MMA. 1999^b. *Políticas ambientales de Colombia*. Ministerio del Medio Ambiente. Santa Fe de Bogotá D. C. (Colombia), 610 p.

MMA. 2002. Programa Nacional para el Uso Sostenible, Manejo y Conservación de los Ecosistemas de Manglar. Ministerio del Medio Ambiente. Santa Fe de Bogotá D. C. (Colombia), 59 p.

Sánchez-Páez, H. & R. Alvarez-León. 1998. Los manglares del Caribe y Pacífico: ecosistemas estratégicos para Colombia, alcances y lecciones de un Proyecto sobre Desarrollo Sostenible de Humedales, pp. 93-105 In: E. Guerrero (ed.); H. Sánchez-Páez, R. Alvarez-León & E. Matilde Escobar-Vélez (comp.) Una Aproximación a los Humedales en Colombia. Fondo FEN-COLOMBIA / UICN. Santa Fe de Bogotá D. C. (Colombia), 163 p.

Sánchez-Páez, H. & G. A. Ulloa-Delgado. 2000. Experiencias de restauración en el Proyecto Manglares de Colombia, In: Ponce de León, E. (ed.) Mem. Sem. Nal. de Restauración Ecológica y Reforestación, FFAE / FFEC / FESCOL / FNA / GTZ, dic. 2 y 3 de 1999. Santa Fe de Bogotá D. C. (Colombia), p: 219-258.

Sánchez-Páez, H. & R. Alvarez-León. 2002. Zonificación y categorías de manejo para áreas silvestres costeras de Colombia y su representatividad en los ecosistemas de manglar. PUJ-IDEADE-Rev. Ambiente y Desarrollo, 10 (1): 33-46.

Sánchez-Páez, H. R. Alvarez-León, O. A. Guevara-Mancera & G. A. Ulloa-Delgado. 2000. Lineamientos estratégicos para la conservación y uso sostenible de los manglares de Colombia. Proy. PD 171/91 Rev. 2 (F) Fase II (Etapa II). Conservación y Manejo para el Uso Múltiple y el Desarrollo de los Manglares de Colombia, MMA / OIMT. Santa Fe de Bogotá D. C. (Colombia), 81 p.

Sánchez - Páez, H., R. Alvarez-León, F. Pinto-Nolla, A. S. Sánchez-Alfárez, J. C. Pino-Renjifo, I. García-Hansen & M. T. Acosta-Peñaloza. 1997 a. Diagnóstico y Zonificación Preliminar de los manglares del Caribe de Colombia. In: Sánchez-Páez, H. & R. Alvarez-León (eds.) Proy. PD 171/91 Rev. 2 (F) Fase I. Conservación y Manejo para el Uso Múltiple y el Desarrollo de los Manglares de Colombia, MMA / OIMT. Santa Fe de Bogotá D. C. (Colombia), 511 p.

Sánchez - Páez, H R. Alvarez-León, O. A. Guevara-Mancera, A. Zamora-Guzmán, H. Rodríguez-Cruz & H. E. Bravo-Pazmiño. 1997 b. Diagnóstico y Zonificación Preliminar de los manglares del Pacífico de Colombia. In: Sánchez-Páez, H. & R. Alvarez-León (eds.) Proy. PD 171/91 Rev. 2 (F) Fase I. Conservación y Manejo para el Uso Múltiple y el Desarrollo de los Manglares de Colombia, MMA / OIMT. Santa Fe de Bogotá D. C. (Colombia), 343 p.

Sánchez-Páez, H., G. A. Ulloa-Delgado, R. Alvarez-León, W. O. Gil-Torres, A. S. Sánchez-Alfárez, O. A. Guevara-Mancera, L. P. Callejas & F. E. Páez-Parra. 2000. Hacia la recuperación de los manglares del Caribe de Colombia. In: Sánchez-Páez, H., G. A. Ulloa-Delgado & R. Alvarez-León (eds.) Proy. PD 171/91 Rev. 2 (F) Fase II (Etapa II). Conservación y Manejo para el Uso Múltiple y el Desarrollo de los Manglares de Colombia, MMA / OIMT. Santa Fe de Bogotá D. C. (Colombia), 294 p.

Ulloa-Delgado, G. A., W. O. Gil-Torres, J. C. Pino-Rengifo & H. Rodríguez-Cruz. 1998^a. Manual sobre técnicas de vivero y restauración de áreas de manglar del Caribe colombiano. Proyecto PD 171/91 Rev. 2 Fase II (Etapa I) Conservación y Manejo para el Uso Múltiple y el Desarrollo de los Manglares en Colombia, MMA / ACOFORE / OIMT, Santa Fe de Bogotá D. C. (Colombia), 24 p.

Ulloa-Delgado, G. A., H. Sánchez-Páez, W. O. Gil-Torres, J. C. Pino-Rengifo, H. Rodríguez-Cruz & R. Alvarez-León. 1998b. Conservación y uso sostenible de los manglares del Caribe colombiano. In: Ulloa-Delgado, G.

A., H. Sánchez-Páez & R. Alvarez-León (eds.). Proyecto PD 171/91 Rev. 2 Fase II (Etapa I) Conservación y Manejo para el Uso Múltiple y el Desarrollo de los Manglares en Colombia, MMA / ACOFORE / OIMT, Santa Fe de Bogotá D. C. (Colombia), 224 p.

Appedix 4 abbreviations

ACCI	Agencia Colombiana de Cooperación Internacional (Colombian Agency for International Cooperation)
AUGURA	Centro de Investigaciones del Banano (Banana Research Center)
ADPIC	Acuerdo de la OMC sobre los Aspectos de los Derechos de Propiedad Intelectual relacionados con el Comercio (WTO Agreement on Trade-Related Aspects of Intellectual Property Rights)
BCH	Biosafety Clearing-House Mechanism
BIRF	Banco Internacional de Reconstrucción y Fomento (The International Bank for Reconstruction and Development)
BMZ	Germany's Ministry of Economic Cooperation and Development
BPIN	Banco de Proyectos de Inversión (Bank of Investment Projects)
CAAAM	Comité Andino de Autoridades Ambientales (Andean Committee of Environmental Authorities)
CAN	Informe Agro biodiversidad (Agro-biodiversity Report)
CAR	Corporaciones Autónomas Regionales (Autonomous Regional Corporations)
CCCP	Centro de Control de la Contaminación del Pacífico (Center for the Control of Contamination of the Pacific)
CDB	Convenio sobre Diversidad Biológica (Convention on Biological Diversity)
CENIBANANO	Centro de Investigaciones del Banano (Banana Research Center)
CENICAFE	Centro Nacional de Investigaciones de café (National Coffee Research Center)
CENICAÑA	Centro de Investigaciones de la Caña de Azúcar (Sugar Cane Research Center)
CFT	Centro Forestal del Tolima (Forestry Center of Tolima)

CHM	Mecanismo de Facilitación (Clearing-house Mechanism)
CIAT	Centro Internacional de la Agricultura Tropical (International Center for Tropical Agriculture)
CIDEAS	Comités Técnico Interinstitucionales (Interinstitutional Technical Committees)
CIF	Certificado de Incentivo Forestal (Forestry Incentive Certificate)
CIMARRÓN	Organización Afro colombiana de Colombia (Afro- Colombian Organization of Colombia)
CIOH	Centro de Investigaciones Oceanográficas e Hidrográficas (Center for Oceanographic and Hydrographic Investigations)
CIPAV	Centro para la Investigación en Sistemas Sostenibles de Producción Agropecuaria (Research Center for Sustainable Systems of Agricultural and Stock-raising Production).
CITES	Convención sobre el Comercio Internacional de Especies Amenazadas de Fauna y Flora Silvestre (the Convention on International Trade in Endangered Species of Wild Fauna and Flora)
CYTED	Programa Iberoamericano de Ciencia y Tecnología para el Desarrollo (Ibero-American Program of Science and Technology for Development)
CMS	Convención sobre la conservación de las especies migratorias de animales silvestres (The Convention on the Conservation of Migratory Species of Wild Animals)
COLCIENCIAS	Instituto Colombiano para el Desarrollo de la Ciencia y la Tecnología Francisco José de Caldas (Colombian Institute for the Development of Science and Technology)
CONIF	Corporación Nacional de Investigaciones Forestales (National Corporation of Forestry Research)
CONPES	Consejo Nacional de Política Económica y Social (National Council for Economic and Social Policy)
CORANTIOQUIA	Corporación Autónoma Regional del Centro de Antioquia (Autonomous Regional Corporation for Central Antioquia)
CORPOCALDAS	Corporación Autónoma Regional de Caldas (Autonomous Regional Corporation of Caldas)

CORPOCEBADA	Corporación para la Modernización de la Cebada y Diversificación de Cultivos (Corporation for the Modernization of Barley and Crop Diversification)
CORPOICA	Corporación Colombiana de Investigación (Colombian Research Corporation)
CORPOURABÁ.	Corporación Autónoma Regional de Urabá - (Autonomous Regional Corporation of Urabá)
CREG CRGAA (FAO Commission on Plant Genetic Resources for Food and Agriculture)	Comisión de Recursos Genéticos para la alimentación y la agricultura de la FAO
CVS	Corporación Autónoma Regional de los Valles del Sinú y del San Jorge (Autonomous Regional Corporation of the Valleys of the Sinú and the San Jorge)
DAMA	Departamento Administrativo del Medio Ambiente (Administrative Environment Department)
DANE	Departamento Administrativo Nacional de Estadísticas (National Administrative Department of Statistics)
DIMAR	Dirección General Marítima (General Maritime Directorate)
DNP	Departamento Nacional de Planeación (National Planning Department)
EPA	Establecimiento Público Ambiental de Cartagena (Public Environmental Establishment of Cartagena)
FAO	Food and Agriculture Organization
FAO	Organización Mundial para la Alimentación y la Agricultura (Food and Agriculture Organization)
FEDEARROZ	Federación Nacional de Arroceros de Colombia (Colombian National Federation of Rice-growers)
FEDEPAPA	Federación Nacional de Productores de Papa (National Federation of Potato Producers)
FEN	Fondo para la Protección del Medio Ambiente (Fund for the Protection of the Environment)

FONAM	Fondo de Inversión Ambiental (Environmental Investment Fund)
GEF	Fondo Mundial para el Medio Ambiente Global Environmental Facility
GIWA	Global International Water Assessment
GRULAC	Group of Latin American and Caribbean States
GTZ	German Cooperation Agency
GEZ	Gestión de zonas costeras (Management of coastal zones)
IAIA	International Association for Impact Assessment
IAVH	Instituto de Investigación en Recursos Biológicos "Alexander von Humboldt" "Alexander von Humboldt Institute of Research into Biological Resources)
ICA	Instituto Colombiano Agropecuario (Colombian Agriculture and Stock-raising Institute)
ICANH	Instituto Colombiano de Antropología e Historia - (Colombian Institute of Anthropology and History)
ICN	Instituto de Ciencias Naturales - de la Universidad Nacional. (Institute of Natural Sciences, of the National University of Colombia)
IDEAM	Instituto de Hidrología Meteorología y Estudios Ambientales (Institute of Hydrology, Meteorology and Environmental Studies)
IIAP	Instituto de Investigaciones Ambientales del Pacífico " John Von Neumann" ("John Von Neumann" Institute of Environmental Investigations of the Pacific)
IICA	Instituto Colombiano Agropecuario (Colombian Agriculture and Stock-raising Institute)
INCIVA	Instituto Vallecaucano de Investigaciones Científicas (Valley of Cauca Institute of Scientific Research)
INSEB	Informe Nacional sobre el Estado de la Biodiversidad (National Report on the State of Biodiversity)

INVEMAR	Instituto de Investigaciones Marinas Y Costeras ("José Benito Vives De Andreis" "José Benito Vives de Andreis" Institute of Marine and Coastal Research)
INVIMA	Instituto Nacional de Vigilancia de Medicamentos y Alimentos (National Institute for the Control of Medicaments and Foods)
ISA	Empresa de Interconexión Eléctrica S.A (Electricity Interconnection Company)
ITTO	Organización Tropical Internacional de Madera (International Tropical Timber Organization)
JICA	Agencia de Cooperación Japonesa (Japanese International Cooperation Agency)
LMMC	Grupo de Países Megadiversos (Group of Like- Minded Megadiverse Countries)
MAVDT	Ministerio de Ambiente, Vivienda y Desarrollo Territorial (Ministry of Environment, Housing and Territorial Development)
MHNMC	Museo de Historia Natural Marino de Colombia (Colombian Museum of Marine Natural History)
MIZC	Manejo Integrado de Zonas Costeras (Integrated Management of Coastal Zones)
MMA	Ministerio de Medio Ambiente (Ministry of Environment)
MYPOW	Multi-Year Programme of Work
NCSA	National Capacity Self Assessment", GEF Project
GEF	Global Enviromental Facility
OEA	Organización de Estados Americanos (Organization of American States)
OIEA:	Organización Internacional de la Energía Atómica (International Atomic Energy Agency)
OIMT	La Organización Internacional de las Maderas Tropicales (International Tropical Timber Organization)
OMC	Organización Mundial del Comercio (World Trade Organization)
OMG	Organismos Modificados Genéticamente (Genetically Modified Organisms)
OMI	Comité de Protección del Medio Marino (Committee for the Protection of the Marine Environment)

OMI	Organización Marítima Internacional (International Maritime Organization)
ONG´S	Organizaciones No Gubernamentales (Non-governmental Organizations)
ONIC	Organización Nacional Indígena Colombiana (Colombian National Indigenous Organization)
OPIAC	Organización de Pueblos Indígenas de la Amazonía Colombiana (Organization of Indigenous Peoples of the Colombian Amazon)
OVM	Organismos Vivos Modificados (Modified Live Organisms)
PAN	Plan Nacional de Acción en la Lucha Contra la Desertificación y Manejo de Ecosistemas de Zonas Secas en Colombia (National Action Plan for Combating Desertification and Managing the Ecosystems of Dry Zones in Colombia)
PEA	Programa de Ecosistemas Acuáticos (Program for Aquatic Ecosystems)
PGN	Presupuesto General de la Nación (General Budget of the Nation)
PNAOCI	Política Nacional Ambiental de los espacios oceánicos y las zonas costeras e insulares de Colombia (National Environmental Plan for the oceanic spaces and coastal and island zones of Colombia)
PNDF	Plan Nacional de Desarrollo Forestal (National Forestry Development Plan)
PNIBM	Programa Nacional de Investigación en Biodiversidad Marina y Costera (National Program of Research into Marine and Coastal Biodiversity)
PNUD	Programa de las Naciones Unidas para el Desarrollo (United Nations Development Programme)
PNUMA	Programa de las Naciones Unidas para el Medio Ambiente (United Nations Environment Programme)
POT	Plan de Ordenamiento Territorial (Territorial Ordering Plan)
PRAES Projects)	Proyectos Ambientales Escolares (School Environment Projects)
PROAGRO	Programa de oferta nacional agropecuario- (Program for national agricultural and stock-raising supply)
RAMSAR	Convención Relativa a los Humedales de Importancia Internacional Especialmente como Hábitat de Aves Acuáticas(Convention on Wetlands of International Importance, especially as the Habitat of Aquatic Birds)
SBTTA	Organismo de Asesoramiento Científico, Técnico y Tecnológico (Agency of Scientific, Technical and Technological Consultancy)

SIAC	Sistema de Información Ambiental de Colombia (Colombian Environmental Information System)
SIB	Sistema de Información en Biodiversidad (Biodiversity Information System)
SIDAP	Sistemas Departamentales de Áreas Protegidas (Departmental System of Protected Areas)
SINA	Sistema Nacional Ambiental (National Environmental System)
SINAP	Sistema Nacional de Áreas Protegidas (National System of Protected Areas)
SINCHI	Instituto de Estudios Amazónicos (Institute of Amazonian Studies)
SIRAP	Sistema Regional de Áreas Protegidas (Regional System of Protected Areas)
UAESPNN	Unidad Administrativa Especial del Sistema de Parques Nacionales Naturales (Special Administrative Unit of the System of National Natural Parks)
WWF	World Wildlife Fund

	ENTIDAD Entity	Person - Post	E-MAIL	Address	Telephone	Colombian Department
REGION ANDINA						
	CORPOURABA - CORPORACION PARA EL DESARROLLO SOSTENIBLE DEL URABA	Jairo Guillermo Vásquez Arango, profesional especializado	proforest@edatel.net.co /subpot@edatel.net.co	-	094- 3811369(Medellín) /8283003/8280170 /1023(apartadó)	Antioquia
	UNIVERSIDAD NACIONAL DE COLOMBIA SEDE MEDELLÍN, Escuela de Biociencia	Jorge Andrés Pérez Zabala		-	2560873 -4309348	Antioquia
	CORANTIOQUIA - CORPORACIÓN AUTÓNOMA REGIONAL DEL CENTRO DE ANTIOQUIA -	Juan Lazaro Toro Murillo	jtoro@corantioquia.gov.co	-	4938888 - 2656823 - 8305733 - (Cel)Dir (310) 8245974	Antioquia
	CORNARE - CORPORACIÓN AUTÓNOMA REGIONAL RIONEGRO-NARE	Jorge Mauricio Orozco	mrorozco@cornare.gov.co/d ire@epm.net.co		094- 5461466/5461616	Antioquia
	FUNDACION NEOTROPICOS	Jaime Badel	info@neotropicos.org	-	094 -2161317	Antioquia
	CENIBANANO - CENTRO DE INVESTIGACIONES DEL BANANO - AUGURA	Miguel Montoya	miguelm@geo.net.co	-	8236602/3211333	Antioquia
	CORPOCHIVOR - CORPORACION AUTONOMA REGIONAL DE CHIVOR -	Harold Gómez Núñez, Coordinador programa de Biología y ecosistemas estratégicos	cchivor@corpochivor.gov.co	-	0987-500772	Boyacá
	CORPOBOYACA - CORPORACION AUTONOMA	Juan Carlos Pino, Coordinador Proyecto Lago de Tota	jcpino@yahoo.com /corpoboy@col1.telecom.co m.co		098- 7432071,73,40752 0,	Boyacá

	REGIONAL DE BOYACA					
	JARDIN BOTANICO Universidad Pedagógica Tecnológica de Colombia	Ricardo Manrique y Pedro Chaparro	rico73@mixmail.com, supers ona@RedColombiana.com		Celular: 3105528520- 3107637721	Boyacá
	CORPOCALDAS - CORPORACION AUTONOMA REGIONAL DE CALDAS	Mónica Dunoyer	monicadunoyer@yahoo.c om, corpocaldas@epm.net.co	-	0968- 830285,8849570,8 830038	Caldas
	INSTITUTO DE INVESTIGACIÓN DE RECURSOS BIOLÓGICOS ALEXANDER VON HUMBOLDT	Maria Elfy Chaves o Maria Claudia Fandiño	mechaves@humboldt.org.c o/ mcfandino@humboldt.org.c o	-	36812370 / 2134(571) - 6086900	Cundinamarca
	CONSERVACIÓN INTERNACIONAL - COLOMBIA	José Vicente Rueda	jvrueda@yahoo.com	-	(571) 3452852 - 3452863	Cundinamarca
	PONTIFICIA UNIVERSIDAD JAVERIANA -IDEADE	Juan Ricardo Gómez, Germán Jimenez, Andrés Rimel Acosta.	jrgomez@javeriana.edu.co/ german.jimenez@javeriana. edu.co/andres.acosta@jave riana.edu.co	-	3208320 ext. 4819 - 4080	Cundinamarca
	RED DE DESARROLLO SOSTENIBLE DE COLOMBIA	Adriana Fernanda Rodriguez Durán-Paula Martínez	adriana@rds.org.co	-	2324246,3492(1) 3380264 cel:310 - 2958780	Cundinamarca
	IDEAM INSTITUTO DE HIDROLOGÍA, METEOROLOGÍA Y ESTUDIOS AMBIENTALES	Sandra Patricia Cruz Arguello, profesional subdirección de ecosistemas/ Mónica Cuellar, profesional especializado	spcruz@ideam.gov.co/moni @ideam.gov.co		6356230 ext 706 6356114- 3158501441- celular Arango	Cundinamarca

	JARDÍN BOTÁNICO DE BOGOTÁ JOSÉ CELESTINO MUTIS-	Guadalupe Caicedo, Bióloga Entomóloga/ Claudia Patrica Gonzales	bogotanico@jbb.gov.co		4377060	Cundinamarca
	MINISTERIO DE RELACIONES EXTERIORES	Flor Ángela Durán	angela.duran@minrelext.gov.co/dmambienc@minrelxt.gov.co		5662008 ext2257	Cundinamarca
	MINISTERIO DE COMERCIO EXTERIOR	Pedro García	pedrog@mincomex.gov.co		6067676 ext 1341	Cundinamarca
	UNIVERSIDAD DE LOS ANDES - Depto de Ciencias biológicas e instituto de genética	Oscar Ramos	o-ramos@uniandes.edu.co		3324534/3394949 ext. 2769	Cundinamarca
	COLCIENCIAS	María Cristina Durán - Ciencias del Medio Ambiente y Habidad	mcduran@colciencias.gov.co	-	6258480 ext 2242 - 2243	Cundinamarca
	DAMA - DEPARTAMENTO TÉCNICO ADMINISTRATIVO DEL MEDIO AMBIENTE	Dorís Tautiva	rural@dama.gov.co	-	4441030, ext 594	Cundinamarca
	CAR - CORPORACION AUTONOMA REGIONAL DE CUNDINAMARCA	Dalila Camelo, profesional universitario subdirección de patrimonio ambiental	dcamelos@car.gov.co	-	3209000 ext 1409	Cundinamarca
	UAESPNN - UNIDAD ADMINISTRATIVA ESPECIAL DEL SISTEMA DE PARQUES NACIONALES DEL MINISTERIO DEL MEDIO AMBIENTE	Martha Suarez	mlsuarez@parquesnacionales.gov.co		2431850	Cundinamarca
	ICA - INSTITUTO COLOMBIANO AGROPECUARIO--	Camilo Silva	camilo.silva@ica.gov.co	-	3323702 ext 308	Cundinamarca

	CONIF - CORPORACIÓN NACIONAL DE INVESTIGACIÓN Y FOMENTO FORESTAL	Ing. Héctor González	conif@colomsat.net.co/hgonzale8@hotmail.com/conifpre@colomsat.net.co	-	(57) 1 3417000 ext 108-Celular: 3153934050	Cundinamarca
	UNIVERSIDAD EXTERNADO DE COLOMBIA	Patricia Guzmán	pguzman@externado.edu.co	-	3420288 3419900 Ext. 1161 - 1163	Cundinamarca
	CORPONOR - CORPORACION AUTONOMA REGIONAL DE LA FRONTERA NORIENTAL	Sergio Niño, profesional del área de planeación	corponor@col1.telecom.com.co/ serarbol@latinmail.com		(097) 5716219	Norte de Santander
	CORTOLIMA - CORPORACION AUTONOMA REGIONAL DEL TOLIMA	Luz Mary Cifuentes/Ruben Dario Gómez	cortolima@cortolima.gov.co/ merycifuentes@hotmail.com/ cortoli3@bundetolinet.com.co		(0982) 0382- 654551-654553	Tolima
	CORPORACION AUTONOMA DE SANTANDER	Armando Rodríguez	asesordireccion@cas.gov.co	-	097-7248341- 7236889	San Gil - Santander
	FUNDACION UNIVERSITARIA POLITECNICO GRAN COLOMBIANO	Juan Carlos Quintero	ccamacho@poligran.edu.co/ jcarlosq@poligram.edu.co	-	3469248	
	CECODES	Sergio Rengifo, profesional proyecto de Biodiversidad	cecodes_sr@cable.net.co	-	6621224, 6221303 Cel (573) 2595076	Cundinamarca
	MINISTERIO DE AMBIENTE -OFCINA DE ECOSISTEMAS	Margarita Gnecco			3323434 ext 411	Cundinamarca
	MINISTERIO DE AMBIENTE - PROYECTO NCSA- (GEF)	Carolina Isaza/Anamaría Aristizabal	carolinaisaza@netscape.net		52536864/524510 82	
REGION PACIFICA						

	MINISTERIO DE AMBIENTE -OFICINA DE EDUCACION Y PARTICIPACION CIUDADANA	Luz Stella Rojas H.	Isrojas@minambiente.gov.co		3323400-3406236	Cundinamarca
	CORPORACIÓN AUTONOMA REGIONAL DEL CAUCA	Rosaura Bermúdez	rosaura@crc.gov.co	Cra 6c 26n 35 Popayán	092-8203232	Cauca-Popayán
	CVC - CORPORACION AUTONOMA REGIONAL DEL VALLE DEL CAUCA -	María Isabel Salazar/Natalia Gómez	maria-isabel.salazar@cvc.gov.co/natalia.gomez@cvc.gov.co	Cra 56 # 11-36 / Centro de Estudios Hidrobiológicos	092- 3307470/ 3396671 ext 300-301/ 2424035	Valle del Cauca-Cali
	JARDIN BOTANICO DE POPAYAN - FUNDACION UNIVERSITARIA DE POPAYAN	Hernando Vergara	herveva@hotmail.com/lucarvajal3@hotmail.com		092-8238005/238213	Cauca-Popayán
	CCCP	Paula Judith Rojas	paulaj31@hotmail.com		092 7272650	Tumaco
	ARMADA/CIOH/DIMAR	Silvia Rondón	srdon@cioh.org/silviaroci7@hotmail.com		095-6694465/6694104/	Cartagena
	IIAP - INSTITUTO DE INVESTIGACIONES AMBIENTALES DEL PACÍFICO	Emilio Arenas	iiap@iiap.org.co		0946-709127	Chocó
	INSTITUTO DE BIODIVERSIDAD UNIVERSIDAD DEL CHOCÓ	Fabio García y Alicia Rios Hurtado	fgcossio@col2.telecom.com.co/fgcossio@hotmail.com/alirios@hotmail.com	Cudadela Universitaria	094 - 6712099/0723/0237 ext 115 y 136	Chocó
	WWF - WORLD WILDLIFE FUND - FONDO MUNDIAL PARA LA NATURALEZA - COLOMBIA	Ximena Barrera, César Suárez y Ana María Lora	xbarrera@wwf.org.co/amlora@wwf.org.co	Cra 35 #4A-25 San Fernando	57 2 5582577	Valle del Cauca-Cali
	CONSERVACION INTERNACIONAL	Jaime Salazar	jsalazar@conservation.org		3452852	Cundinamarca

	NATURA	Carlos Vieira	cavieirab1@cable.net.co		8037338/3456188/ 5264666	Cundinamarca
	CENICANA - CENTRO DE INVESTIGACIÓN DE LA CAÑA DE AZÚCAR DE COLOMBIA	Juan Carlos Ángel	jcangel@cenicana.org/jcangel@telesat.com.co	Calle 58N # 3BN 110.	(2) 6648025 - 30	Valle del Cauca-Cali
	CALIDRIS - ASOCIACIÓN PARA EL ESTUDIO Y LA CONSERVACION DE LAS AVES ACUÁTICAS EN COLOMBIA CALIDRIS	Fernando Castillo/Felipe Estela	calidris@telesat.com.co/falk@emcali.net.co/lfcastillo7@hotmail.com/faestela@telesat.com.co	Cra 24 F Oeste # 3 - 110 Barrio Tejares de San Fernando	5585585	Valle del Cauca-Cali
	YUBARTA	Julio Herrera	yubarta@emcali.net.co/falk@emcali.net.co	Cra 24 F Oeste # 3 - 110 Barrio Tejares de San Fernando	(572) 5585598	Valle del Cauca-Cali
	ISA/ANDI	Esteban Alvarez/Fernando Cadena	fecadena@ISA.com.co		4-3157065	Medellín
	RED DE RESERVAS	Lourdes Peñuela	resnatur@resnatur.org.co		092-6534538	Valle del Cauca-Cali
	MINISTERIO DEL INTERIOR-OFICINA DE ETNIAS	Laura Román	lauraromang@yahoo-com	cra 8 N 13- 31 piso 6	5662638	Cundinamarca
	CENTRO FORESTAL TROPICAL BAJO CALIMA	Hugo Martinez Higuera	martinez@colombianet.net, famartinez@telesat.com.co	Universidad del Tolima, Barrio Santa Helena - facultad de Ingeniería Forestal - Ibagué	2-2644219	Valle del Cauca
	COMUNIDADES INDIGENAS	Antonio Jacanamijoy - Mayibe Ardila	coicacol@007mundo.com, mayibeardila@yahoo.com		Antonio- 3102603938/2698 760	Cundinamarca

	OPIAC	José Soria	sorialeti@hotmail.com		2826010/2814456	Cundinamarca
	CIMARRON	Juan de Dios Mosquera	cimarron_@latinmail.com	Cille 13 N 5-63 oficina 403	2848431/ 2867883	Cundinamarca
	INCIVA	Juan B.Adarve	jadarve@teletulua.com.co/	A.A. 314 Tulua/	2260975	Valle del Cauca - Tulua
	INVESTIGADORA INDEPENDIENTE	Olga L. Cifuentes	olcifuen@hotmail.com	Cra 53 N 6A- 90 Cali	5131575	Valle del Cauca - Cali
REGION ATLANTICA						
	MINISTERIO DE AMBIENTE -OFICINA DE EDUCACION Y PARTICIPACION Y OFICINA DE ASUNTOS INTERNACIONALES	Luz Estela Rojas (Educación) Jimena Nieto (Grupo Asuntos Int.)	lsrojas@minambiente.gov.c o / jnieto@minambiente.gov.co	calle 37 N0. 8- 40	3323400	Cundinamarca
	AVE FENIX	Fabio Ocampo	avefenix@col3.telecom.com .co	edif, mar azul, apto 1101.Rioacha	3157110137	Guajira
	MINISTERIO DE AGRICULTURA Y DESARROLLO RURAL	Jorge Luis Mican (Biologo) Direccion Cadenas productivas/ Wiliam Rene Gutierrez Ortegon (Zootechnista- Direccion desarrollo tecnológico)/Jimmy Ruiz (pasante-Política sectorial)	jmican@minagricultura.gov. co/wgurierrez@minagricultu ra.gov.co/ jruiz@minagricultura.gov.co	-	3341199- ext 443 cadena productivas	Cundinamarca
	ICA - INSTITUTO COLOMBIANO AGROPECUARIO--	Camilo Silva,encargado de Asuntos Ambientales(planeación) - Rodrigo Artunduaga, coordinador de bioseguridad y recursos geneticos, agrícolas	camilo.silva@ica.gov.co/ rartundis@hotmail.com	calle 37 No. 8- 43, piso 5- oficina 507	3323700 ext 308/2855520- 2884427-2325315	Cundinamarca

	CORPOICA	Jorge Granados/Carlos Fernando Ortiz (Bogotá) y Antonio Jose López (monteria)	jhgranados@corpoica.org.co/cfortiz@corpoica.org.co/alopez@turipana.org		4227300 Bogotá y (0947) 860217-860052 (monteria-señor López)	Cundinamarca
	IDEAM	Sandra Patricia Cruz	spcruz@ideam.gov.co		3500111 ext (1611)-3158501441-celular Gonzalo Arango	Cundinamarca
	CORPOURABA - CORPORACION PARA EL DESARROLLO SOSTENIBLE DEL URABA	Jairo Guillermo Vásquez Arango, profesional especializado	proforest@edatel.net.co/subpot@edatel.net.co	calle 92 No. 98-39- Apartadó	094-3811369(Medellín) /8283003/8280170 /1023(apartadó)	Antioquia
	CORALINA -	Yolima Granados	jgranados@yahoo.com/blackcrab@coralina.gov.co/coralina@coralina.gov.co	Via San Luis-Bight	(09851) 20080-26853-28272	San Andrés y Providencia
	CORPOMOJANA	Emiro Cordero, bilógo	cemiro@hotmail.com/mojana2@terra.com.co/yahoo.com/corpomoj@col3.telecom.com.co		(095) 2954877/869 -	Sucre
	CARSUCRE	Iván Sierra Martínez, Coordinador Fauna Silvestre	carsucre@col3.telecom.com.co, ivan01@col3.telecom.com.co		2811418- cel (315)7435824	Sucre
	CORPOCESAR - CORPORACION AUTONOMA DEL CESAR	Libardo Lascarro Ditta.	corpovidaong@latimail.com/corpoce@telear.net.co		(0955) 737346/733925-709095	Cesar
	CVS - CAR- VALLES DEL SINU Y DEL SAN JORGE	Rafael Espinosa, director grupo control y saneamiento ambiental	rafael.espinosa@cvs.gov.co		(094) 7829951-ext 701	Cordoba

	CORPOGUAJIRA - CORPORACION AUTONOMA REGIONAL DE LA GUAJIRA	Gregoria Fonseca	glfoseca3@latinmail.com/ corpogua@col3.telecom.co m.co	Edificio el ejecutivo of 503- Rioacha	(0957) 272581- 273905-273652- 283473	Cordoba
	CSB	Hugo Romero, jefe de Fauna Silvestre	csb327@col3.telecom.com. co,		6878819- 6878016,12	
	EPA -Establecimiento Público Ambiental de Cartagena	Rafael Vergara	rvergaran@yahoo.com		(315)7383031/656 4231	Bolivar
	INVEVAR	Juan Manuel Díaz, Lina Barrios, Milena Benavides, Mario Rueda	fariasis@invemar.org.co, linab@invemar.org.co, jmdiaz@invemar.org.co, mbenavides@invemar.org.c o		5 4214774 - 4214413- 4211380	
	INSTITUTO ALEXANDER VON HUMBOLDT	María Teresa Palacios	mtpalacios@humboldt.org.co		(571) - 6086900, 3682702/ Villa de Leyva (987) 320164 ext.170	Cundinamarca
	CIOH	TN. Silvia Rondon/ Paula Tigreros/Tatiana Vanegas	/srdon@cioh.org.codesat @cioh.org.co/cioh@cioh.org .co/ tigrerosballz@bdzmail.com/t atianavs@yahoo.com		6694465/6694104/ 6694427/6694323/ 6694286	
	CONIF	Ing. Héctor González	conif@colomsat.net.co/hgon zale8@hotmail.com/conifpre @colomsat.net.co	Av circunvalar No. 16-20- Detrás instituto Rossvelt.	3417000 Ext. 108/ 3417000Celular: 3153934050	Cundinamarca
	INGEOMINAS	Luz Helena Molina	ingeominas@col3.telecom.c om.co		5-6620258/7960	Bolivar
	UNIVERSIDAD DEL MAGDALENA	Guillermo Rueda	biologia@unimag.edu.co		095-4303368 095- 4303619 / 4301140 - 4303368	Magdalena

	UNIVERSIDAD JAVERIANA - Facultad de ciencias	Luis Alberto Acosta	alberto.acosta@javeriana.edu.co	-	3208320 ext 4081	Cundinamarca	
	FUNDACION BIOZOO	Gloria María Fernandez	biozoo@hotmail.com	-	4-7850165	Córdoba	
	UNIVERSIDAD DE CALDAS	Daniel Ricardo Toro, Director Instituto Biología Tropical Andina	biotropican@ucaldas.edu.co	-	Celu:(315)591204 1/ casa8868757/096-8861250	Caldas	
	CAPITANÍA DE PUERTO- Turbo-DIMAR	Teniente de Navio Camilo Forero, Capitán de puerto Turbo-/ DIMAR	juancamiloforero@yahoo.com/capiturbo@edatel.net.co	-	Celulares(315)578 9302/(315)035083 48	Cundinamarca/	
	UNIVERSIDAD DEL ATLANTICO	Octavio Galvis/Luis Carlos Gutiérrez	agalvis@uniatlantico.edu.co , rotifero@hotmail.com		Carrera 4 No. 19-125 - Barranquilla / Carrera 38 No. 84-115, B-2 Apto 301 -C.R Oasis- Barranquilla	315-7218196 / 3157348259	Atlántico
REGION ORINOQUIA							
	UNIVERSIDAD NACIONAL DE COLOMBIA - SEDE ARAUCA	Carlos Jaramillo	martorre@dnic.edu.co		Kilometro 9, Via Tame	09878853004-0978853004	Arauca
	UNIVERSIDAD DE LA AMAZONÍA	Edgar Humberto Murcia	edgarhmurcia@hotmail.com		Av. Circunvalación Barrio El Porvenir	098-4360733 (casa)-4358786 ext 166 (oficina)	Caquetá
	FUNDACIÓN UNIVERSITARIA INTERNACIONAL DEL TRÓPICO AMERICANO-	Pablo Ávila	avilafernando@hotmail.com		Ciudadela Universitaria - Jopál	0986320700 - 0986320701	Casanare

	CORPORINOQUÍA - CORPORACION AUTONOMA REGIONAL DE LA ORINOQUIA	Rafael Vargas Riveros	controlinterno@corporinoqui a.gov.co/corpquia@col1.tele com.co/rafavargas@hotmail .com	Cra 19 No 21 34	6358588 6355481	Casanare 1 cupo
	UNIVERSIDAD DE LOS LLANOS - UNILLANOS	Clara Ines Caro-Alvaro Ocampo-	mojana2@yahoo.com- ccaro@unillanos.edu.co	Kilometro 12 vía Pto. López	6698600 ext 124- 6698631	Meta-Llanos
	CORMACARENA - CORPORACION PARA EL DESARROLLO SOSTENIBLE DEL AREA DE MANEJO ESPECIAL DE LA MACARENA	Beltsy Barrera y Henry Hernández	cormacarena@hotmail.com- corma01@col1.telecom.com .co	Cra 35 # 25-57 3 Piso San Benito	(0986)678797- 983285 (José luis)- 0986582158(Edua rdo)	Meta
	ORIOUS BIOTECNOLOGIA LTDA	Ernesto Andrade	oriusbiotc@andinet.com- eandrade@orius.com.co	Calle 15 N° 37 J-04. Esperanza 8ª	8-6700202	Cundinamarca
	FUNDACION HORIZONTE VERDE	Jhon Diego Jaramillo, Francisco Castro	fhverde@andinet.com, aocampo@andinet.com	Centro Comercial Villacentro, local 4	6632494	Meta-Llanos
	OMACHA	Maria Claudia Diazgranados	omacha@cable.net.co		2873665	Cundinamarca
	COMUNIDADES INDIGENAS	Antonio Jacanamijoy	coicacol@007mundo.com			Cundinamarca- Bogotá
	ONIC	Nilson Zurita	onic@colnodo.apc.org		2843465- 3158572995	Cundinamarca
	OPIAC	Jose Soria y Casildo Yepes	sorialeti@hotmail.com, jos_soriajava@yahoo.es		2826010-2814456, 310-7652563 (soria), 2842168 (yepes)	Cundinamarca
	CIMARRON	Julián Gutierrez	cimarron_@latinmail.com	calle 34 No. 34-14-Barrio Galán	098-5656712- 0985656340	Puerto Inirida

	UNITROPICO	Luz Teresa Ayala	uzteresaayala@yahoo.com	Ciudadela Universitaria - Jopal	098-6320702	Casanare
	FUNDACION BIODIVERSIDAD Y AMBIENTE SANO	Julio Roberto Camargo y Héctor Iván Santiago	fundabiodiversidad@hotmail .com, jrcamargo50@hotmail.com		0986580172- 3157845232	Villavicencio- Meta
	FEDEPALMA	Miguel Angel Mazorra, Director Ambiental	mmazorra@fedepalma.org		3210300	Cundinamarca- Bogotá
REGION AMAZONIA						
	SINCHI	Luz Marina Mantilla Cárdenas.(Leticia) Clara Peña (Leticia) Luis Eduardo Acosta.(Leticia) Juan Carlos Arias. (Leticia) Edwin Agudelo (Leticia) Augusto Mazorra (Leticia) Dairon Cárdenas. (Bogotá) Luisa Fernanda Ricaute(Bogotá) Rene Lopez. (Bogotá)	comunicaciones@sinchi.org .codireccion@sinchi.org.co subdiradmi@sinchi.org.co, herbario@sinchi.org.co, elcenizo@yahoo.es, juancariasg@yahoo.com, rlopez@sinchi.org.co		2836755 2846369(Btá)/ 0985928171 (Leticia)- 3153386784 celular luz marina	Leticia-Bogotá
	CIMARRON	Juan de Dios Mosquera	cimarron_@latinmail.com	Calle 13 No. 5- 63, oficina-403	2848431/ 2867883	Cundinamarca
	CORPOAMAZONÍA - CORPORACION POR EL DESARROLLO SOSTENIBLE DEL SUR DE LA AMZONIA	Laureano Roa (Asuntos Ambientales) y Wilson Muñoz (Director).	carama_d@col1.telecom.co m.co, larobonilla@hotmail.com, Wimuca@starmedia.com,Wi nuca@starmedia.com	Barrio La Esmeralda	098-5925659, 5927619	Amazonas- Leticia

	IMANI - INSTITUTO AMAZÓNICO DE INVESTIGACIONES - UNIVERSIDAD NACIONAL DE COLOMBIA	Edgar Prieto	efprietop@unal.edu.co	KM. 2 Via Tarapaca	098 - 5927996 ext 102	Amazonas- Leticia
	FUNDACIÓN TROPENBOS COLOMBIA	Paula Ungar	ftropenbos@cable.net.co	Cra 21 # 39- 35	3203319 / 3203502	Cundinamarca
	FUNDACIÓN JARDÍN BOTÁNICO, ZOOLOGICO Y ACUARIO DEL AMAZONAS, LETICIA	Natalia Flórez (Proyecto Boa - Bio -observatorio Amazonas)	nataliaflor@hotmail.com	Cr 3 A # 60 A 34 Apto 602 Bogotá	(57+1) 2482016	Cundinamarca
	UNIVERSIDAD NACIONAL - INSTITUTO DE CIENCIAS NATURALES	José Iván Mojica	mgandrad@ciencias.ciencia s.unal.edu.co, jimojica@unal.edu.co	Ciudad Universitaria - Bogotá.	3165000 ext: 11521	Cundinamarca
	JARDÍN BOTÁNICO DEL VICHADA CERRO EL BITA	Ruben Arango	rubenarango20032003@ya hoo.es - car8266@hotmail.com	Cerro El Bita	(57+1)5618485- 5619827- 3339577 - 3158526907	Puerto Carreño
	MIN-AMBIENTE - EDUCACION	Luz Estela Rojas	lsrojas@minambiente.gov.c o		3323400 Min- Ambiente	Cundinamarca
	COMUNIDADES INDIGENAS	Antonio Jacanamijoy	coicacol@007mundo.com		310-2603938 Cel	Cundinamarca- Bogotá
	ONIC	Geronimo Laureano del Aguila	onic@colnodo.apc.org		2846815 tel en Bogotá	Amazonas- Leticia
	OPIAC	Jose Soria	sorialeti@hotmail.com, jos_soriajava@yahoo.es		2826010-2814456, 310-7652563	Cundinamarca
	RED DE SOLIDARIDAD	Olga Beatriz Maldonado	olgabeld@yahoo.com		5927749	Amazonas- Leticia
	FUNDACION FAUNA AMAZONICA	Carlos Pinto	karpinto@hotmail.com	km 6 Via Leticia	3108073419	Amazonas- Leticia
	RESERVA TANIMBOCA	María Kuivu	tanimboca@yahoo.com		3104857482- 3155703589	Amazonas- Leticia

	RESGUARDO INDIGENA. PTO. NARIÑO	Roberto López			098-4857482-5703589	Amazonas-Leticia
	GOBERNACION DEL AMAZONAS	José Tomàs Quiñonez			098-5926629	Amazonas-Leticia
	ALCALDIA-AMAZONAS	Andrés Zambrano	anzam73@hotmail.com		098-5927158	Amazonas-Leticia
	ASOCIACION DECABILDOS INDIGENAS DE LA AMAZONIA	Rosendo Ahue	ahuecoello@latinmail.com		5924450, 5927811, 5221100	Amazonas-Leticia
	HUMBOLDT	Roberto Franco	mchaves@humboldt.org.co mcfandino@humboldt.org.co			Cundinamarca-Bogotá
	GRUPO ORGANIZADOR	Susana Díaz/Mónica Eslava/ Efrain Peña	amhernandez@minambiente.gov.co		2889860	Cundinamarca
TALLER NACIONAL						
	AUGURA	Miguel Montoya	mmontoya@augura.com.co		8236602/3211333-3315123	Antioquia
	FUNDACION NEOTROPICOS	Jaime Badel	info@neotropicos.org	Cl 50 No. 38-50 apto. 206	094 -2161317	Antioquia
	ECOSISTEMAS-Min-Ambiente	Gonzalo Andrade	mgandrad@ciencias.ciencias.unal.edu.co	-	3323400	Cundinamarca
	RED DE DESARROLLO SOSTENIBLE DE COLOMBIA	Paula Martínez	paula@rds.org.co , @rds.org.co	-	2324246,3492(1) 3380264 cel:310 - 2958780	Cundinamarca
	JARDÍN BOTÁNICO DE BOGOTÁ JOSÉ CELESTINO MUTIS-	Claudia Patrica Gonzales	bogotanico@jbb.gov.co		4377060	Cundinamarca
	MINISTERIO DE COMERCIO EXTERIOR	Pedro García	pedrog@mincomercio.gov.co		6067676 ext 1341	Cundinamarca

	COLCIENCIAS	María Cristina Durán - Ciencias del Medio Ambiente y Habidad	mcduran@colciencias.gov.co	-	6258480 ext 2242 - 2243	Cundinamarca
	DAMA - DEPARTAMENTO TÉCNICO ADMINISTRATIVO DEL MEDIO AMBIENTE	Dorís Tautiva	rural@dama.gov.co	-	4441030, ext 594	Cundinamarca
	CAR - CORPORACION AUTONOMA REGIONAL DE CUNDINAMARCA	Dalila Camelo, profesional universitario subdirección de patrimonio ambiental	dcamelos@car.gov.co	-	3209000 ext 1409	Cundinamarca
	UAESPNN - UNIDAD ADMINISTRATIVA ESPECIAL DEL SISTEMA DE PARQUES NACIONALES DEL MINISTERIO DEL MEDIO AMBIENTE	Martha Suarez	mlsuarez@parquesnacional es.gov.co	-	3410265	Cundinamarca
	ICA - INSTITUTO COLOMBIANO AGROPECUARIO--	Camilo Silva	camilo.silva@ica.gov.co	-	3323702 ext 308	Cundinamarca
	UNIVERSIDAD EXTERNADO DE COLOMBIA	Patricia Guzmán	pguzman@uexternado.edu. co	-	3420288 3419900 Ext. 1161 - 1163	Cundinamarca
	CORTOLIMA - CORPORACION AUTONOMA REGIONAL DEL TOLIMA	Pablo Emilio Salas	cortolima@cortolima.gov.co/ merycifuentes@hotmail.com /cortoli3@bundetolinet.com. co	-	(0982) 657186	Tolima
	Corporación Autónoma de Santander	Armando Rodríguez	asesordireccion@cas.gov.co	-	097-7248341- 7236889	San Gil - Santander
	Fundación Unversitaria Politécnico Gran Colombiano	Juan Carlos Quintero	ccamacho@poligran.edu.co/ jcarlosq@poligram.edu.co	-	3469248	Cundinamarca

	CECODES	Sergio Rengifo, profesional proyecto de Biodiversidad	cecodes_sr@cable.net.co		6621224, 6221303 Cel (573) 2595076	Cundinamarca
	MINISTERIO DE AMBIENTE -Educación y participación ciudadana	Luz Stella Rojas H.	Isrojas@minambiente.gov.co		3323400-3406236	Cundinamarca
	IIAP - INSTITUTO DE INVESTIGACIONES AMBIENTALES DEL PACÍFICO	Bismark Chaverra	iiap@iiap.org.co		0946-709127	Chocó
	INSTITUTO DE BIODIVERSIDAD UNIVERSIDAD DEL CHOCÓ	Alicia Rios Hurtado	fgcossio@col2.telecom.com .co/fgcossio@hotmail.com/a lirios@hotmail.com	Cudadela Universitaria	094 - 6712099/0723/023 7 ext 115 y 136	Chocó
	CONSERVACION INTERNACIONAL	Byron Calvache	bcalvachi@conservation.org		3452852	Cundinamarca
	CENICANA - CENTRO DE INVESTIGACIÓN DE LA CAÑA DE AZÚCAR DE COLOMBIA	Juan Carlos Ángel	jcangel@cenicana.org/jcang el@telesat.com.co	Calle 58N # 3BN 110.	(2) 6648025 - 30- ext- 139	Valle del Cauca-Cali
	YUBARTA-CALIDRIS	Patricia Falk .	yubarta@emcali.net.co/falk @emcali.net.co	Cra 24 F Oeste # 3 - 110 Barrio Tejares de San Fernando	(572) 5585598	Valle del Cauca-Cali
	ISA/ANDI	Esteban Alvarez	esalvarez@ISA.com.co		4-3157065	Medellín
	OPIAC	José Soria	sorialeti@hotmail.com		2826010/2814456 y 310-7652563	Cundinamarca
	INCIVA	Norma Ibón Rallón	inciva@telesat.com.co	A.A. 314 Tulua/	2260975	Valle del Cauca - Tulua
	AVE FENIX	Fabio Ocampo	avefenix@col3.telecom.com .co	edif, mar azul, apto 1101.Rioacha	3157110137	Guajira

	CORPOICA	Jorge Granados	jhgranados@corpoica.org.co/cfortiz@corpoica.org.co/alopez@turipana.org	km 14 via Mosquera-Tibaitata	4227300 Bogotá y (0947) 860217-860052 (montería-señor López)	Cundinamarca
	CORPOMOJANA	Emiro Cordero, bilogo	cemiro@hotmail.com/mojana2@terra.com.co/yahoo.comcorpomoj@col3.telecom.com.co		(095) 2954877/869 -3157117191	Sucre
	CARSUCRE	Iván Sierra Martínez, Coordinador Fauna Silvestre	carsucre@col3.telecom.com.co, ivan01@col3.telecom.com.co	cra 22 No. 16A 38	2811418- cel (315)7435824	Sucre
	CVS - CAR- VALLES DEL SINU Y DEL SAN JORGE	Rafael Espinosa, director grupo control y saneamiento ambiental	rafael.espinosa@cvs.gov.co		(094) 7829951-ext 701	Cordoba
	EPA -Establecimiento Público Ambiental de Cartagena	Francisco Castillo	rvergaran@yahoo.com	-	(315)7312722/656 4231	Bolivar
	INVEMAR	Mario Rueda	mrueda@invemar.org.co	Cerro de Punta Betún	5 4214774 - 4214413- 4211380	Santa Marta
	UNIVERSIDAD JAVERIANA - Facultad de ciencias	Luis Alberto Acosta	laacosta@javeriana.edu.co	-	3208320 ext 4081	Cundinamarca
	UNIVERSIDAD DE CALDAS	Daniel Ricardo Toro, Director Instituto Biología Tropical Andina	biotropican@ucaldas.edu.co	-	Celu:(315)591204 1/casa8868757/096-8861250	Caldas
	UNIVERSIDAD DE LA AMAZONÍA	Leandro Lizcano	lizcanomvz@hotmail.com	Av. Circunvalación Barrio El Porvenir	098-4360733 (casa)-4358786 ext 166 (oficina)	Caquetá
	FUNDACION HORIZONTE VERDE	Francisco Castro	bojonovi@yahoo.com.ar	Centro Comercial Villacento, local 4	6632494	Meta-Llanos

	OPIAC	Jose Soria	sorialeti@hotmail.com, jos_soriajava@yahoo.es		2826010-2814456, 310-7652563 (soria), 2842168 (yepes)	Cundinamarca
	UNITROPICO	Luz Teresa Ayala	luzteresaayala@yahoo.com	Ciudadela Universitaria - Jopal	098-6320702	Casanare
	FUNDACION BIODIVERSIDAD Y AMBIENTE SANO	Iván Santiago (Bogotá) y Julio Roberto Camargo (Llanos)	fundabiodiversidad@hotmail .com, jrcamargo50@hotmail.com		3157845232	Villavicencio- Meta y Bogotá
	FEDEPALMA	Miguel Angel Mazorra, Director Ambiental	mmazorra@fedepalma.org		3210300	Cundinamarca- Bogotá
	NATURA	Olga Lucia Trespalacios	oltrespalacios@natura.org.c o		3456188	Cundinamarca
	UNIVERSIDAD DEL MAGDALENA	Luis Vidal	biologia@unimag.edu.co, lavidal@yahoo.com		095-4303368 095- 4303619 / 4301140 - 4303368	Santa Marta - Cartagena - Santa Marta
	UNIVERSIDAD DEL ATLANTICO	Octavio Galvis	agalvis@uniatlantico.edu.co , rotifero@hotmail.com	km 7, via puerto colombia.	315-7218196 / 3157348259	Barranquilla- Cartagena- Barranquilla
	MIN-AMBIENTE - ECOSISTEMAS	Maria del Rosario Guzmán	mrguzman@minambiente.g ov.co		33234000	
	MIN-AMBIENTE - ECOSISTEMAS	Rodrigo Moreno	rmoreno@minambinete.gov. co		3323400	
	SINCHI	Dairon Cárdenas. (Bogotá)	herbario@sinchi.org.co,		2836755 2846369(Btá)/ 0985928171 (Leticia)- 3153386784 celular luz marina	Bogotá
	FUNDACIÓN TROPENBOS COLOMBIA	Paula Ungar	ftropenbos@cable.net.co	Cra 21 # 39- 35	3203319 / 3203502	Cundinamarca

	UNIVERSIDAD NACIONAL - INSTITUTO DE CIENCIAS NATURALES	José Iván Mojica	mgandrad@ciencias.ciencias.unal.edu.co, jimojicac@unal.edu.co	Ciudad Universitaria - Bogotá.	3165000 ext: 11521	Cundinamarca
	FUNDACION FAUNA AMAZONICA	Carlos Pinto	karpinto@hotmail.com, karpinco@hispanavista.com	km 6 Via Leticia	3108073419	Amazonas-Leticia
	RESERVA TANIMBOCA	María Kuivu	tanimboca@yahoo.com, ukudo_5@hotmail.com		3104857482-3155703589	Amazonas-Leticia
	COMUNIDADES INDIGENAS	Antonio Jacanamijoy	coicacol@007mundo.com		Antonio-3102603938/2698760	Cundinamarca
	IMANI	Edgar Prieto	eprietop@unal.edu.co	KM. 2 Via Tarapaca	3165000- ext-15166	Leticia
	ORIOUS BIOTECNOLOGIA LTDA	Ernesto Andrade, Jair Riaño, Carlos Villamizar	oriusbiotc@andinet.com, eandrade@orius.com.co, jriano@innovar.org	Calle 15 N° 37 J-04. Esperanza 8ª	8-6700202	Villavicencio y Bogotá-
	CCCP-Armada	Paula Judith Rojas	paulaj31@hotmail.com		092 7272650	Tumaco
	CORPOGUAJIRA - CORPORACION AUTONOMA REGIONAL DE LA GUAJIRA	Gregoria Fonseca	glfoseca3@latinmail.com/ corpogua@col3.telecom.co m.co	Edificio el ejecutivo of 503- Rioacha	(0957) 272581-273905-273652-283473	Rioacha
	CORMACARENA -	Eduardo Sanchez	sanchezeduardo@yahoo.com	Cra 35 # 25-57 3 Piso San Benito	(0986)678797-983285 (José luis)-0986582158(Eduardo)	Meta
	UNIVERSIDAD NACIONAL DE COLOMBIA SEDE MEDELLÍN, Escuela de Biociencia	Jorge Andrés Pérez Zabala	jperez@unalmed.edu.co		2560873 -4309348	Antioquia
	MIN-AGRICULTURA	Juan Antonio Clavijo	jclavijo@minagricultura.gov.co		3414969	

	CORPORINOQUÍA - CORPORACION AUTONOMA REGIONAL DE LA ORINOQUIA	Rafael Vargas Riveros	controlinterno@corporinoqui a.gov.co/corpquia@col1.tele com.co/rafavargas@hotmail .com	CARRERA 19 No 21 34	6358588 6355481	Casanare 1 cupo
	GRUPO ORGANIZADOR	Ana María Hernandez/ Susana Díaz/Mónica Eslava/ Fanny Sierra/Alvaro José Rodríguez / Anamaria Arisitizabal/ Carolina Isaza/ Nicolás Tirado/Juan Guillermo Cobo	amhernandez@minambiente. gov.co, cisaza@minambiente.gov.c o, ntirado@minambiente.gov.c o,alvarojrodriguez@cable.n et.co		2889860	Cundinamarca
	AUGURA	Miguel Montoya	mmontoya@augura.com.co		8236602/3211333- 3315123	Antioquia
	FUNDACION NEOTROPICOS	Jaime Badel	info@neotropicos.org	Cl 50 No. 38- 50 apto. 206	094 -2161317	Antioquia
	ECOSISTEMAS-Min- Ambiente	Gonzalo Andrade	mgandrad@ciencias.ciencia s.unal.edu.co	-	3323400	Cundinamarca
	RED DE DESARROLLO SOSTENIBLE DE COLOMBIA	Paula Martínez	paula@rds.org.co, @rds.org.co	-	2324246,3492(1) 3380264 cel:310 - 2958780	Cundinamarca
	JARDÍN BOTÁNICO DE BOGOTÁ JOSÉ CELESTINO MUTIS-	Claudia Patrica Gonzales	bogotanico@jbb.gov.co		4377060	Cundinamarca
	MINISTERIO DE COMERCIO EXTERIOR	Pedro García	pedrog@mincomercio.gov.c o		6067676 ext 1341	Cundinamarca
	COLCIENCIAS	María Cristina Durán - Ciencias del Medio Ambiente y Habitad	mcduran@colciencias.gov.c o	-	6258480 ext 2242 - 2243	Cundinamarca
	DAMA - DEPARTAMENTO TÉCNICO ADMINISTRATIVO	Dorís Tautiva	rural@dama.gov.co	-	4441030, ext 594	Cundinamarca

	DEL MEDIO AMBIENTE					
	CAR - CORPORACION AUTONOMA REGIONAL DE CUNDINAMARCA	Dalila Camelo, profesional universitario subdirección de patrimonio ambiental	dcamelos@car.gov.co	-	3209000 ext 1409	Cundinamarca
	UAESPNN - UNIDAD ADMINISTRATIVA ESPECIAL DEL SISTEMA DE PARQUES NACIONALES DEL MINISTERIO DEL MEDIO AMBIENTE	Martha Suarez	mlsuarez@parquesnacionales.gov.co		3410265	Cundinamarca
	ICA - INSTITUTO COLOMBIANO AGROPECUARIO--	Camilo Silva	camilo.silva@ica.gov.co	-	3323702 ext 308	Cundinamarca
	UNIVERSIDAD EXTERNADO DE COLOMBIA	Patricia Guzmán	pguzman@uexternado.edu.co	-	3420288 3419900 Ext. 1161 - 1163	Cundinamarca
	CORTOLIMA - CORPORACION AUTONOMA REGIONAL DEL TOLIMA	Pablo Emilio Salas	cortolima@cortolima.gov.co/ merycifuentes@hotmail.com /cortoli3@bundetolinet.com.co		(0982) 657186	Tolima
	Corporación Autónoma de Santander	Armando Rodríguez	asesordireccion@cas.gov.co	-	097-7248341- 7236889	San Gil - Santander
	Fundación Unversitaria Politécnico Gran Colombiano	Juan Carlos Quintero	ccamacho@poligran.edu.co/ jcarlosq@poligram.edu.co	-	3469248	Cundinamarca
	CECODES	Sergio Rengifo, profesional proyecto de Biodiversidad	cecodes_sr@cable.net.co	-	6621224, 6221303 Cel (573) 2595076	Cundinamarca
	MINISTERIO DE AMBIENTE -Educción y participación ciudadana	Luz Stella Rojas H.	lsrojas@minambiente.gov.co		3323400-3406236	Cundinamarca

	IIAP - INSTITUTO DE INVESTIGACIONES AMBIENTALES DEL PACÍFICO	Bismark Chaverra	iiap@iiap.org.co		0946-709127	Chocó
	INSTITUTO DE BIODIVERSIDAD UNIVERSIDAD DEL CHOCÓ	Alicia Rios Hurtado	fgcossio@col2.telecom.com.co/fgcossio@hotmail.com/alirios@hotmail.com	Cudadela Universitaria	094 - 6712099/0723/023 7 ext 115 y 136	Chocó
	CONSERVACION INTERNACIONAL	Byron Calvache	bcalvachi@conservation.org		3452852	Cundinamarca
	CENICAÑA - CENTRO DE INVESTIGACIÓN DE LA CAÑA DE AZÚCAR DE COLOMBIA	Juan Carlos Ángel	jcangel@cenicana.org/jcangel@telesat.com.co	Calle 58N # 3BN 110.	(2) 6648025 - 30-ext- 139	Valle del Cauca-Cali
	YUBARTA-CALIDRIS	Patricia Falk .	yubarta@emcali.net.co/falk@emcali.net.co	Cra 24 F Oeste # 3 - 110 Barrio Tejares de San Fernando	(572) 5585598	Valle del Cauca-Cali
	ISA/ANDI	Esteban Alvarez	esalvarez@ISA.com.co		4-3157065	Medellín
	OPIAC	José Soria	sorialeti@hotmail.com		2826010/2814456 y 310-7652563	Cundinamarca
	INCIVA	Norma Ibón Rallón	inciva@telesat.com.co	A.A. 314 Tulua/	2260975	Valle del Cauca - Tulua
	AVE FENIX	Fabio Ocampo	avefenix@col3.telecom.com.co	edif, mar azul, apto 1101.Rioacha	3157110137	Guajira
	CORPOICA	Jorge Granados	jhgranados@corpoica.org.co/cfortiz@corpoica.org.co/alopez@turipana.org	km 14 via Mosquera-Tibaitata	4227300 Bogotá y (0947) 860217-860052 (monteriasenior López)	Cundinamarca

	CORPOMOJANA	Emiro Cordero, bilógo	cemiro@hotmail.com/mojana2@terra.com.co/ yahoo.com corpomoj@col3.telecom.com.co		(095) 2954877/ 869 -3157117191	Sucre
	CARSUCRE	Iván Sierra Martínez, Coordinador Fauna Silvestre	carsucre@col3.telecom.com.co, ivan01@col3.telecom.com.co	cra 22 No. 16A 38	2811418- cel (315)7435824	Sucre
	CVS - CAR- VALLES DEL SINU Y DEL SAN JORGE	Rafael Espinosa, director grupo control y saneamiento ambiental	rafael.espinosa@cvs.gov.co		(094) 7829951-ext 701	Cordoba
	EPA -Establecimiento Público Ambiental de Cartagena	Francisco Castillo	rvergaran@yahoo.com	-	(315)7312722/656 4231	Bolivar
	INVEMAR	Mario Rueda	mrueda@invemar.org.co	Cerro de Punta Betún	5 4214774 - 4214413- 4211380	Santa Marta
	UNIVERSIDAD JAVERIANA - Facultad de ciencias	Luis Alberto Acosta	laacosta@javeriana.edu.co	-	3208320 ext 4081	Cundinamarca
	UNIVERSIDAD DE CALDAS	Daniel Ricardo Toro, Director Instituto Biología Tropical Andina	biotropican@ucaldas.edu.co	-	Celu:(315)591204 1/ casa8868757/096- 8861250	Caldas
	UNIVERSIDAD DE LA AMAZONÍA	Leandro Lizcano	lizcanomvz@hotmail.com	Av. Circunvalación Barrio El Porvenir	098-4360733 (casa)-4358786 ext 166 (oficina)	Caquetá
	FUNDACION HORIZONTE VERDE	Francisco Castro	bojonovi@yahoo.com.ar	Centro Comercial Villacentro, local 4	6632494	Meta-Llanos
	OPIAC	Jose Soria	sorialeti@hotmail.com, jos_soriajava@yahoo.es		2826010-2814456, 310-7652563 (soria), 2842168 (yepes)	Cundinamarca

	UNITROPICO	Luz Teresa Ayala	luzteresaayala@yahoo.com	Ciudadela Universitaria - Jopal	098-6320702	Casanare
	FUNDACION BIODIVERSIDAD Y AMBIENTE SANO	Iván Santiago (Bogotá) y Julio Roberto Camargo (Llanos)	fundabiodiversidad@hotmail .com, jrcamargo50@hotmail.com		0986580172- 3157845232	Villavicencio- Meta y Bogotá
	FEDEPALMA	Miguel Angel Mazorra, Director Ambiental	mmazorra@fedepalma.org		3210300	Cundinamarca- Bogotá
	NATURA	Olga Lucia Trespalacios	oltrespalacios@natura.org.c o		3456188	Cundinamarca
	UNIVERSIDAD DEL MAGDALENA	Luis Vidal	biologia@unimag.edu.co, lavidal@yahoo.com		095-4303368 095- 4303619 / 4301140 - 4303368	Santa Marta - Cartagena - Santa Marta
	UNIVERSIDAD DEL ATLANTICO	Octavio Galvis	agalvis@uniatlantico.edu.co , rotifero@hotmail.com	km 7, via puerto colombia.	315-7218196 / 3157348259	Barranquilla- Cartagena- Barranquilla
	MIN-AMBIENTE - ECOSISTEMAS	Maria del Rosario Guzmán	mrguzman@minambiente.g ov.co		33234000	
	MIN-AMBIENTE - ECOSISTEMAS	Rodrigo Moreno	rmoreno@minambinete.gov. co		3323400	
	SINCHI	Dairon Cárdenas. (Bogotá)	herbario@sinchi.org.co,		2836755 2846369(Btá)/ 0985928171 (Leticia)- 3153386784 celular luz marina	Bogotá
	FUNDACIÓN TROPENBOS COLOMBIA	Paula Ungar	ftropenbos@cable.net.co	Cra 21 # 39- 35	3203319 / 3203502	Cundinamarca
	UNIVERSIDAD NACIONAL - INSTITUTO DE CIENCIAS NATURALES	José Iván Mojica	mgandrad@ciencias.ciencia s.unal.edu.co, jimojicac@unal.edu.co	Ciudad Universitaria - Bogotá.	3165000 ext: 11521	Cundinamarca

	FUNDACION FAUNA AMAZONICA	Carlos Pinto	karpinto@hotmail.com, karpinco@hispavista.com	km 6 Via Leticia	3108073419	Amazonas-Leticia
	RESERVA TANIMBOCA	María Kuivu	tanimboca@yahoo.com, ukudo_5@hotmail.com		3104857482- 3155703589	Amazonas-Leticia
	COMUNIDADES INDIGENAS	Antonio Jacanamijoy	coicacol@007mundo.com		Antonio- 3102603938/2698 760	Cundinamarca
	IMANI	Edgar Prieto	eprietop@unal.edu.co	KM. 2 Via Tarapaca	3165000- ext- 15166	Leticia
	ORIOUS BIOTECNOLOGIA LTDA	Ernesto Andrade,Jair Riaño, Carlos Villamizar	oriusbiotc@andinet.com, eandrade@orius.com.co, jriano@innovar.org	Calle 15 N° 37 J-04. Esperanza 8ª	8-6700202	Villavicencio y Bogotá-
	CCCP-Armada	Paula Judith Rojas	paulaj31@hotmail.com		092 7272650	Tumaco
	CORPOGUAJIRA - CORPORACION AUTONOMA REGIONAL DE LA GUAJIRA	Gregoria Fonseca	glfoseca3@latinmail.com/ corpogua@col3.telecom.co m.co	Edificio el ejecutivo of 503- Rioacha	(0957) 272581- 273905-273652- 283473	Rioacha
	CORMACARENA -	Eduardo Sanchez	sanchezeduardo@yahoo.com	Cra 35 # 25-57 3 Piso San Benito	(0986)678797- 983285 (José luis)- 0986582158(Eduardo)	Meta
	UNIVERSIDAD NACIONAL DE COLOMBIA SEDE MEDELLÍN, Escuela de Biociencia	Jorge Andrés Pérez Zabala	jperez@unalmed.edu.co		2560873 -4309348	Antioquia
	MIN-AGRICULTURA	Juan Antonio Clavijo	jclavijo@minagricultura.gov.co		3414969	Cundinamarca
	CORPORINOQUÍA - CORPORACION AUTONOMA REGIONAL DE LA ORINOQUIA	Rafael Vargas Riveros	controlinterno@corporinoquia.gov.co/corpquia@col1.telecom.co/rafavargas@hotmail.com	CARRERA 19 No 21 34	6358588 6355481	Casanare

	GRUPO ORGANIZADOR	Ana María Hernandez/ Susana Díaz/Mónica Eslava/ Fanny Sierra/Alvaro José Rodríguez / Anamaria Arisitizabal/ Carolina Isaza/ Nicolás Tirado/Juan Guillermo Cobo	amhernandez@minambiente.gov.co, cisaza@minambiente.gov.co, ntirado@minambiente.gov.co, alvarojrodriguez@cable.net.co		2889860	Cundinamarca
--	-------------------	---	---	--	---------	--------------

