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and Development
Central American Agricultural Council
Central American Integration System

Regional Strategic Program for Forest Ecosystems Management (PERFOR)



Forestry Technical Committee
April 2010

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Acronyms

ACDI	Agencia Canadiense de Desarrollo Internacional
ACICAFOC	Asociación Coordinadora Indígena y Campesina de Agroforestería Comunitaria de Centroamérica
AECID	Agencia Española de Cooperación Internacional para el Desarrollo
AEIR	Áreas estratégicas de interés regional
AFE	Administración Forestal del Estado
ALIDES	Alianza para el Desarrollo Sostenible
ASDI	Agencia Sueca para la Cooperación Internacional
BCIE	Banco Centroamericano de Integración Económica
CAC	Consejo Agropecuario Centroamericano
CATIE	Centro Agronómico Tropical de Investigación y Enseñanza
CCAD	Comisión Centroamericana de Ambiente y Desarrollo
CEPAL	Comisión Económica para América Latina y el Caribe
COFLAC-Cono Sur	Comisión Forestal para América Latina y el Caribe-Cono Sur
COHDEFOR	Corporación Hondureña de Desarrollo Forestal (actualmente ICF: Instituto Nacional de Conservación y Desarrollo Forestal, Áreas Protegidas y Vida Silvestre)
COSUDE	Cooperación Suiza al Desarrollo
CTB	Comité Técnico de Bosques
DGIS	Directorate General for International Cooperation, Holanda
EFCA	Estrategia Forestal Centroamericana
ERAS	Estrategia Regional Agroambiental y de Salud de Centroamérica
ERB	Estrategia Regional de Biodiversidad
ESNACIFOR	Escuela Nacional de Ciencias Forestales, Honduras
Facility	National Forest Programme, FAO
FAO	Organización de las Naciones Unidas para la Agricultura y la Alimentación
FINNIDA	Finnish International Development Agency/Agencia de Cooperación de Finlandia
FLEG/BM	Gobernanza y cumplimiento de la ley forestal/Banco Mundial/Forest Law Enforcement and Governance
FOSCAD	Foro Social Centroamericano de Ambiente y Desarrollo
GEF	Global Environment Facility
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit/Agencia de Cooperación Técnica Alemana
IDB	Interamerican Development Bank
IICA	Instituto Interamericano de Ciencias Agrícolas

IRBio	Instituto de Investigación de la Biodiversidad/Biodiversity Research Institute
ITTO	International Tropical Timber Organization/Organización Internacional de Maderas Tropicales
JICA	Agencia de Cooperación Internacional del Japón
KFW	Kreditanstalt für Wiederaufbau
MBC	Mesoamerican Biological Corridor
MFS	Manejo forestal sostenible
NORAD	Norwegian Agency for Development Cooperation/Agencia Noruega de Cooperación para el Desarrollo
ONU	Organización de las Naciones Unidas
OTCA	Organização do Tratado de Cooperação Amazônica/Organización del Tratado de Cooperación Amazónica
PROARCA	Programa Ambiental Regional de Centroamérica
PARCA	Plan Ambiental de la Región Centroamericana
PERCBM	Programa Estratégico Regional del Corredor Biológico Mesoamericano
PERCON	Programa Regional de Conectividad
Perfor	Programa Estratégico Regional para el Manejo de los Ecosistemas Forestales
PERTAP	Programa Estratégico Regional de Trabajo en Áreas Protegidas
PES	Payments for Environmental Services
PFN	Programa forestal nacional
PROMEBIO	Programa Mesoamericano de Biodiversidad
SE-CAC	Secretaría Ejecutiva del CAC
SE-CCAD	Secretaría Ejecutiva de la CCAD
SIAM	Sistema de Información Ambiental Mesoamericano
SICA	Sistema de Integración Centroamericana
SICAP	Sistema Centroamericano de Áreas Protegidas
UCP	Unidad de Coordinación del Perfor
UNDP	United Nations Development Program



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The importance of the support of the FAO-Facility to the Central American Forestry Strategy (EFCA), must be mentioned, on which the formation of Perfor was based, and to the process of setting up the program itself. In the same vein, we recognize the support of FAO-Holland and GTZ in the initial process of setting up Perfor through the material that was generated by Puenbo II.

Furthermore, we recognize the participation of a series of individuals and institutions involved with and committed to the concept and vision of the Mesoamerican Biological Corridor (MBC), which enriched this program

through their timely remarks and inputs, providing not only a broad process of participation but also a high level of appropriation and the focus necessary for these changing times. They also contributed to the quality required for a regional integration instrument of this kind.

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Preface

Starting in 2000, almost all the countries of the region began formulating and implementing their National Forestry Plans. However, the level of progress and political support received by these programs has varied.

Recognition of the relevance of conservation areas, as well as the role of international mechanisms for observation and certification, has contributed to the assumption of responsibilities in the search for implementation of sustainable forest management. Despite these advances, the productive forestry sector continues to have a bad image and is not very efficient; resulting in a polarization between forest conservation and management for production. The consequence is that political attention, both national and international, has concentrated more on the conservation of forest resources, neglecting dialog aimed at reconciling productive use and forest resource conservation. The distancing that has taken place over the last few decades between the institutions responsible for the productive forestry sector and those responsible for biodiversity (conservation) has not helped to integrate use and conservation.

The recognition and real and active participation of the relevant stakeholders play a deciding role in constructing “good governance” over forests. By stakeholders we understand not only those from the forestry sector but also those from the forest. Among these are the settlers, farmers, local communities, NGOs, municipalities, private forest enterprise, the financial sector, the mining sector and government institutions.

The legislation and standards necessary for good sustainable forest management exist in almost all the countries; all that is needed is to reinforce their implementation and application. This, however, is not so easy. The lack of resources, technical and field personnel and the bad experiences with traditional systems of control and supervision require that we look for innovative solutions. In several countries, new forms of control and supervision

have been developed with the participation of third parties (ruling and auditing bodies, better information systems, use of modern technology), in which transparency, community participation and dialog with stakeholders have been some of the chief supports.

Undoubtedly, Perfor constitutes the planning instrument to orient the actions of the forestry sector in Central America and in the Dominican Republic, seeking to increase interinstitutional coordination and to build together the synergies that favor regional environmental integration and sustainable development.

Gaspar Vega
Vice Prime Minister and Minister of
Natural Resources and Environment of Belize
President Pro Tem of CCAD
August 2010



Executive Summary

Strategic Regional Program for Management of Forest Ecosystems (Perfor)

Institutional framework: CCAD/CAC/Forestry Technical Committee/ Ministries of Environment and Agriculture/National Forestry Administrations for the execution of the PFN.

Background and description of the problem

Processes of policy formulation, strategies and national forestry plans that present a conceptual framework oriented toward conservation and sustainable forest management are being put into effect in the Mesoamerican region. Nonetheless, it is evident that these tools do not yet constitute the framework that guides the actions of the public and private stakeholders involved with forests. Deforestation continues to be a scourge that affects all the countries, illegality and informal procedures continue and the forestry sector continues to fill an insignificant space within the boundaries of national policies.

The countries have been working with a focus on forests in an isolated way more to be associated with the exploitation of wood than with forest ecosystems and their multiple functions. This has resulted in problems of governance, institutional disjointedness, incoherency between judicial and normative guidelines, and a lack of recognition of the key stakeholders in the sector, the owners of the forests and the local communities. In practice, this dislocation in the institutional framework and in policies has produced voids and obstacles in the management of the forest ecosystems, especially in relation to the development of agriculture.

The lack of clarity with regard to land ownership promotes the inability to govern forests and the unrestrained advance of the agricultural frontier and the consequent loss of forests. Furthermore, the lack of real impact of the

social stakeholders within the spaces for interaction that exist in the debate on policy and strategies of the countries has not allowed actions that will renew, innovate and invigorate the forest ecosystems management sector. This lack of integral vision has not fully allowed the identification of the use and management of nontimber forest products, nor has it permitted an increase in the assigning of resources for research and development in these areas. Neither has there been recognition of the contribution of cultural and traditional knowledge in forest management processes, which would be of direct importance in generating jobs in rural zones and which would moreover permit an active participation of women in these activities.

This situation makes evident the necessity and importance of a strategic regional program for management of forest ecosystems, such as Perfor. This program attempts to establish this integral, systemic and cross-sector focus with regard to management of forest ecosystems in the region, recognizing the role of the spaces available at a regional level for joint endeavors and for coordination between the different stakeholders. Perfor recognizes the relevance of sustainable management of forest ecosystems as productive sources of wealth and for combating poverty, reducing environmental and social vulnerability and reducing the threats of fragmentation. It also recognizes the importance of sustainable forestry management (MFS) in the strategy for adaptation to climatic change, increasing the offer of goods and services that these ecosystems offer society not only in terms of economics but also in well-being and quality of life.

Brief description of the program

This document details the **Strategic Regional Program for the Management of Forest Resources (Perfor)** for Central America and the Dominican Republic, with the first stage from 2008 to 2012 and with a perspective of 15 or more years. As its name indicates, Perfor is of a strategic nature, i.e., it must be broadly considered as a strategic planning tool for regional policy and the Central American Forestry Strategy (EFCA). Because of its regional and strategic character, it is a true framework program; that is, it goes beyond what normally is considered a forestry program. Perfor is not a substitute for national efforts at forestry planning but neither is it the sum of the National Forestry Plans and strategies; rather it offers regional high-quality added value at a technical and political level for sustainable forestry development.



Perfor is the expression of the integration of political wills and technical processes at the regional level. As such, it presents a shared vision of regional forest integration that is accompanied by a holistic focus for the regional management of the forest ecosystems of Central America and the Dominican Republic. It is this multifunctional, cross-sector and ecosystems focus that makes Perfor a modern and useful strategic planning tool. It forms a firm base for achieving governability, maintenance of biodiversity and economic growth while fighting against the scourge of poverty and in favor of the welfare of the population, in particular that of indigenous groups, ethnic groups and rural communities that live or around the forests.

The program content is articulated and developed on a forest ecosystems management model that is adapted to the needs and peculiarities of the region; it integrates and complements the conservation of the environment with the sustainable management of forest resources and sustainable agricultural development. Perfor is conceived, therefore, as a basic tool of a strategic nature that organizes, complements and operates the policy and regional forest strategy promoted by the CCAD. Perfor's principles, vision, mission, objective view and general and specific goals for sustainable forest development have been defined, along with the expected results. Once these bases have been established, it proposes to the member countries the need to structure in a coordinated manner a regional model capable of guaranteeing the sustainable management of the forest areas and resources, as well as their conservation. Thus, planning and forest management are presented through five fundamental elements that form regional forestry policy.

- 1. Establishment of a harmonious legal framework** that will afford a common platform suitable for sustainable forest development. It is considered extremely important to finalize the legal framework in each of the countries and its harmonization and alignment at a regional level, particularly as regards the framework of regulations and standards.
- 2. Development of a proposal for efficient regional and national institutional organization with** regard on the one hand, to configuring an administrative structure that is endowed with sufficient human and economic and financial resources to guarantee the development of the program in its regional and national components, and, on the other, creating whatever participatory forums may be deemed necessary.

3. **Establishment of a common territorial framework** expressed through the priority areas of regional interest based on the MBC and the territorial priorities that the Dominican Republic may determine.
4. **Formulation of a proposal for strategies and guidelines**, components and results in order to guarantee that proposed objectives be achieved, starting from the established principles. Evaluation of these actions will correspond to each of the national forestry plans (PFNs), which will allow them to develop their economic programming for an initial horizon of five years in the first stage of implementation (2008–2012), and with a perspective for long-term execution (15 years or more).
5. **Establishment of a financial proposal** and financial mechanisms that will be capable of financing the development of the program within its regional components and for execution of the PFNs.

Localization: regional

Duration: stage I: five years, from 2008 to 2012

General objective

To improve the management of the forest ecosystems of the Central American region and the Dominican Republic, recuperating their potential for generating environmental goods and services in order to improve the welfare of the region's inhabitants.

Components

1. Institutional strengthening for good governance
2. Strengthening of technical and entrepreneurial management capabilities
3. Economic and financial management
4. Harmonization and alignment with the Regional Agroenvironmental and Health Strategy (ERAS)

Desired results

1. The institutional management of the forest ecosystems is strengthened to contribute to governability and good governance of sustainable management and access to the goods and services generated by forest ecosystems.



2. The technical capabilities of the public, private and community sectors have been strengthened and include management tools for contributing to sustainable management and to reversing forest ecosystems deterioration.
3. The financial resources and mechanisms and economic tools have been established and are operating fairly and with equal access given to all stakeholders, with financial and economic value being given to the multifunctionality of forest ecosystems in the countries of the region.
4. The management of forest ecosystems contributes to the implementation of the cross-sector agenda for the agricultural environment, particularly in generating opportunities for sustainable development and poverty reduction.



Introduction

The formulation of the **Regional Strategic Program for the Management of Forest Ecosystems (Perfor)** is an initiative of the Central American Commission on Environment and Development (CCAD) and of the Central American Agricultural Council (CAC). This Commission has as its origin, mandate and institutional legal foundation the Declaration of the Ministers of the area, specifically the 23rd Ordinary Meeting of the Technical Committee on Forestry (CTB), Panama City, Panama, held on April 26–27, 2006. At that meeting, the decision was made to revise and update the Central American Forestry Strategy (EFCA) and to formulate the Regional Strategic Forest Program of CTB-CCAD as part of the Environmental Plan for the Central American Region (PARCA) and the Regional Biodiversity Strategy (ERB). These actions attempt to respond to the demands of the member countries and in concert with those nations at a global level who are manifesting ever more concern about the deterioration or disappearance of forest ecosystems. During the process of developing Perfor, the chief institutions related to the subject of the environment, forests and sustainable human development in each of the member countries were involved.

Perfor as a strategic planning tool of the EFCA

This document is the Perfor Final Report for Central America and the Dominican Republic 2008–2012, with a perspective of 15 years or more. This report should be widely considered as a strategic planning tool for regional policy and the EFCA, at the service of the member countries.

Because of its strategic and regional character, Perfor is a true framework program, i.e., it goes beyond what normally is considered a forest program, but it is not a substitute for national efforts at forestry planning. Neither is it the sum of National Forestry Plans and strategies, but rather it offers high-quality added value at a technical and political level for sustainable forestry development because of the positive synergy generated by its implementation.

Perfor is the expression of the integration of political wills and technical processes at a regional level; that is, it presents a shared vision of regional forest integration, a vision accompanied by a holistic focus for the regional management of the forest ecosystems of Central America and the Dominican Republic. This multifunctional, intersectoral and ecosystem focus makes Perfor a modern and useful strategic planning instrument, called to energize and advance the debate and actions in favor of conservation and sustainable development of our forest ecosystems. In this way, it forms a firm foundation for achieving governance, maintenance of biodiversity and economic growth while fighting against the scourge of poverty and in favor of the welfare of the people, in particular of indigenous groups, ethnic groups and rural communities that live in or around the forests. dad (ERB) en lo relacionado a la biodiversidad de los ecosistemas forestales.

Background

Since the year 2000, a process has been gradually developed for formulating National Forestry Strategies and National Forestry Programs (PFNs), a process that culminated in 2006 with the formation at a regional level of the Central American Forestry Strategy (EFCA). The EFCA, in regard to strategy, required a programmatic tool that would complement it and make it operational; in terms of specific programs, the PFNs required a programmatic framework that would give a general frame of action that, as an umbrella program, would provide coverage, harmony, coordination and regional direction to the national efforts that the countries were making in isolation.

Perfor comes to fill this vacuum. Within the scope of the Central American institutions for regional environmental and development policy, through CCAD, Perfor adopts as its own the principles of multifunctionality of forest ecosystems, which includes sustainability in their production and management, and of biodiversity, which includes their conservation and protection. In this way, the region also cements the international commitments that the countries have acquired via the United Nations Conference on Environment and Development held in Rio de Janeiro (Earth Summit 1992). Among these commitments are the United Nations Framework Convention on Climate Change (1992), the United Nations Convention on Biological Diversity and the United Nations Convention to Combat Desertification (both in 1994)



and in more concrete terms, the forestry principles and the forest program of Agenda 21.

The regional institutional framework was defined with the signing of the Regional Agreement on Biodiversity and the Alliance for Sustainable Development (ALIDES), both in 1992. At the same time, with PROARCA, the region's commitment to adopting the concept of "sustainable forestry development" was reaffirmed, which seeks to make align and harmonize production and conservation of forests and forestlands, as presented at the United Nations Conference on the Environment in Johannesburg (September 2002).

As stated by EFCA, *"It is necessary to take up again the forestry agenda in Central America in order to increase forest cover in the region, restore the degraded forests, strengthen the Central American Protected Areas System (SICAP), support the implementation of the Strategic Program for the Mesoamerican Biological Corridor (MBC), and convert the Central American forestry sector into one of greater competitiveness and scope, since all of this will contribute to reducing vulnerability and combating poverty in the Isthmus"*.

EFCA seeks to harmonize policies and the PFNs, under the supervision of the CCAD through the Forestry Technical Committee, a regional body formed at the sovereign will of the member countries in order to guarantee the coordinated execution of Perfor. Perfor will be carried out within the context of respect for the sovereignty of the countries, taking into account regional asymmetries and their own specifics, rhythms, interests and national needs. The idea is that the national authorities should use Perfor as an umbrella or reference program in order to formulate their own medium-term and long-term programs, as well as operational action plans that are oriented toward the sustainable use of forest resources and ecosystems. Perfor assumes the objectives that the Regional Biodiversity Strategy (ERB) proposes concerning biodiversity of forest ecosystems.

Perfor: Spatial, thematic and temporal boundaries

Perfor's field of action includes not only a set of priority subject areas of a strategic nature, as will later be seen, but also it includes its strategic landscape range. As a priority, the "strategic areas of regional interest" (AEIR) in Central

America and the Dominican Republic are defined, as well as the priorities identified in the connectivity strategy of the CBM and those defined by the Dominican Republic as a tool of landscape legislation on a regional scale for the conservation and sustainable development of natural and forest areas, with an ecosystem perspective. This focus covers in addition the agricultural areas for sustainable development included in the Regional Agroenvironmental and Health Strategy (ERAS) and the conservation of the ecosystems, habitats and landscapes whose diversity makes possible an immense variety of soil uses in the region and options for sustainable development.

The ecosystems focus

Perfor's ecosystems focus consists in incorporating in their entirety and in all of their complexity the elements that determine the sustainability of the ecosystems. For this reason, it is vitally important to understand the relationships of interdependency between the abiotic factors of climate and soil and their relationship with other biotic and ecological processes in their environmental, economic, social and cultural dimensions. Special attention will be given to lands covered by forest or disposed toward forestry and those in which trees, shrubs and grasses play a fundamental role in the development of sustainable productive systems, (agroforestry and silvopastoral systems), and they are key elements for sustainable agricultural development and watershed management.

Because of its strategic nature for promoting a change in vision and a focus on development, Perfor is a program that transcends the short and medium term. Nonetheless, it has been conceived as a program of urgent strategic action whose execution will take place in a first stage between 2008 and 2012.

International precedents

The Puenbo initiative for strengthening forestry dialog in Latin America and the Caribbean is an important precedent. Puenbo is a joint initiative of CCAD, OTCA and COFLAC Southern Cone and it is implemented with the support of the Mechanism for PFNs, the Regional Office of the FAO for Latin America and the Caribbean, IUCN and the governments of Germany and the Netherlands.



Puembo has become a space for dialog for the forestry sector and from it have emerged several approaches and promising results that underline the value and potential of dialog for advancing in sustainable forest management implementation. This initiative was developed from the results of the workshop that took place in Puembo, Ecuador, in February 2002, organized by the governments of Ecuador, Germany and the Netherlands under the title: “Implementing the International Agreements Relating to Forestry and the National Forestry Programs in Latin America.” Puembo is based on

1. Governance and institutional capability (setting of norms, decentralization, participation, transparency, interest groups, conflict management)
2. Evaluation and financial mechanisms (policies, strategies and financing tools based on multifunctionality of forest ecosystems)
3. The influence of other sectors on forest ecosystems and vice versa (finances, agriculture, mining, tourism, etc.)
4. The relationship between the regional and international processes and their national implementation (relationship of the countries with the regional and international forestry processes and organizations, representation of the countries in these and the relationship with neighboring countries in matters relating to forests)

Components of Perfor

The present document represents an important effort to advance in changing the paradigms of pure conservation and timber exploitation in exchange for an integral and sustainable management of the region’s forest ecosystems.

Chapter I offers an analysis of the general context of the region (biophysical, socioeconomic, political-institutional and situational aspects of the forest and water resources). Chapter II brings together the chief justifications that give rise to the development of the program, and in Chapter III the program and the strategic and programmatic elements it contains are described. In Chapter IV, the execution strategy of the program is defined, and in Chapter V the institutional framework and the principal stakeholders at regional and national level are presented, together with their predominant roles. Finally, Chapter VI explains the program’s monitoring and evaluation system, which will allow evaluation of progress in the countries of the region.

Perfor has the general objective of *“improving the management of the forest ecosystems of the Central American region and of the Dominican Republic, recuperating their potential for generating environmental goods and services in order to improve the welfare of the region’s inhabitants.”* **Specific goals** are the following:

1. Strengthening regional, national, public, private and community capabilities for the sustainable management of forest ecosystems, as an essential foundation for the sustainable development of the countries of the region
2. Improving the administrative and economic and financial management capabilities of the sector’s stakeholders, aiming at sustainability based on multifunctionality of the forest ecosystems
3. Positioning the forestry agenda on the intersectoral agenda of the ERAS in order to contribute to the reduction of poverty and vulnerability and to the mitigation of and adaptation to climate change.

The program is composed of four **components**:

1. Institutional strengthening for good governance
2. Strengthening of technical and entrepreneurial management capabilities
3. Financial and economic management
4. Harmonization and alignment with the ERAS

Desired results of the program

1. The institutional management of forest ecosystems is strengthened in order to contribute to governability and good governance of sustainable management and access to the goods and services generated by the forest ecosystems.
2. The technical capabilities of the public, private and community sectors are strengthened and include management tools for contributing to sustainable management and to reversing forest ecosystems deterioration.
3. Financial resources and mechanisms and economic tools are established and operating fairly and with equal access given to all stakeholders, with financial and economic value being given to the multifunctionality of forest ecosystems in the countries of the region.



4. Management of forest ecosystems contributes to the implementation of the intersectoral agroenvironmental agenda, particularly in generating opportunities for sustainable development and poverty reduction.

For each component, implementation strategies have been defined, and, for each of these, guidelines for developing strategic actions to achieve the desired results.

Chapter I

Strategic Context





1.1. Biophysical context

The Central American isthmus, with its 533,000 km², and the Dominican Republic, with 48,442 km², possess interesting physical and natural characteristics that lend to this region a high potential for biodiversity, recognized throughout the world.

The recent geologic formation of Central America and its particular geography enable the existence of a rich biological diversity and an interesting variety of climates. These conditions allowed the development of more than 200 ecosystems (natural ecoregions) and more than 300 types of landscape. The region is also host to a rich cultural diversity; its territory contains some 46 indigenous groups. Moreover, it possesses a forest cover estimated in 2005 at 20,064 million hectares (36.5% of the territory), 8% of the surface area of the mangroves of the world and the second longest coral barrier reef on the planet (Rodriguez 2005). The characteristics of the Central American region have been determined by very specific conditions: its shape as an isthmus, its variability in climate and its location in the earth's Neotropical belt have allowed it to enjoy a rich biological diversity and play the role of a real geographical biological and cultural bridge that links the two great continental land masses of North and South America; furthermore, it is located between the two most important ocean masses in the world.

The Dominican Republic has 67% of land dedicated to forestry and a forest cover of 1.6 million hectares, which represents 33% of its land surface, with a rich and varied biodiversity composed of some 5,600 species of plants, of which 36% are endemic and 700 are trees (Diaz 2008). The country occupies the first position in biodiversity in the Antilles and is third in the world for biodiversity of an island, in proportion to its size (Troncoso 2008). It contains major geomorphologic diversity (relief), represented by three chains of mountains, five mountain ranges, three karst or limestone regions, four coastal or littoral plains, four valleys, plus 15 intramontane valleys and a tectonic depression or river basin. There exists a great quantity of life zones determined by altitude since its relief extends from 45 meters below sea level

at Lake Enriquillo and its Cabritos Island up to 3.087 meters above sea level at Duarte Peak. In terms of ethnocultural diversity, more than 18 groups of immigrants have been recognized during its population history that have enriched the island's heritage.

Central America acts as a biological bridge because migrations of species from the Neartic and the Neotropical biota have been found together with species originating in the Caribbean zone, which has caused a high variety and relative abundance of species. From the Neartic, different kinds of vegetation spread through the isthmus that were originally adapted to cold and dry climates, such as the pine groves or cacti of southern Mexico. From the Neotropics, various types of Amazon flora arrived that chiefly populated the Caribbean slope, such as mahogany origin (*Cupressus* sp.). From the Caribbean arrived species of dry forest deciduous trees as well as mangrove forest species: *Avicennia bicolor*, *Rhizophora mangle* and *Laguncularia racemosa* (PNUMA 2004 cited by CTB-CCAD 2008).

This has permitted the existence of a wide range of mangrove forests, deciduous forests and oak forests, tall tropical humid forest, coniferous forest, and low forest and savanna. The tall tropical forest, the oak trees and coniferous trees tend to be located in the wetter life zones such as humid forest, very humid rainforest and mountain forest, while the low and medium forest and savanna vegetation are located in dry forest areas. The dry forest of the Pacific coast has suffered massive destruction and only small remnants of isolated forest have survived, which has increased vulnerability and reduced productivity in these ecosystems.

In the Central and Caribbean zones of the region, two major types of vegetation are to be distinguished: conifers and broadleaf. The former have a restricted and well-defined range that includes the savannas of Moskitia in Honduras and Nicaragua as well as mountain forests in Honduras and Guatemala. The broadleaf forests extend from the mountain ranges and volcanic cones (cloud forests) to the coastal plains of the Central American Caribbean (rainforests) as well as to the Osa Peninsula in Costa Rica and to Darien, Panama. In Panama, these are found on both coasts; nevertheless, the largest mangrove forests are on the Pacific slope (Pascal 1998).

The conditions and characteristics described have caused the concentration in Mesoamerica of 12% of the world's biological wealth in only 2%

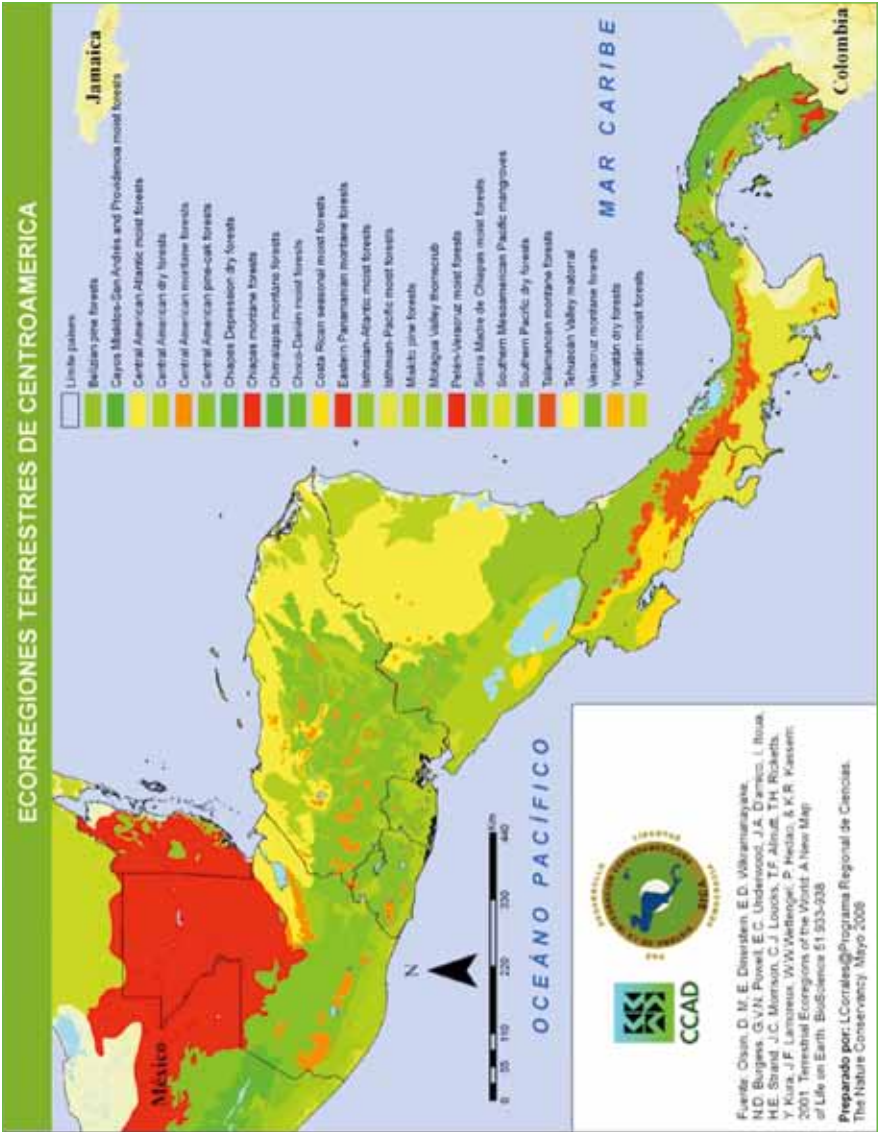


Table 1. Territorial ecoregions of Central America

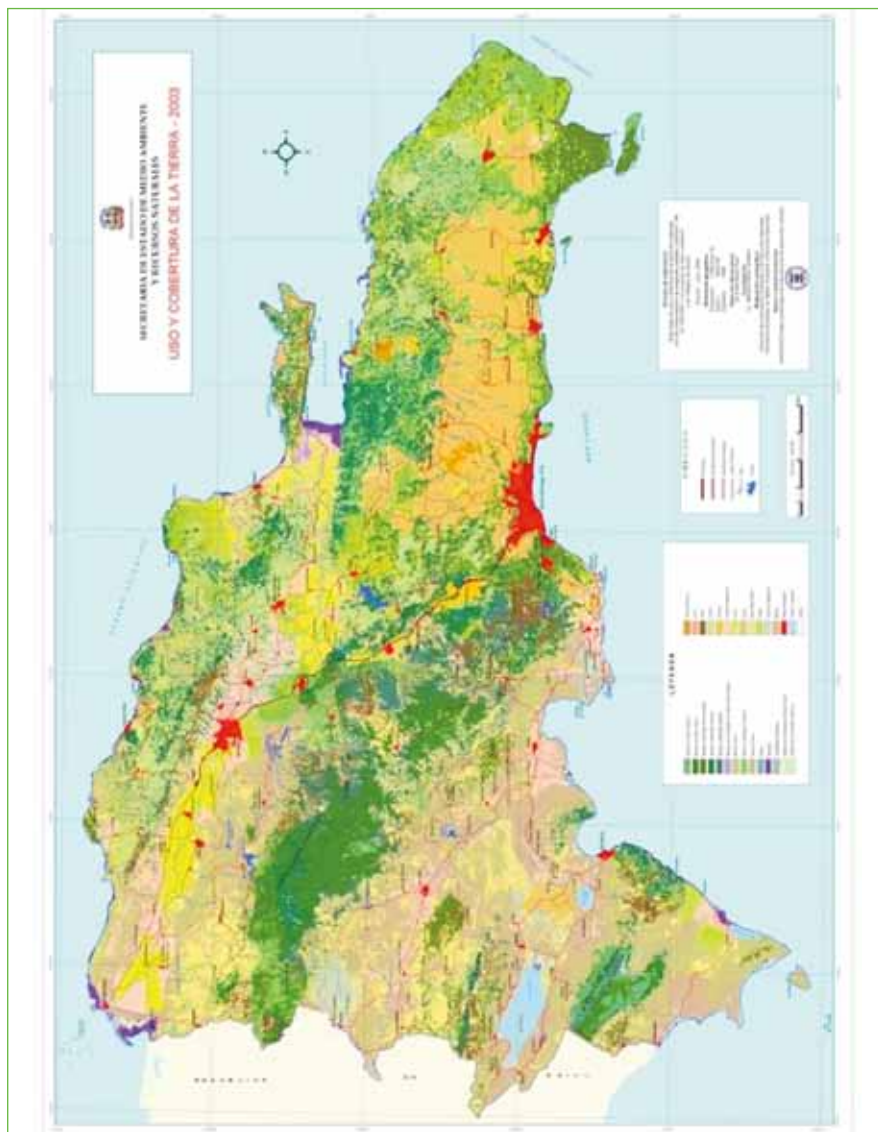


Table 2. Land use and land cover in the Dominican Republic



of its land area. The region has a biological diversity recognized worldwide with more than 20,000 species of flora and fauna: it is for this reason that the region is considered to be megadiverse.

The region has also acted as a cultural bridge. Migrations of groups from the South American macro-Chibchan culture (Kunas, Ngöbes, Bribris, Guatusos, Botos, among others) mingled in the territory with Aztec and Mayan migrations from North America (Mayans, Nahuas, Chorotegas, among others) (CCAD 2005).

The geological history of the isthmus, which is relatively recent, has been marked by an intense tectonic and volcanic activity that has molded its territory. The geomorphology of Central America is determined by a volcanic corridor that divides it into two slopes and that has defined the territory's profile, contributing to its shaping and to the formation of the region's soils.

The active plate dynamics, frequent seismic and volcanic activity and continuous depositing of volcanic and alluvial material have contributed to the formation of the territory. This activity has sculpted its geography and landscapes through thousands of years of faulting and folding. Because of its hot tropical climates, the isthmus possesses a wealth of water resources superior to that of many developing countries.



The Dominican Republic for its part contains the most impressive karst (limestone) region in the Antilles, Los Haitises, which covers an area of 1600 km² with *haitises* (conical mountains), dolinas (sunken microvalleys), caves, underground rivers and humid forest. A large part of this territory is protected in the Eastern National Park. Here is to be found the greatest number of caves in the Antilles, among them the José-María Cave where it is possible to admire more than 1,700 pictographs in a single room.

Despite the richness of environmental conditions and natural resources, the situation of those who live in these countries is far from being prosperous, stable or safe. All of the natural potential of the region is threatened by the fact that Central America is located in an area of geological instability and in the Caribbean hurricane corridor. These conditions favor the occurrence of extreme events that strongly impact the region, increasing the social and ecological vulnerability of the territory.

Another important threat comes from inappropriate use of the land and natural resources, which adds to the conditions of poverty and extreme poverty of much of the region's population. This has led to establishment of inadequate patterns of settlement and land occupation. As a result, the agricultural frontier is advancing, the fragmentation of habitats and



deforestation processes¹ and contamination of soils and water all continue, which consequently increases the loss of biodiversity and the deterioration of natural resources. Many specialists consider the region to be one of the planet's "critical sites" as far as biodiversity is considered.

1.2. Socioeconomic context

1.2.1. Population, poverty and conservation

The population of the Central American region is about 38 million; it is predominantly young and growing at a constant rate of 2.2%; half is located in the rural area, and 24% is made up of indigenous peoples. In 2005 the Dominican Republic had a population estimated at 9.2 million.

In general terms, Central America displays moderate and high indices of deprivation of basic necessities, according to the human poverty index estimated by PNUD (2003). Costa Rica and Panama have low deprivation indices (4.0 and 8.4, respectively), while it is fairly high for the rest of the countries: Nicaragua 24.4, Guatemala 23.5, Honduras 20.5 and El Salvador

1 By the middle of the 1990s an annual deforestation rate of 2.1% was estimated (SICAP 2003)



18.3. The estimate for the region as a whole in 2002 shows an index similar to that of El Salvador.

The human development report for the year 2004 for the Dominican Republic determined a human poverty index of 11.9. Compared with the figures published in the previous year's report, the country lost ground with respect to other developing countries, i.e., human poverty increased more in comparison with other countries.

During the 90s, poverty diminished in Central America, but high levels had been accumulated in previous decades because of economic and political crises and economic and human losses caused by natural disasters. For this reason, the State of the Region Project asserts that the reduction has not been enough and that Central America, in absolute terms, had in 2003, more poor people than 20 years ago (PNUD 2003).

“Thus, while in 1990 there were about 16.8 million poor people, by 2001 their number had increased to 18.8 million, or 2 million new poor in those two years. In the case of extreme poverty, the increase is less because it went from 7.6 million Central Americans in extreme poverty in 1990 to almost 8.5 million in 2001, about 850,000 people. As far as rural areas are concerned, the reduction was less, 5.8% in the case of total poverty and practically nil in the case of extreme poverty (0.1%)” (PNUD 2003).

This last result is quite significant because it reflects the few options for improvement for the extremely poor in rural areas. If we consider that it is precisely this population group that has a close relationship with the forests, it can be stated that much of the population living in conditions of poverty and extreme poverty lives in forested areas, indigenous peoples among them.

This situation has serious implications for the conservation of the forest ecosystems, because for these sectors they form an important source of food, energy, materials for housing construction and medicine. And it has myriad consequences for the conservation of biodiversity, especially because of the increase in pressure for land ownership and the natural resources because of the advance of the agricultural frontier and continuous fragmentation of the remaining areas where biodiversity is concentrated. Faced with an increasing demand for food, the agricultural areas expand, forests are cut and new industries arise that have an impact on ecosystems; consequently there is greater contamination and deterioration of the environment in general.



1.2.2. Land tenure

Land tenure structure in the region is a limiting factor for good practice and good management of the forests and the goods and services provided by their ecosystems. Many of those who use forest resources do not have property titles, which excludes them from incentives such as the payments for environmental services (PES) and other sources of income as an alternative to activities that put pressure on forest ecosystem resources.

Furthermore, the absence of clear land-financing policies has caused inappropriate use of the land since most legislation demands that in order to be accredited with the possession of a piece of land or plot, it is necessary to demonstrate its use (normally agricultural). This has motivated the change in use of the soil and caused deforestation and an advance in the agricultural and ranching frontier.

Here are some of the problems that must be resolved in order to favor changes in the structure of land tenure:

- High levels of insecurity of tenure
- Large number of informal owners
- Lack of security for the property rights of women and indigenous peoples
- Complex land administration systems
- Lack of information and/or disorderly data regarding property registration
- Political and administrative centralization
- Absence of mechanisms to gain access to credit using the land as guarantee

Another limiting factor is that the information regarding land tenure is scant in many countries in the region; it is not available for the analyses that would allow land policies and forest ecosystem conservation policies to be developed. It is expected that in the next three years there will be more information, since all the countries of the region are implementing land registry projects aimed at reducing this problem.

1.2.3. Economic policies

In the past 50 years, Central America has experimented with various development models. Import substitution and export promotion policies, as well as structural adjustment programs, marked the period of transition toward a

greater economic liberalization. The timid economic growth experienced in the 90s was the product of the process of political and institutional stabilization, adoption of the market model and promotion of structural measures in government organization. The achievements in terms of social equity and environmental sustainability for that period were limited. All this historic process and the development models have shown that the agro-export model, demographic growth, unequal resource distribution patterns and inadequate forms of land use have brought as a consequence the deforestation of great swathes of forest and the marginalization of important sectors of the population, chiefly farmers on the agricultural frontier and indigenous peoples.

An analysis by country shows that economic growth has been modest and not sustained; public deficits that attack economic stability and that give not very clear signals to national and foreign investors persist. This calls for a structural reform that will improve collection systems and resolve tax-evasion problems with the support of an expeditious legal framework. At the same time, public spending must be redirected toward those items and programs that have greatest impact in generating economic opportunities, in developing competitive capabilities and consequently in economic competitiveness. Monetary policies must be of an anti-inflationary nature while foreign-exchange policies should be flexible so as not to cause an anti-export bias. Financial systems will have to be modernized in order to support entrepreneurial efforts in an efficient manner, to lower cost of financial intermediation and to facilitate credit access for productive investment. In such an environment, forestry can play an important role.

Nonetheless, according to Economic Commission for Latin America and the Caribbean (CEPAL), economic activity in the Central American isthmus expanded by 5.9% in 2006, which represents almost one and a half percentage points more than in 2005 (4.5%), and half a point more than the average for Latin America and the Caribbean (5.3%). Such a growth rate has not been recorded since 1992 when the variation reached 6.6%, and it is the second-highest in 30 years. In terms of PIB per inhabitant, the increase was 3.6%. Although this expansive phase of the economic cycle has lasted several consecutive years, it is also true that it has been closely linked to the evolution of the U.S. economy, which makes it very sensitive to whatever may occur in that country's economy. Even though almost all economic indicators show progress,



to improve the social situation decisively in these countries, it would be necessary to grow at similar or better rates in a sustained manner over several years, which represents a major challenge for Central American economies.

The Dominican Republic's performance, according to CEPAL, has been excellent over the past decade. After the recession of 1990 (-6%), the internal gross product had an average growth of close to 6% in the nine years following and of 8% in the three-year period 1996–1999, the highest in the Latin American region. Economic policy and the reforms implemented throughout the 90s combined to maintain macroeconomic stability. Inflation fell to one-digit levels, the exchange rate stabilized and important progress was made in fiscal restructuring. In the external sector, the growing deficit in the commercial balance for goods was countered by surpluses in the free zone industry, tourism and private transfers, which has maintained the imbalance of the balance of payments current account at reasonable levels as a proportion of product. According to the preliminary report of CEPAL, the Dominican Republic grew by 10% in 2006, one of the highest rates in the entire region, continuing the positive tendency of the previous year. The driving force of Dominican economic growth was based more on investment spending than on consumer spending.

1.3. Status of forest and water resources

Between 1990 and 1995, more than two million hectares of forest were lost. Deforestation has various and profound causes, ranging from cultural patterns to economic ones: clear-cutting for agricultural activities, extraction of wood, use of firewood for cooking, and urbanization. It is estimated that 92% of the total production of wood is used for firewood and the 8% remaining for industrial uses. The destruction of the forests has affected fauna because of loss of natural habitat and because of overexploitation of resources, supported very often by the legal and illegal traffic in wild species of flora and fauna. However, it seems that efforts to stop deforestation have not been well-focused: the literature on deforestation and policies designed to protect forests have concentrated more than anything on the situation of natural resources and have marginalized important aspects related to people (Usting 1996).

1.3.1. Forest problems

Deforestation

The loss of forest vegetation, estimated at about 2.1% annually, contributes to worsening the conditions of poverty and vulnerability of the region's inhabitants. In the decade of the 90s, the rate of deforestation reached 48 hectares per hour, which is equal to an annual destruction rate of 416,000 hectares. According to recent reports obtained in countries of the region, deforestation between 2000 and 2005 reached between 375,158 and 416,158 hectares per year. That is, despite efforts made at control and supervision in the past 10 years, no progress has been made in this area (Table 1).

Illegal logging and mechanisms of control and supervision

This activity, by its nature, is difficult to quantify. However, existing information indicates that in Central America it greatly exceeds the officially authorized volume, which averages 3 million cubic meters per year.

In the Dominican Republic, legal deforestation is 85,000 m³ per year, although illegal logging is an unquantified problem. In Costa Rica, the National Forest Development Plan estimated that 25% of the wood that the country consumes comes from illegal logging. In Guatemala, estimates made in 2003 indicated that illegal logging for timber production purposes represented from 30% to 50% of the volume of commercial wood harvested per year. In Honduras, according to some studies, illegal logging exceeds 60% of



**Table 1.** Status of Forest Resources in Central America

	Belize	Guatemala	El Salvador	Honduras	Nicaragua	Costa Rica	Panama	Dominican Republic	TOTAL
Surface (km ²)	22,966	108,889	21,040	112,492	130,642	50,100	75,516	48,442	570,087
Population (thousands)	266.4	12,000	6,500	6,900	5,484	4,262	3,253	9,200	47,865.4
Forest cover (thousands of ha and %)	1721 79%	4,344 39.9%	202 9.6%	4,830* 46.9%	3,200 24.5%	2,131 46%	3,364 45%	1,585 33%	21,377 37%
Deforestation (ha)	36,000	50,000 a 60,000	4000 a 7,000	80,000	70,000	4,720	47,158	–	–
Volume authorized (m ³ per year)	60,145	800,000	300,000	759,000	210,720	950,000	95,000	85,000	3,259,865
Forest plantations (ha)	3,000	133,000	3,000	37,112	58,000	117,438	62,812**	75,000	481,924
Consumption of charcoal and firewood per capita (m ³)	0.47	1.00	0.65	1.26	1.06	0.81	0.38	0.1	–

Source: PN FAO 2005

*Results of forest and tree inventory 2005–2006

**ANAM, Dept. of Forest Development and Management

legal forest exploitations, chiefly in deciduous forest; however, according to the Intervention Committee of COHDEFOR, it exceeds 80% of such logging. In Nicaragua, some studies indicate that illegal logging exceeds 100% of the volume of what is legally approved for exploitation.

The systems of control and supervision have not been efficient. Existing sets of norms reduce profitability and are very bureaucratic, which has stimulated illegal exploitation. This highlights the need to improve forest governance, strengthen participation and decentralization and allow the more active involvement of civil organizations. Experience shows that when

communities have greater control over management of the resources, illegal activities are reduced. Moreover, it is urgent that control systems (at present based on coercion) be modernized and to increase the value of verification of origin and chain of custody and the use of intelligent forms for tracking movement, such as bar codes.

Firewood consumption

In Central America, about 39 million cubic meters of wood are consumed for firewood and charcoal; this is 13 times more than the volume authorized officially for the forestry industry that exists in the region (Tables 2 and 3): an average charcoal and firewood consumption of approximately one cubic meter per capita, part of which is used as a source of energy to prepare food. Another percentage, in no way negligible, is the production of energy. In Honduras, for example, between 65% and 70% of energy consumed comes from firewood.

In the Dominican Republic, 10% of the population consumes 0.1 m³ of charcoal and firewood per capita per year, according to data from the years 2001 to 2003. The high consumption of firewood in the region reduces consumption of other fuels, a situation that seemingly will not change in the next few years.





Table 2. Consumption of firewood and charcoal in Central America (thousands of cubic meters)

Country	2001	2002	2003	Consumption per capita m ³	Population using firewood (%)
Belize	126	126	126	0.47	---
Guatemala	14,540	14,870	15,207	1.0	60
Honduras	8,732	8,720	8,710	1.26	29 (urbano) 100 (rural)
El Salvador	4,518	4,518	4,518	0.65	38.6
Nicaragua	5,756	5,791	5,827	1.06	64.3
Costa Rica	3,486	3,474	3,463	0.86	11.8
Panama	1,280	1,264	1,248	0.38	20.7
Dominican Republic	48	61	22	0.1	10.4
TOTALS	38,486	38,824	39,121	-	-

Source: GEO Central America 2004: second Human Development Report 2003. UNDP.

Hence the importance of developing dendro-energy projects (forests for firewood) that will support the cogeneration of renewable energy. To do this, the Clean Development Mechanism of the Kyoto Protocol could be used.

Forest fires

Forest fires are a general problem for the whole region and they are reported in varying magnitudes every year. Between 1996 and 2001, 104,900 incidents were totaled throughout the region, a period in which Honduras and Nicaragua were the most affected. Between 2000 and 2001, almost 34,000 fires were reported, 9,000 of which were in Nicaragua and Honduras (Figure 3).



Table 3. Importance of firewood and how it is taken into account in energy policies
Share of firewood in total energy supply (2002)

Renewable firewood-related energy within the OTE						
Country	Nonsustainable firewood	Residential firewood	Agricultural firewood	Industrial firewood	Vegetable charcoal	Total sustainable firewood
Costa Rica	0.2	1.1	0.1	0.2	1.4	1.6
El Salvador	3.7	23.5	1.2	0.4	25.1	28.8
Guatemala	39.3	1.6	0.4	0.3	2.3	41.6
Honduras	4.3	30.1	1.2	-----	31.3	35.8
Nicaragua	5.0	37.9	0.3	1.4	39.6	44.6
Panama	2.3	16.0	0.6	0.2	16.8	19.1
Dominican Republic	0.2	1.1	0.1	0.2	1.4	1.6

Source: Majano 2005.

In the Dominican Republic between 1962 and 2005, 5,815 forest fires were recorded, affecting some 308,176 hectares.

CCAD (1998, 2001) identifies the institutional, political, agricultural and forestry causes for the problem. Among the institutional and political causes mentioned are the use of inappropriate detection systems, weak



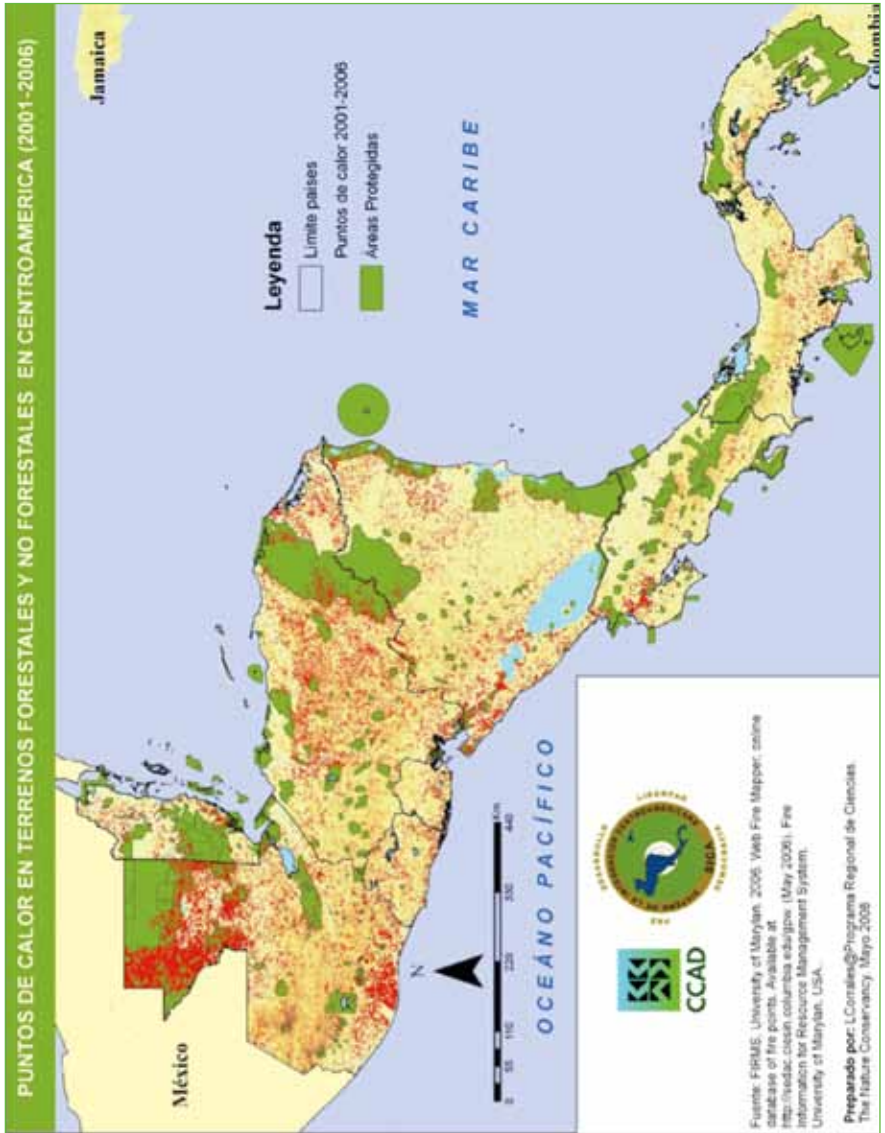


Figure 3. Hot points in forest and nonforest regions in Central America (2001-2006)

organizational structures for preventing and fighting fires, out-of-date or completely inadequate legal frameworks and serious deficiencies in coordination among institutions and among sector and extrasectoral policies. To this is added the scarcity or lack of trained personnel and equipment.

Among the agricultural causes are the change in land use; subsistence agriculture; industrial crop-harvesting practices; extensive cattle ranching, whose demand for land uses fire as one its principal tools for establishing and maintaining pastureland; the absence of good sustainable forest management; and weaknesses in regulations and control. In addition, there are other specific causes such as hunters, pyromaniacs and lightning. The months of greatest incidence and probability of forest fires are March and April, which coincide with the preparation of the land for planting. These activities take place spontaneously without any control on the part of state authorities.

A recent study done by TNC/CCAD (2006) calculated the total cost per hectare of the annual burning of forests, based on the economic value of the damage caused by direct and indirect impacts. For this calculation, only the average number of hectares of forest burned annually was considered. The greatest number of affected areas is within the production and conservation forests, and less in protected areas. This is due on the one hand to the fact that the greatest concentration of population is in areas outside the pro-





tected areas and, on the other, to the fact that the predominant species in the protected areas are deciduous (humid forests).

The burning of approximately 289,088 hectares has had a social cost of some US\$498.7 million. The sum total of the direct impacts produced by the fires is US\$118.2 million, while the indirect impacts amount to US\$380.6 million (Table 4).

Table 4. Hectares burned in the region in the period 2002–2004

Country	Hectares burned			
	2002	2003	2004	Average
Guatemala	22,467	83,058	7,463	37,662
Honduras	63,442	56,655	56,655	58,917
Nicaragua	26,148	27,448	33,252	28,949
Panama	3,739	17,755	1,723	7,739
El Salvador	1,261	3,661	3,497	2,806
Costa Rica	50,337	32,372	35,228	39,312
Belize	ND	ND	ND	ND
Dominican Republic	1,186	5,430	4,265	3,627
Total	168,580	226,379	142,083	179,012

Source: TNC-CCAD 2006

1.3.2. Some strategies and tools for sustainable management of forest ecosystems

For years, the future of the world's forests has been a major concern among scientists, but only recently has it become a subject of public concern (Evans 1995). The most significant topics of concern related to tropical forests are the reduction in the area and quality of the forest, environmental degradation of the forest area, loss of biodiversity, loss of cultural assets and knowledge, loss of livelihoods and climate change. Hence the importance of promoting sustainable forest management through the application of strategies and tools that guarantee the existence of forest ecosystems in perpetuity.

Management of protected areas

More than 50% of the forests of Central America are located in areas that are legally protected and therefore it is important to have effective management in the national systems of protected areas. To date, the region has 743 protected areas, with a surface area of 143,908.4 km² intended for the conservation of biodiversity and under different protection categories and regulations (Table 5). In the Dominican Republic there are some 10,164 km² under the regulations of protected areas, making up 24% of the surface area of the country.

A great part of these areas was established precisely for the preservation of forest ecosystems and their biodiversity. Protected areas include categories such as national parks, wildlife refuges and nature reserves. There are also categories for the management of forests and services connected to them, such as the forest reserves, protected zones and water-protection areas. However, in many cases the potential of these areas has not been evaluated and they are being underutilized or are not utilized for the purposes for which they were created. The tendency is toward an almost absolute conservation in areas that would easily permit a sustainable use of the forest resources through silvopastoral and agroforestry systems.

Table 5. Status of protected areas in Central America and the Dominican Republic between 2003 and 2006

Country	# of protected areas		Extension (ha)		% of national territory	
	2003	2006	2003	2006	2003	2006
Belize	94	94	1,071,664	1,071,664	47.21	47.21
Costa Rica	155	160	1,288,565	1,840,448	25.21	22.7
El Salvador	3	87	7,111	63,670	0.33	3.0
Guatemala	120	163	3,192,997	3,357,509	29.4	31.0
Honduras	76	98	2,220,111	3,215,3397	19.7	34.8
Nicaragua	76	76	2,242,193	2,242,193	17.0	18.2
Panama	50	65	2,941,386	2,600,018	26.0	34.4
Dominican Republic	70	86	917,588	1,150,000	19.04	24.0
TOTAL	624	829	13,881,614	15,540,839	24.35	27.26

Source: National Reports 2003 and 2006.



On the other hand, there are factors that threaten the existence and stability of the protected areas, such as inappropriate extractions, land invasion, deforestation, forest fires, and advance of the agricultural frontier. All these are elements that put biodiversity in danger in the long term and cause loss and fragmentation of habitat, increase the processes of environmental deterioration and the degradation of the ecosystems, and create major levels of environmental and social vulnerability. Many of the problems indicated persist, faced with a lack of institutional presence on the part of the state and because of inappropriate practices. Almost 70% of the areas lack the human resources that would guarantee their management and effective administration.

To compensate for this situation, efforts have been made in the last few years to incorporate the participation of civil society stakeholders in the management of protected areas, and new management methods have emerged, such as co-management or shared management (joint administration of an protected area by an NGO and organized local groups). Currently, practically 75% of the protected areas with institutions present are being co-managed by civil society stakeholders.

However, policies still prevail that conceive of protected areas as an excluding communities since they limit their access to natural resources, thus causing greater poverty and socioenvironmental conflicts. In this sense, national systems of protected areas continue to have the challenge of converting these areas into tools for sustainable development instead of sources of conflict.

Despite the efforts made, it is clear that it is one thing to attempt to conserve and protect these areas, and another is the socioeconomic reality that surrounds them. The majority of the protected areas have been defined as islands of conservation, but in practice they have become “parks on paper” without a real connection to the communities that live there and without official sustenance. The debate that has been going on in this respect points out that a protected area can be viable in the long term as long as its conservation is an important part of the local socioeconomic system and as long as it brings tangible benefits to the local community. Otherwise the traditional conservationist vision will clash with the urgent socioeconomic needs of the populations.

Despite the picture described, the protected areas of the region continue to be a natural resource of enormous potential for the sustainable development of Central America and the Dominican Republic. The set of environmental goods and services that they generate, such as water for various uses, forest biomass, nontimber products, genetic resources, stabilization and adaptation to climate change, prevention of natural risks and carbon conservation can be translated into concrete economic benefits that, fairly distributed, can contribute to improving welfare and income for the population, especially rural ones.

The protected areas also possess a potential wealth of great importance for other economic sectors such as tourism, scientific/technical development, especially biotechnological, and recreational and educational opportunities for the population in general.

Payments for environmental services (PSA) and multifunctionality of forest ecosystems

In the past few years, Central America has looked to the PSA as a conservation mechanism. The formulation and putting into practice of programs of this kind would not only benefit all the countries but it also represents a viable option for rural development, both in agricultural and nonagricultural sectors. This topic permits a new vision that transcends forests as a source of wood to consider them as ecosystems that can fulfill multiple functions.

In this sense, the discussions of the Kyoto Protocol and its mechanisms have brought about a new reality. The vision of forests as producers or securers of carbon has





increased their financial value. In general, the interrelationship between the forest ecosystems and water, tourism, biodiversity, energy sources, welfare and health is more obvious and recognized every day. This subject acquires greater relevance and becomes an opportunity if the resources generated by the projects in Kyoto lands are invested in conservation and development processes as well as in processes for adapting to climate change.

Forest certification

The Central American region has demonstrated a growing tendency in the area of forest certification. In February 1999, there were only 90,000 hectares of certified forest, but by October 2000 there were 160,078 hectares and by November 2001 there were 398,971 hectares. In August 2003, 537,781 hectares of certified forest in Central America were reported—five times more than in 1999. By 2005, there were 830,589 hectares, 4.7% of the region's forest surface area. Guatemala was the country with the greatest number of certified sites (16: 435,090 ha) in 2003, and by 2005 Guatemala had 579,916 hectares, (20.3% of its forest surface area) followed by Belize with 104,888 hectares (7.8% of its forest surface area) (GTZ-FAO, FSC, WWF 2005). Natural forest is the type of forest most certified (85% of the total certified area), followed by forest plantations and mixed plantations

In the Dominican Republic 354.64 hectares of natural *Pinus occidentalis* forests have been certified as under forest management control on 16



properties of small producers, under the auspices of the Management of the Upper Basin of the Rio Yaque del Norte Project.

1.3.3. Water resource problems

Water is one of the principal subjects on international and regional agendas as an indicator of human development and it is closely related to the conservation status of forest ecosystems. Since forests are the real producers of water, many of the efforts at conservation and management of the forests are directly related to the protection and production of water resources. The isthmus has 120 main river basins (18 are cross-frontier basins) that cover an area estimated at 276,322 km², which corresponds approximately to 50% of the territory of the region (CCAD 2006) and to 10.7% of all the cross-frontier river basins in the world. A great wealth of water exists in the region but with little planning and poor use of the resource. Human settlements have affected the aquifer strata, and unsustainable agricultural practices have reduced the capacity to produce water.

The water resources of the region are distributed irregularly both in space and in time, which affects their availability. The Caribbean Coast is much wetter than the Pacific. Being dependent on the distribution patterns and on





the demand for the resource, many territories and populations suffer situations of water stress. 66% of towns and cities are located on the Pacific slope but 70% of water resources are located on the Caribbean slope (Asociación Mundial por el Agua 2006).

The per capita extraction of water is estimated at 656 m³ per year. El Salvador is the country with least availability of water and it possesses one of the highest extraction rates (4.1%), reflecting serious problems of water scarcity and stress. Costa Rica is the country with the highest extraction rate (5.1%) but with a high availability of water. Guatemala shows an extraction rate of 3% and the second lowest water availability rate after El Salvador (Asociación Mundial por el Agua 2006).

1.4. Institutional policy context

1.4.1. Background

Concern about the environment as a regional objective comes rather late in Central America. In the decade of the 60s, the first attempts were sketched out for specifying Central American initiatives for the management of environmental matters (such as the Regional Committee on Water Resources or the Coordinating Committee for Drinking Water Institutions in Central America, Panama and the Dominican Republic). But it was not until the 90s, once the most acute phase of the armed conflicts was ended, that progress was made on the subject of the environment, due to three main factors.

1. The arrival of the peace processes in the region, which allowed the adoption of an inclusive regional agenda determined less and less by security matters.
2. The promulgation in 1991 of the Tegucigalpa Protocol creating the Central American Integration System (SICA), which permitted the recuperation of regional areas as a public policy objective in all states in the area.
3. The announcement of the Rio Summit (1992) and its sequel.

The above circumstances permitted CCAD to begin functioning within a few years, the approval of the Agreement for the Conservation of Biodiversity and Protection of Wild Areas in Central America (1992) and its

main instrument, the Central American System for Protected Areas (SICAP); the creation of the Coordination Center for the Prevention of Natural Disasters in Central America; the formation of National Commissions for Sustainable Development; signing of the Agreement on the Management and Conservation of Natural Forest Systems and the Development of Plantations (1993); and the signing of what was to be the strategic framework of SICA: the Central American Alliance for Sustainable Development (ALIDES) in 1994.

In that same time period, the forestry action plans were formulated in the countries of the region with the support of FAO. In them, the first attempts were given shape for building a programmatic vision for this topic. In 1999, the first PARCA was published, whose main objective was that of facilitating a strategic link between development and conservation of Central America's environmental heritage. The most significant contribution of PARCA I was the search for environmental standards that would enable a more effective and up-to-date environmental management. That focus made it possible to overcome the narrow range of creation of environmental laws that had predominated during the first years of ALIDES.

By the year 2008, Central America already had more than a decade of efforts directed toward highlighting the advantages of sustainable development. In effect, after the Earth Summit, the region entered a process of political dialog that led to the signing of the Alliance for Sustainable Development, to putting into effect of a series of legal tools of a binding nature in various subject areas (biodiversity, protected areas, forests, climate change, hazardous wastes) and to the development of an even more abundant number of policy and strategy documents in these areas.

This new, more sophisticated and flexible environmentalist spirit was reinforced by the proposal for the Mesoamerican Biological Corridor between 1977 and 2000. More recently, CCCAD has revised and formulated a new plan, PARCA (2010–2014), which brings the region's situation up to date and incorporates a series of principles and guidelines that orient actions in different strategic areas that will contribute to the region's sustainability.

There is no doubt that in recent years Central America has undergone improvements in the institutional and legal framework for environmental and forest management. The countries have continued working on strengthening



state, legal, entrepreneurial and community capabilities. At a state level, highlights are the institutional modernization processes, the promotion of information systems and the efforts at coordination with other sectors for the development of work agendas together with the ministers of agriculture, economics and trade and tourism.

Work continues with small, medium and large businesses to apply clean production or ecofriendly production strategies; efforts are also being increased in environmental certification, forest certification and the monitoring of environmental impacts, among other strategic actions. The governments have managed to open dialog with civil society and spaces have been created for social participation, among these the Central American Social Forum for Environment and Development (FOSCAD).

In many countries of the region, the legal framework is being modernized and laws are being enacted that guarantee citizens' participation and access to public information. Even though this participation must still be improved, a positive tendency exists in the relationship between governments and NGOs or community organizations. In some countries, forest governance committees have been established, as have forestry commissions at different national and local levels, as well as other structures of informal participation in the organizations of the state, civil society and private sector in forest management.



1.4.2. A new legal framework and new kinds of institutions

Changes have been produced in the region, both in national forestry legislation as well as in the national forestry agencies that complement protected areas legislation. Moreover, there is provision for various mechanisms for coordination between the ministries of the environment and agriculture on which they depend, making initiatives for promoting and applying national forest norms more efficient. In four countries, the forestry sector is under the ministries of the environment and in another four, under the ministries of agriculture, which shows the conservationist or productive emphasis of the institutional management of the sector.

Autonomous forestry institutions have been created, with their own assets, decentralized and with their own government, which have mechanisms for promoting forestry activity and forestry incentive programs that contribute to allowing more stakeholders of all kinds to join in the productive/economic activity. Processes of decentralization and deconcentration of forestry management have also been initiated, sharing responsibilities with the municipal governments, and forest crimes have been classified, contributing to a reduction in the degree of discretion used concerning the application of the law, particularly when judging illegal actions that are detrimental to the forest ecosystems.

The main advance in the region in recent years has probably been in the field of forestry regulation, as shown in the development and enactment of forestry policies and laws, some of which are considered very modern and advanced. However, it cannot be said that significant progress exists in the implementation and application of these laws and policies since the institutional framework for their application is weak. The human and budgetary resources available to the institutions do not correspond to their mandate, which means that the laws are not followed. In addition, there is an absence of solid structures and of a “culture” of coordination between institutions; very often the legal and technical tools that are available are not known even within an institution.

These weaknesses lead to poor planning and capacity to respond to the urgent requirements of its major stakeholders, which translates into an absence of reliable and current forestry information, a lack of research, educational, extension, and forestry training programs, as well as a financial



framework that is not very favorable to the needs of the sector. Despite this, and without doubting for a moment that there has been important progress in different aspects of legislation and regional institutions, the uneasy feeling remains that it is not possible to recognize the same progress on the ground. Macroeconomic, social and environmental conditions in general, with only very specific exceptions, indicate that the aspirations and goals of the regional agenda for sustainable development expressed in ALIDES still remain a long way from being achieved.

One of the obstacles to be overcome is the conceptual dichotomy between conservation and sustainable use of forest ecosystems, with the vision of the forest as a simple producer of wood. It is fundamental in this program to carry forward an integral and integrating vision, as the result of different initiatives, policies and programs that will allow combined work between sectors but with real efforts at decentralization that favor the participation of the different stakeholders linked to forest ecosystems.

On the basis of the above, strengthening and development of institutions must involve the institutions responsible for the sustainable development of the forestry sector, both at the regional level and with local governments and connected autonomous institutions, and with organizations and stakeholders of a private and nongovernmental nature that act in the sector. Gradually but continuously, the limitations and obstacles to the development of the sector will be overcome, and the advances and achievements can be strengthened.

1.4.3. Limitations and obstacles

Among the chief limiting factors and obstacles that most affect the good management of forest ecosystems are the following:

- a. The participation of the forestry sector in the economy of the countries of the region is scant and tends to be limited to logging activity without any greater social, economic and territorial considerations.
- b. The forestry industry is backward and disconnected horizontally and vertically and this prevents the forestry sector from being competitive and sustainable.
- c. The countries are beginning to import timber in order to satisfy their internal markets, despite being privileged producers. Meanwhile, the illegal market is growing and the traffic in precious woods is on the rise.

- d. The process of deconcentration in the forestry administrations is not keeping pace with decentralization. Centralized structures and a negative attitude toward the transfer of competencies persist.
- e. Lack of training in the municipalities, influence peddling, lack of financing and lack of organization can have negative repercussions for forest management.
- f. Lack of attention to the chain of corruption linked to logging activity in the countries severely impacts the attempts to manage and plan the use of the forest ecosystems; it affects many stakeholders and has an effect on the governability and illegality of this activity.
- g. The lack of connectedness and horizontal and vertical linking of policies, sectors and processes connected to the management of forest ecosystems affects advancement.
- h. The interference and impact of public officials in defense of forest offenders is a limited factor. In some cases, there are officials who are offenders using front men.

For society to overcome these negative aspects will require the coordinated, brave and determined collaboration of all stakeholders linked to the forest ecosystems. Only concerted action by the state, the private and community sector and civil society, organized around a strategic action program such as that proposed, expressed in regional, national and local programs, will be able to halt and even reverse the consequences of these grave problems that affect the region and hinder the sustainable management of its resources and forest ecosystems.



Chapter II

Justification and conceptualization of the program





2.1. Justification for the program

Processes formulating policies, strategies and national forestry programs are under way in the region, setting up a conceptual framework aimed at conservation and sustainable forest management. However, it is obvious that these instruments do not yet form the guiding framework for the actions of the public and private stakeholders in relation to forest ecosystems. Deforestation continues to be a scourge that affects all the countries, illegality and informality continue to be common practice and the forestry sector continues to occupy an insignificant position in the context of national policies.

Furthermore, society continues to give precedence to pure conservation as the only valid effort for forest conservation. In most of the countries, in political implementation the term “conservation” has greater priority than the term “sustainable forest use.” In addition, land use policy, including for lands devoted to forestry, has historically been under the dominance of a short-term agricultural focus, considered as a national priority because of its social and economic impact on exports and production of basic foodstuffs for internal consumption.

This separation between the theme of conservation (more linked to biodiversity), the theme of sustainable forest management, (more linked to the classic productive forestry sector predominantly focused on extraction or logging), and the theme of agricultural development, (linked to the production of foodstuffs) is reflected in the differentiated structuring of institutions in the countries and has produced a polarization among the policies on forests that affects the full set of relationships between society and nature.

This triple relationship between the institutional framework and the policies of biodiversity conservation, sustainable forest management and agricultural development not only has been contradictory but also has frequently slowed down and complicated decision making on sustainable use and management of forest ecosystems, both on the part of the national authorities and on the part of the other stakeholders in the forestry and agricultural sector. In other words, the forestry sector lacks connectedness because there is no shared vision.

The countries have focused on the forest more in association with extraction than with forest ecosystems and their multiple functions. This has brought as a consequence problems of governance, institutional disconnectedness, incoherence between legal and standards frameworks, and lack of recognition of the key stakeholders in the sector (the owners of the forests and the local communities). In practice, this disconnection between the institutional framework and policies has produced voids and obstacles in the management of forest ecosystems; in the same way, the lack of clarity regarding land tenure promotes the nongovernability of forests and the uncontrolled advance of the agricultural frontier and consequent loss of forests.

The lack of real impact of the social stakeholders in the areas of collaboration that exist in the policy and strategy debate of the countries has not allowed actions to be taken that might renew, innovate and advance the forest ecosystems management sector. Even though forest ecosystems represent large areas of the national territories, land-use planning, despite its recognized importance, does not play the role that it should with those responsible for the forests and with decision makers.

This lack of an integrated vision has not permitted the identification of the use and management of nontimber-yielding forest products, it has not allowed an increase in assigning research and development resources in these areas, nor has it permitted any contribution of cultural and traditional knowledge in forest management processes. Otherwise, there would already have been an increase in the creation of jobs in the rural areas and in the active participation of women in these activities.

The lack of innovation in the execution of many of the forestry projects that have been undertaken in the region, and the lack of systematization of the processes of knowledge transfer and exchange, have contributed to the fact that public opinion has a negative and prejudiced image with regard to the forestry sector. Neither are there any mechanisms for replicating experiences or for spreading good practices and successful experiences taken from innovation and learning.

The national forestry programs in the countries have been the product of long periods of discussion and negotiation. However, they are still not visualized as the principal tool that society should strengthen and of which it



should take advantage. A renewed joint effort is required between the international cooperation community, the region and the countries in order to promote a shared vision of the multiple functions and cross-sectoring of the forest ecosystems as a base for sustainable development.

Nonetheless, not everything in the region has been negative. There are some significant achievements, such as the development of strategies for conserving biodiversity, not only in protected areas (creation of biological corridors), and a greater attention given to agrobiodiversity and sustainable forest management. Positive changes are in evidence because, to a growing extent, the multifunctionality of the forest and its values for society are the central concept on which the national policies for forest management are based.

As expressed at Puembo, sustainable forest management can only be achieved through a good policy of participation (multiple stakeholders) using tools at all levels, international, regional, national and local (multi-level), and with a wide vision of good management (with multiple functions and across multiple sectors) of the forests. In order to realize this aspiration in the different countries of the region, the integration of political wills and technical processes at a regional level becomes necessary; these will promote regional forestry integration with a focus on ecosystems so as to guide the actions of the countries in developing and operating the national forestry programs.

Hence the necessity and importance of a program such as Perfor, which will attempt a) to establish this integral, systemic and intersectoral focus for the management of forest ecosystems of the region and b) to recognize the role played by the regional areas for cooperation and coordination between the different participating stakeholders. For this reason, Perfor recognizes the relevance of sustainable management of forest ecosystems as sources that produce wealth and combat poverty and as a means of contributing to the reduction in environmental and social vulnerability and the threats of fragmentation. Moreover, it recognizes the importance of sustainable forest management in the strategy of adaptation to climate change and in supplying the goods and services that these ecosystems offer society, both in economic terms and also in terms of well-being and quality of life.

2.2. Inside Perfor

The content of the program is clearly expressed and developed in a forest ecosystem management model adapted to the needs and peculiarities of the region. The conservation of the natural environment is integrated and complemented with the sustainable management of forest resources and sustainable agricultural development. Thus Perfor claims to serve as a strategic planning tool at the regional level that will guarantee conservation, improve the sustainable use of the forest ecosystems and define the strategic and programmatic elements for the management of forestry systems.

Perfor is conceived as a basic strategic tool that organizes, complements and operates regional forestry policy and strategy promoted by CCAD. Perfor establishes the principles, vision, mission, objective image and general and specific goals for sustainable forest development; in addition, it outlines the desired results. Once these bases are established, the program proposes to the member countries the need to structure in a coordinated manner a regional model capable of guaranteeing the sustainable management of forest areas and resources, as well as their conservation. Thus the forestry planning and management proposed will result in the new regional model via five fundamental elements that will make up regional forestry policy:

1. Establishment of a harmonious legal framework that affords a joint platform suitable for sustainable forest development. It is considered extremely important to finalize the legal framework in each of the countries and make it harmonious and compatible at a regional level, particularly with regard to the regulatory and standards framework.
2. Development of a proposal for efficient regional and national institutional organization regarding, on the one hand, configuring an administrative structure endowed with the personnel and economic and financial resources sufficient to guarantee the development of the regional and national components of the program, and, on the other, establishing all forums for participation that may be deemed necessary.
3. Establishment of a common territorial framework expressed in the Priority Areas of Regional Interest based on the Mesoamerican Biological Corridor and the territorial priorities that the Dominican Republic sees as necessary.



4. Formulation of a proposal for strategies and guidelines structured in components and results to guarantee achieving the objectives that stem from the established principles. The evaluation of these actions will correspond to each of the national forestry plans, which will permit interconnection of their economic programming with an initial projection of five years in the first stage of implementation (2008–2012) and a perspective for long-term execution of 15 years or more.
5. Establishment of a proposal for financing and financial mechanisms that will be capable of financing the development of the program in its regional components and for the execution of the national forestry plans.

2.3. Territorial aspects and principal themes that underpin the program

2.3.1. The Mesoamerican Biological Corridor

The work on corridors began in the region between 1993 and 1994 when the creation of the Mesoamerican Biological Corridor (MBC) was proposed. At that time it was known as the Path of the Panther (Paseo de la Pantera). Subsequently, in 1995, CCAD requested from UNDP some preparatory assistance in designing the corridor. In 1997, this proposal was presented at the highest political level, the Summit of Central American Presidents, a joint declaration being signed that defined the MBC in the following manner:

“The Mesoamerican Biological Corridor is a system of territorial planning composed of natural areas under special administration regulations, nuclear zones, buffer zones, zones of multiple use and interconnecting areas; these are organized and consolidated to afford a collection of environmental goods and services for Central American and world society, creating the spaces for social collaboration in order to promote investment in conservation and sustainable use of resources.”

The MBC amplifies efforts made in Mesoamerica in recent years in the search for environmental sustainability; at the same time, it attempts to improve the living standards and quality of life of the population that uses, manages and conserves biodiversity. This initiative starts with the conviction that in the long run, conservation of biodiversity cannot be achieved without

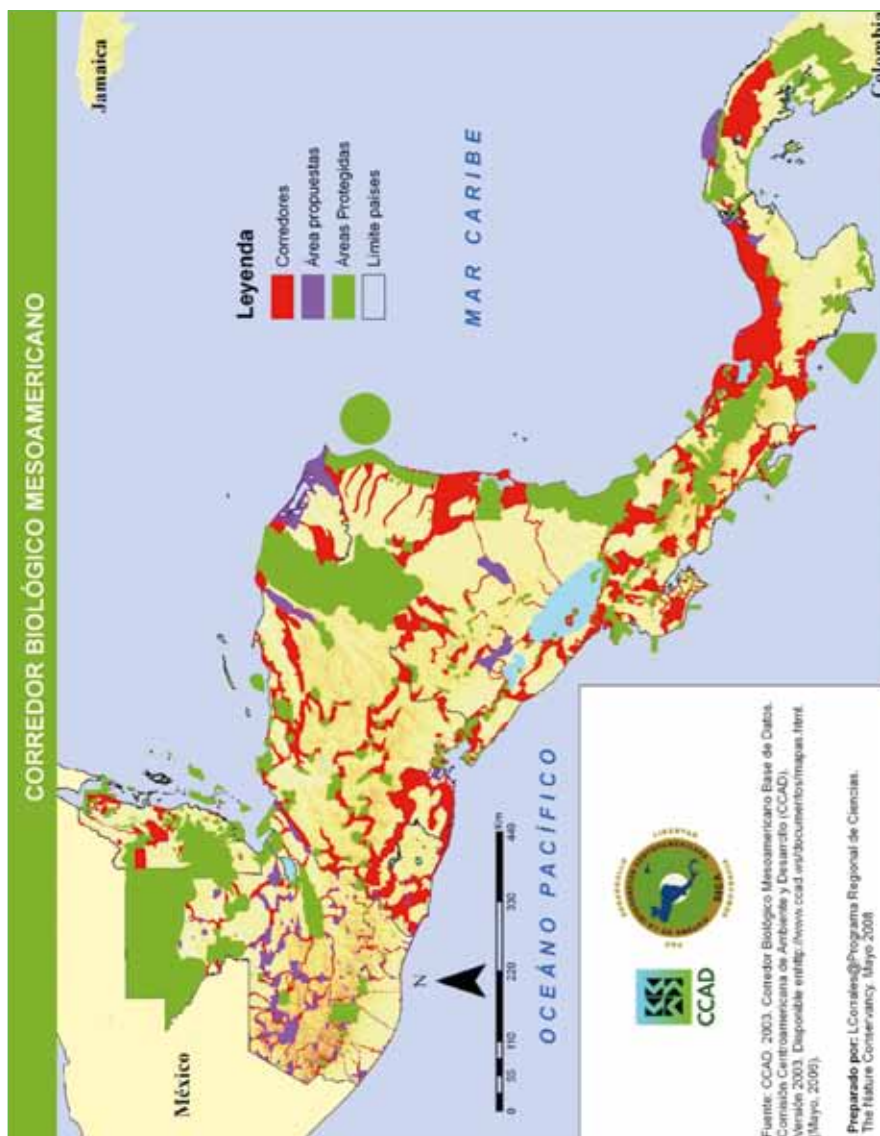


Figura 4. Mesoamerican Biological Corridor



working at the same time on reducing rural poverty and strengthening the economic viability of the countries of the region. The MBC also pursues to help prevent and reduce the risks that affect human settlements, infrastructure and crops and that are made worse by deforestation and inappropriate use of land (Figure 4).

2.3.2. The context of Puembo I and II

Perfor defines as priority subjects for the management of forest ecosystems those that are established under the context of the Puembo I and Puembo II initiatives. These are processes that attempt to promote the political forestry agenda and to support actions at local, national, regional and international levels in order to strengthen national forestry programs and the sustainable management of forest ecosystems in the countries. Subsequently, in the Latin American Forestry Congress (Guatemala 2002) and in meetings of the Latin American and Caribbean Forestry Commission (Argentina 2002 and Peru 2003), four themes were defined that were considered as fundamental for national forestry programs and for the Latin American region:

- **Governance and institutional capability** (setting standards, decentralization, participation, transparency, interest groups, conflict management)
- **Evaluation and financial mechanisms** (policies, strategies and instruments of financing based on the multiple functions of forests)
- **Influence from other sectors** on forests and vice versa (finances, agriculture, mining, tourism, etc.)
- Relationship between the **regional and international processes and their implementation** nationally (relationship of the countries with regional and international forestry processes and organizations, representation of the countries in them and relationship with neighboring countries in matters relating to forests)

Puembo II2 was an initiative promoted by CCAD and CTB in conjunction with GTZ, FAO Holland and IUCN Mesoamerica, based on the results from Puembo I. On the basis of the four topics, a transversal analysis of the

2 The purpose of Puembo II is to establish a platform for dialog among regional and national organisms to develop proposals and recommendations stemming from existing experiences.

forestry sector was carried out for each country in Central America, which has enabled identification of the opportunities and challenges of the sector.

2.4. Opportunities for the program

- The forest ecosystems of Central America form an ideal central focus for moving forward some of the more pressing goals regarding sustainable human and environmental development, linking them to the development plans of the countries and to other opportunities such as the Millennium objectives.
- The sustainable use of the forest ecosystems can mean financial opportunities and can favor processes of integration as regards industrialization and commercialization of timber and nontimber forest resources, as well as in taking advantage of payments for environmental services (PES).
- The possibility of productive chains that link timber management and use in forest ecosystems to other activities of great potential, such as tourism, sustainable agriculture and projects for adaptation to climate change, allows us to visualize forestry activity as an instrument for improving the quality of life of forest inhabitants in particular, and the economies of the countries in general.
- Favorable conditions exist in the countries and in the region for taking advantage of international agendas and agreements.
- The PES represents an important opportunity for the countries of the region; it is a very positive incentive for promoting the sustainable management of forest ecosystems and it offers many alternatives for improving income and quality of life for the rural population. Its application and promotion are of great regional interest.
- In all the countries, since 2000, national strategies for forestry development have been worked out. Most of them are based on the multifunctionality of forests and include conservation and protection of forest resources as well as sustainable production and management.
- The identification and appreciation of new social and economic stakeholders participating in the sustainable management of the forest ecosystems represent opportunities to generate income and wealth for sectors that traditionally have been marginalized from these processes.



2.5. Challenges for the program

Challenges for the program are many and diverse. For the purposes of applicability, we will divide them into two groups: those of a global and long-term nature and others of a specific character that are short or medium term.

The former have to do with the making and applying of general policy instruments in the countries that are directed at strengthening institutions, productivity, setting of standards and the processes of effective participation of social and economic sectors in the process. The second group aims at developing or strengthening policy tools and agendas that are more concrete, such as:

- Establishing the multifunctionality of the forest and its values as the central concept on which to base implementation of national and sector policies.
- Strengthening policies that will incorporate the management of forest ecosystems as a strategic component for each country and for the regional institutional system for combating poverty.
- In the case of forest exploitation, it will be necessary to overcome the archaic dichotomy of conservation versus sustainable use of forest ecosystems, using new policies and strategies that permit the preservation of those areas and promote competitiveness and the exploitation of their great potential value.
- Promoting in a decisive manner the establishment of industrial plantations, chiefly in those areas in land use is suitable for forestry and where lands exist without a current economic use, such as abandoned pastureland.
- Identifying the importance of the forest in relation to other strategic resources for development. Because of its relationship with such essential elements as water and energy resources, the forest is a principal (though ignored) factor in development, and this condition distances it from government policies and strategies.
- Strengthening good governance of the forests, creating space for the participation of civil society and decentralizing decision making at local level.
- Incorporating fully all stakeholders involved in forest ecosystems, beyond the set of stakeholders of the so-called forest sector.

- Establishing intersectoral relationships with agriculture, mining, tourism, energy, water resources and the financial sector, in order to take advantage of the potential for synergies and cooperation.
- Creating efficient mechanisms for coordination and collaboration between the institutions of the state and community and indigenous organizations to consolidate synergies between both.
- Promoting the programs of community forestry that further the active participation of the communities in the integrated management of forest ecosystems; strengthening the capabilities of the government sector and the community sector as mechanisms for local governance.
- Promoting development programs for sustainable productive systems, particularly agroforestry and silvopastoral systems.



Chapter III

Institutional framework underlying the program





3.1. The institutional framework

The institutional framework for carrying out Perfor is based, at a regional level, in SICA through the CCAD and the Central American Agricultural Council (CAC), which afford wide support through legal institutions. On December 12, 1989, the presidents of Costa Rica, El Salvador, Guatemala Honduras and Nicaragua, signed the Constitutive Agreement for CCAD, with the goal of establishing “a regional regime of cooperation for the maximum utilization and rational use of natural resources in the area, control of contamination and reestablishment of ecological equilibrium” that would guarantee a better quality of life for Central American people. An Addendum to the Agreement in 1991 incorporated Belize and Panama. In 2005, the Dominican Republic joined CCAD as an associated body.

For its part, CAC came into being as such when the Guatemala Protocol to the General Treaty on Economic Integration went into effect. Its highest authority is the Council of Agricultural Ministers of Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama. Both councils have their respective Executive Secretary Offices (SEs) whose functions are to support, monitor and execute the agreements of the Councils of Ministers, including the coordination or execution of actions, programs or projects.

The setting up of Perfor is an initiative of CCAD, and its origin, mandate and legal-institutional foundation is the Declaration of Ministers of CCAD and CAC. Its implementation forms part of the Intersectoral Work Agenda of CCAD and CAC, particularly as regards the Regional Agroenvironmental and Health Strategy (ERAS) that both Councils of Ministers have committed themselves to promote in the region. By doing this, they are attempting to create synergies that respond to a truly integrated and sustainable rural development, especially in those area that are highly socially marginalized but of great potential for the sustainable use of natural resources and biodiversity, and where the management of forest ecosystems is a strategic factor.

Perfor is a strategic planning tool of regional policy and of the EFCA, and as such it affords an operative framework for adapting and complementing it with actions and strategic approaches such as the following:

- Increase forest cover in the region, with an emphasis on the connectivity of the forest landscape
- Reexamine and reposition the political agenda for the management of forest ecosystems in Central America
- Restore degraded forests in a socially and economically sensible manner in order to contribute to the reduction in fragmentation of ecosystems
- Strengthen SICAP and conserving biodiversity
- Promote the management of the forest ecosystems of Central America for a greater sustainability and competitiveness and with greater outreach to contribute to reduction of vulnerability, mitigation and adaption to climate change, fighting poverty, and, in general, sustainable development.

Perfor promotes the implementation of actions contributing toward the reduction of poverty in the communities that surround or live within the forests and depend on the natural resources to satisfy their needs. This is particularly important for the indigenous people who, moreover, maintain a spiritual relationship with the forest. For this reason, it promotes the establishment of mechanisms needed for the sustainable use and management of forest ecosystems at a community level. Achieving a significant recuperation of forest cover will permit a reduction in economic and social vulnerability and conservation of the region's high biodiversity. These actions will help reduce the trend toward disappearance of the region's forests.

These elements, already indicated by the EFCA, are reexamined by Perfor with the aim of having the national forestry plans and the agricultural sector plans complement each other through actions of common interest. The idea is to promote a more integrated exploitation of the territories that will favor rural development in harmony with nature and that will contribute to the reduction in vulnerability, adaptation to climate change and the reduction of poverty. On a regional scale, Perfor is carried out as a mandate of CCAD-CAC through the Forestry Technical Committee. In accordance with the Internal Regulation for the CCAD technical committees, *"The Technical Committees of CCAD are characterized as technical assessment bodies within the field of their competency, and they will be the mechanism that facilitates*



communication between the Council of Ministers and the authorities entrusted with enforcing policies at a national level, with a view to achieving the objectives taken from the action plans and decisions of the Council of Ministers in each country.”

Perfor considers the consolidation of institutions through the actions of the CTB as the technical body that guides administrative matters in the forest ecosystems of the region. Moreover, by taking advantage of intersectoral relationships among the Ministries of Agriculture and the Environment and the progress made on the intersectoral work agenda of the ERAS, it proposes establishing the link with forestry through CCAD-CAC.

At a national level, Perfor will be executed through the national forestry plans, where these exist, or through the State Forest Administration (AFEs), the Minister of Agriculture or of the Environment, whichever the case may be. It will have to work with the institutions existing in each country, where the subject of forestry is contained within the agricultural or environmental sector, depending on the legal institutional framework of the country. Apart from the institutions mentioned, the execution of this strategic program follows the same philosophy of execution as all the CCAD strategic programs, which are open to all stakeholders of society but in particular to the municipalities, chambers of commerce, universities and research and training



centers. Among the latter are CATIE, Zamorano, IUCN, the donors' forum, FOSCAD, producers' associations, ACICAFOC, indigenous groups and ethnic communities and nongovernmental organizations of similar interests.

3.2. Relationship with other strategic programs

Through regional projects, the Executive Secretary's Office of CCAD has been developing a process to reclassify the different technical committees and regional strategic programs, among these the Regional Strategic Work Program in Protected Areas (PERTAP), the Regional Strategic Program for Connectivity (PERCON) and the Central American Forest Strategy (EFCA). All of these form part of PARCA III within Strategic Area 3, Management of Natural Patrimony and of Priority Ecosystems, and more directly, within the Regional Strategy for Biodiversity.

Perfor, as a strategic tool of CCAD, is an attempt to make operative and harmonize the EFCA and to achieve the objectives of PARCA related to the management of the natural patrimony and priority ecosystems. At the same time, it promotes harmonization and synergy with PERCON, PERTAP and PROMEBIO. All these processes, including the reorientation and institutional configuration of the technical committees, must guide CCAD's actions in the next 15 years, using PARCA as a reference tool for each of the programs and projects that are formulated.

Chapter IV

Regional Strategic Program for the Management of Forest Ecosystems





4.1. Strategic elements of Perfor

4.1.1. Principles

The stakeholders who participated in the process of defining Perfor have agreed to a set of principles and criteria that inspire and guide its execution. These principles and criteria reexamine positions and declarations of other national and regional forums, with the aim of connecting and coordinating regional, national and local actions with the international context.

The following principles define the philosophical and ethical framework that will guide Perfor in the countries.

Sustainability of the processes of conservation of biodiversity, planning and management for sustainable forest development. Sustainability is understood as maintaining the ecological functions of productive systems and the management of forest ecosystems in a permanent way.

Multifunctionality of forest ecosystems and natural spaces. This a wider and more horizontal concept of sustainability directed simultaneously at various uses and resources, in accordance with priorities. In this way, a new criterion for multifunctionality joins up with the principles of sustainability and biodiversity that are universally recognized for running an efficient, rational, ordered and environmentally responsible forest management. The inclusion of the variable of forest multifunctionality supposes the development of a forest management organized by a multicriteria ordering of diverse elements and factors.

Forest management and multiplicity of criteria allow forest ecosystems and resources to be managed in time and space so as to be able to carry out simultaneous productive actions in an ecosystem or forest area, while at the same time maintaining conservation and protection criteria.

Ecosystems are functional biophysical entities that are interconnected by important natural cycles. At the same time, forests are intimately interrelated ecosystems where natural cycles and a series of cultural and socioeconomic processes come together. In fact, there exist strong links between forest ecosystems and the social welfare of the communities who live in them.



The services that forest ecosystems offer (water, climate regulation, timber and nontimber products and adaptation to climate change) are, in practice, components of human welfare since they offer materials and services to improve the quality of life.

However, the focus on extraction and forest fragmentation are the chief threats to the biodiversity and the productive capacity of the region. Recognizing the multiple functions of the forest ecosystems is the first step toward beginning to resolve several of the problems and threats that affect them.

Cross-sectoring as a focus for the management of forest ecosystems. It is a question of helping incorporate the topics related to forest ecosystem management in the actions planned by the different sectors, in the development agendas and sectoral agendas of the countries, and in the actions that are taken in the region, given the transversal nature of the subject area (agriculture, health, tourism, etc.).

Development of a system and territorial vision. Any measure or policy has its range of application in the territory and thus it will be important to give attention to the relationships that are present in the territorial system where the forest ecosystems are located, in order to modify those that may be inadequate.



Forest governance for forest management aspires to put into practice a new management model by establishing participatory relationships between the institutions of the state, the private sector and civil society. The concept of governance underlines the principles of transparency, participation and responsibility that were the cardinal elements of Agenda 21. That agenda formulates the importance of the participation of civil society in decision making for sustainable development.

Other functional elements related to good governance are to promote the institutional reforms needed to foster professional ethics in all the sectors, offer training to technicians and public officials, promote research and analysis of the complex problems and solutions that affect society, and maintain good communication with all the population.

Other principles that will govern the execution of Perfor are equality, equity, solidarity, sovereignty, transparency, consensus seeking, territoriality, subsidiarity and complementarity, public rendering of accounts, education and training at all levels.

4.1.2. Criteria for good forest management

Without this being an exhaustive list, the following criteria will guide forestry management for the participatory, efficient and effective execution of Perfor.



- **Intraregional cooperation** (management and reduction of asymmetries): this principle seeks to reduce negative asymmetries and take advantage of the positive ones in order to promote the development of synergies and the exchange of experiences and knowledge between the relevant stakeholders and institutions in the countries of the region. It includes, moreover, the principle of shared responsibility in the execution of Perfor with other strategic programs of CCAD and PARCA III, as well as the strengthening of regional processes, mechanisms and integrating bodies.
- **Contribution to sustainable national development and the reduction of poverty:** the initiatives that have to be developed in the context of the program must be aimed at generating wealth and taking advantage of the offers of goods and services of forest ecosystems. The inclusion of the different stakeholders who are involved in the management must take into account the distribution of the benefits and responsibilities and the exploitation of market opportunities.
- **Decentralization:** decentralization of actions will be based on a process of landscape classification that will determine the measures that must be taken in space and time.
- **Interadministrative and territorial coordination:** the actions of the AFEs must be actively coordinated with the municipalities from the perspective of their competencies in order to avoid duplicities and contradictions and in order to integrate territory stakeholders, such as landowners, NGOs and other social organizations.
- **Simplification of technical and administrative procedures** to facilitate access to sustainable exploitation of forest ecosystem resources, including taking advantage of agricultural silvopastoral systems.

4.1.3. Vision

Central America and the Dominican Republic are managing their forest ecosystems sustainably in order to reverse the processes of deterioration and to recover the potential for goods and services, with the active participation of all stakeholders.



4.1.4. Mission

To strengthen institutionalism and good governance in the forestry sector to promote, within an intersectoral framework, the sustainable management and recovery of the forest ecosystems and to contribute to sustainable human development in the region.

4.1.5. Objective image

The region has managed to establish a system of territorial forest management with the active and committed involvement of all stakeholders in the public, private and community sector and in civil society. This system is characterized by good governance in the management of forest ecosystems, both for the conservation of biodiversity and for sustainable forest management. The institutions have also been strengthened and contribute to economic development and the reduction in poverty.

The system of sustainable management of the main forest ecosystems has managed to reverse the processes of deterioration that affected the most important forest resources and in addition has increased forest cover and the areas under effective and sustainable forestry management. Conservation of biodiversity in perpetuity *in situ* and *ex situ* has been achieved, both in the management of its protected areas and in the management of its productive forests and other forest ecosystems.

Society takes advantage of resources in an integrated, sustainable and intersectoral manner, as a foundation for the development of numerous activities that produce goods and services from the environment and agriculture as well as from tourism and energy. Another success has been to get the forest ecosystems that maintain their ecological functions in the territory to contribute to generation of wealth with tangible environmental and economic benefits for society in general and for the indigenous and rural communities in particular.

4.2. Programmatic elements

4.2.1. General objective

To improve the management of the forest ecosystems of the Central American region and the Dominican Republic in order to recuperate their

potential for generating environmental goods and services and to improve the welfare of the inhabitants of the region.

4.2.2. Specific goals

- To strengthen the regional, national, public, private and community capabilities for the sustainable management of forest ecosystems as an essential foundation for the sustainable development of the countries of the region.
- To improve the administrative and economic and financial management capabilities of the stakeholders in the sector, aiming at sustainability based on the multifunctionality of the forest ecosystems.
- To position the forestry agenda on the intersectoral agenda of the ERAS with a view to contributing to the reduction of poverty and vulnerability and to the mitigation of and adaptation to climate change.

4.2.3. Components, strategies and results

Component 1: Institutional strengthening for good governance

Strategy

The result will be achieved through an institutional and legal modernization for the good governance of forest ecosystems, with an integrating, inclusive and participatory vision that takes into consideration the multifunctionality of the ecosystems, economic evaluation of resources and the interests of the stakeholders throughout the value chains.

Result

A strengthened institutional management of the forest ecosystems to contribute to good governance for sustainable management and access to the goods and services generated by forest ecosystems.

Strategic guidelines

1. To promote and strengthen the national and regional spaces and mechanisms for forestry coordination within the framework of the PFNs.
2. To facilitate and reinforce the systems and tools for coordination and articulation for the management of forest ecosystems



3. To support national initiatives for promoting rights of access and fair and equitable use of the environmental goods and services provided by the forest ecosystems.
4. To support the national institutions in harmonizing their policies and legislation and in improving their supervision and control functions; to promote the implementation of national systems for checking legality in the forestry sector, that they be credible and efficient.
5. To promote and support processes of deconcentration and decentralization based on the experiences and lessons learned in the region.
6. To promote a platform of exchange of experiences for national initiatives that review institutional aspects in order to improve use and access to the resources of forest ecosystems
7. To support the analysis of the performance of policies and standards frameworks that regulate the forest resource and its harmonization at national level.
8. To support national initiatives for strengthening national capabilities through the application of regulations
9. To facilitate and reinforce systems and tools for coordinating and articulating the management of forest ecosystems between national and local governments.
10. To promote bi- or tri-national and regional agreements for preventing and controlling the illegal traffic in goods originating in forest ecosystems.
11. To promote the simplification of the technical and administrative procedures for facilitating access to the management and use of the forest ecosystem resources.



Component 2: Strengthening technical capabilities and business management

Strategy

The result will be achieved through education, training and practice in order to move the management focus toward a systemic, self-managing, entrepreneurial business vision based on the multifunctionality of forest ecosystems and market opportunities. Other actions that will be taken include technical assistance; technological and business development; supplying of financial resources; training for financial management; monitoring and evaluation on the part of the stakeholders; accompanying stakeholders; new work focus that considers multifunctionality of the ecosystems.

Result

The technical capabilities of the public, private and community sectors have been strengthened and management tools are available that contribute to sustainable management and reversing the deterioration of forest ecosystems.

Strategic guidelines

1. Strengthening the network of research and training centers (universities, research centers, NGOs) for research/action in forestry, agroforestry material, territorial planning and management of forest ecosystems. Promoting exchange of good practices, systematization and training of local and community teams for the management of forest ecosystems and community forestry.
2. Establishment of a training plan with an intersectoral focus that promotes social, economic and environmental competitiveness in the region in the sustainable management of forest ecosystems. To give incentive to the inclusion of national and local, governmental and non-governmental stakeholders, with particular attention to the training of indigenous peoples and ethnic communities.
3. Elaboration and implementation of dissemination and communication strategies regarding existing techniques and experiences, with an emphasis on the capabilities of community sectors, farm communities,



indigenous peoples and ethnic communities, as well as the private sector.

4. To gain a consensus and to harmonize at a regional level the tools for management and sustainable forest use, in order to adapt and implement them in the countries.
5. Fostering of intersectoral territorial planning processes, national and local, together with private stakeholders, in order to have appropriate management of the forest ecosystems and water resources in areas of regional interest.
6. Definition of criteria, procedures and mechanisms for establishing pilot locations (strategic areas of regional interest) for the implementation of Perfor.
7. Establishment of a regional monitoring and evaluation systems for forest ecosystems and compliance with international agreements, based on the Mesoamerican Environmental Information System (SIAM) and Promebio.
8. Strengthening national forest information systems that are linked to SIAM.



Component 3 Economic and financial management

Strategy

This result will be achieved through the creation, development and strengthening of entrepreneurial, organizational, market (physical and financial) and investment management capabilities that promote the production and exchange of goods and services that originate in the forest ecosystems.

Result

The resources, financial mechanisms and economic tools have been established and are operating fairly, accessibly and equally for all stakeholders; economic and financial value is placed on the multifunctionality of forest ecosystems in the countries of the region.

Strategic guidelines

1. To generate the conditions suitable for taking advantage of the opportunities in free trade treaties; to maximize the benefits and services of forest ecosystems with the objective of strengthening the transactions of high added value, based on a competitive price.
2. To exchange experiences and promote the implementation of national and local strategies that respond to the needs of the PFNs.
3. To create new fiscal and financial tools (value titles, guarantees, securities, grants, sales futures, stocks and shares) suitable for the macroeconomic, legal and institutional frameworks of each country. To harmonize those that exist in order to promote an integral management of the region's forest ecosystems.
4. To create, harmonize and/or make operative the national forestry funds as a tool for researching, innovating, promoting and facilitating public, community and private investment processes in the forestry sector, with a view to improving competitiveness.
5. To promote the creation of mechanisms and platforms for environmentally sound trade (regional stock exchange, trade fairs, expo sales) in the goods and services that the forest ecosystems offer, preferably with a high aggregate value, within the context of the institutions of the countries of the region.



6. To promote portfolios and regional investment systems for the sustainable management of the forest ecosystems, where the various stakeholders are incorporated and the opportunities are considered that the Kyoto Protocol and other markets for environmental goods and services offer.
7. To develop tools and indicators for evaluating the contribution of forest ecosystems to national accounts.
8. To promote principles of social and environmental business ethics and responsibility in the value chains of the goods and services that come from the forest ecosystems.
9. To promote and implement a policy that will ensure the evaluation and the recognition of the rights, recovery and protection of the local knowledge systems associated with the uses of goods and services that derive from the forest ecosystems.



Component 4: Harmonization and alignment with the ERAS

Strategy

To promote intersectoral participatory processes for negotiating and combining actions in order to position the management of forest ecosystems in the implementation of the agroenvironmental cross-sector agenda.

Result

Forest ecosystems management contributes to the implementation of the agroenvironmental intersectoral agenda, particularly in generating opportunities for sustainable development, food security and poverty reduction.

Strategic guidelines

1. To create and promote spaces for dialog across sectors (local, national, and regional) by means of mechanisms for coordination, monitoring and technical support for their implementation.
2. To promote the recognition and evaluation of the multifunctionality of forest ecosystems starting from a shared vision and a consensus role that each sector must play in their management.
3. To promote the incorporation of the elements of the intersectoral agenda into the different tools for national and regional planning.



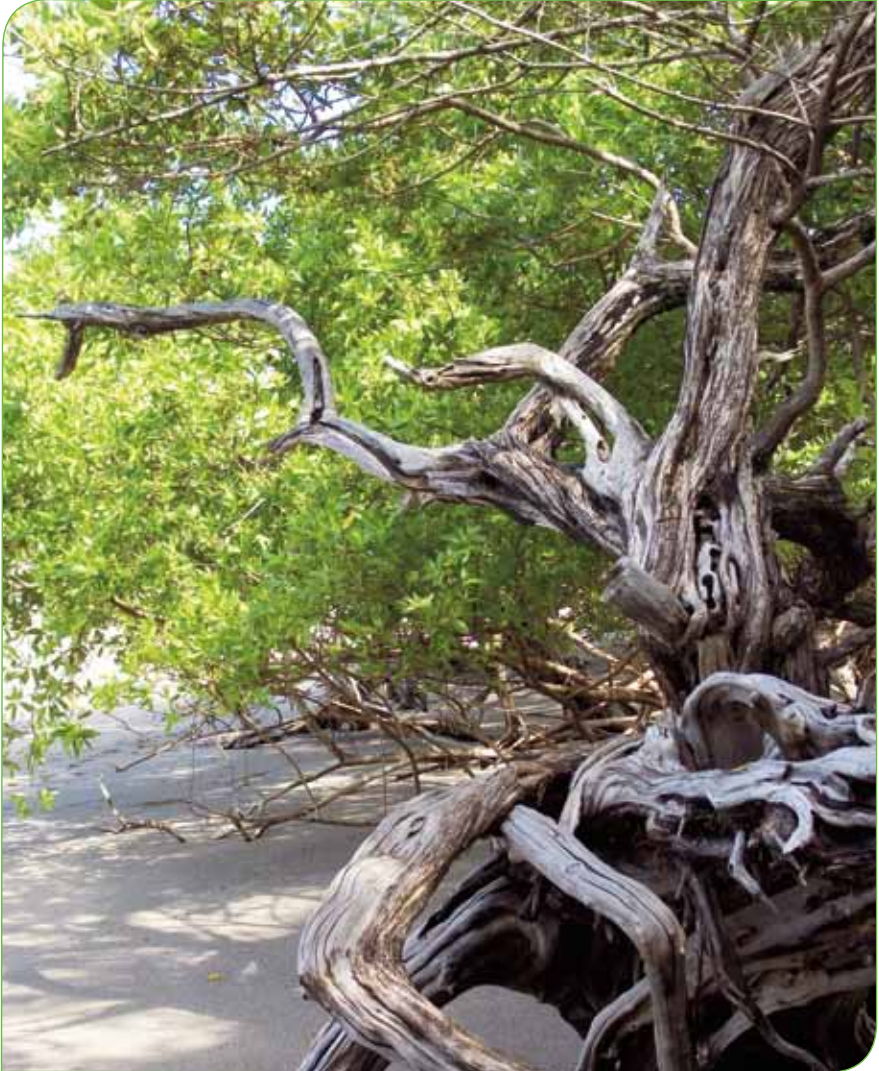


4. To promote the regional harmonization of the criteria for the sustainable management of forest ecosystems and their incorporation in national agricultural and environmental policies, as well as in the processes of territorial planning.
5. To promote and facilitate the implementation of actions for restoration and sustainable management of forest ecosystems, within the context of agroenvironmental strategy.
6. To incorporate the theme of agroforestry (with emphasis on community agroforestry) as a strategic element for coordination around the multifunctionality of forest ecosystems and decentralization of forest administration.
7. Strengthening of the capabilities of the stakeholders in the forestry sector to affect the formulation and implementation of the agroenvironmental intersectoral agenda.



Chapter V

Implementation strategy





5.1. Perfor strategy and levels of execution

Perfor will be executed in two stages: the first covered in the period 2008–2012 and the second to be defined within a perspective of 15 years and more. In the regional sphere, the program will be executed under the coordination of the CTB and, in each participant country, through the PFNs in accordance with the institutional planning corresponding to the structure of the AFEs. Perfor is therefore a regional tool led by the CTB as a technical structure of CCAD, which in its turn promotes, supports and reinforces the national forestry programs that are implemented in the region and coordinates the support of international cooperation.

The program's compliance is based on the interconnection between the regional and national authorities and institutions of each of the countries and their capacity to involve the stakeholders from the private sector and from organized civil society who live in the forest ecosystems. Coordination and facilitation will be the responsibility of CCAD and CAC, and the regional organisms and bodies, and international organizations with a presence in the region (FAO, Facility, IUCN, GTZ) will serve as facilitators and assist with the monitoring.

Within its strategic range, Perfor also attempts to strengthen the public institutions entrusted with administering the forest heritage in the Central American countries. It is expected to contribute to improving the governance of forest ecosystems, to promote better participation of local populations in decision making, and to improve their access to natural resources, especially forests and water. Furthermore, Perfor aims to promote opportunities for those who comply with the technical criteria and who generate productive chains, as a contribution toward reducing rural poverty in the region.

Perfor's execution will give content and will contribute decisively to the social, economic and ecological interconnectedness and connectivity established by the MBC in Central America and priority areas in the Dominican Republic. For this reason, political and operational actions will be taken that will strengthen the territorial framework set up by the MBC as the territorial platform for sustainable development.



In the first years of the program's operation, we hope to have encouraged important changes in the capabilities of the public and private institutions in the region and in the countries. At the same time, it is hoped that we have strengthened their capacity to initiate and to participate competently in those processes that require sustainable management of forest ecosystems, using appropriate tools and better knowledge of the subject matter.

5.2. Program coordinating unit

To guarantee the execution of the program, the CTB and the AFEs must continue to fulfill efficiently and effectively the functions with which they have been entrusted. Priorities must be established clearly in order to complete the related activities and to dedicate human, technical and financial resources to the monitoring of the institutional tasks that derive from this program. One of the first actions of the CTB in the execution of Perfor will be to work out a multiyear investment program with annual operating plans and a financial strategy. Moreover, it is urgent that a Program Coordination Unit (UCP) be created with the ideal minimum number of personnel required for it to function.

Given the fact that the execution of this program transcends the capabilities and responsibilities of the CTB and AFEs, there must be established, in as short a time as possible, mutually beneficial associations, strategic alliances and formal agreements for cooperation between institutions. The specific agreements on technical and financial cooperation, both at the regional level and expressed nationally, must be established with international bodies, research centers, universities and other regional and national institutions and nongovernmental organizations that concern themselves with the environment, development and research, as well as with the private and community sector, with industry and landowners (individuals, cooperatives and communal).

Special attention will have to be given to the development of a communication strategy and permanent dialog with civil society. Activities must be promoted to strengthen conferences, forums and national, regional and international congresses, among these the Forests Forum, the Framework Conference on Climate Change, and the Conference on Biological Diversity.



5.3. The stakeholders: roles and interrelationships

When building good governance, the stakeholders play a decisive role in formulating agendas. In the discussion and definition of the forestry programs, all those stakeholders must be taken into consideration who have a relationship with the forest ecosystems. A wide criterion must be held that will be based on the multifunctionality of forest ecosystems and on an intersectoral focus. Without being an exhaustive list, Table 6 presents the chief regional and national stakeholders and their principal roles in the execution of Perfor.

Table 6. Stakeholders and roles in the forestry sector

Regional stakeholders	Roles/functions
CCAD/CAC	Directive, strategic apex
CTB	Executive management, legal representation of Perfor
Technical committees of CCAD	Assessment, accompaniment, technical support, coordination
IUCN	Assessment, accompaniment, technical support, coordination
IRBio	Accompaniment, strengthening capabilities, execution, technical support
ESNACIFOR	Accompaniment, training, research, strengthening of capabilities, technical support
CATIE	Accompaniment, training, research, strengthening of capabilities, technical support
Zamorano	Accompaniment, training, research, strengthening of capabilities, technical support
FOSCAD	Coordination
ACICAFOC	Accompaniment, technical support
Central American Forestry Congress	Promoting dissemination and analysis of subject areas and/or experiments of interest
Regional Forestry Chamber	Stakeholders and beneficiaries of Perfor in matters of production and commercialization
Cooperating Bodies	
World Bank, United Nations	Accompaniment, technical and financial support
GTZ, IICA, JICA, ITTO, GEF	Accompaniment, technical and financial support
FAO, AECID, NORAD, COSUDE, ACDI, WWF	Accompaniment, technical and financial support
ASDI, DGIS (Holland), Austria, FINNIDA	Accompaniment, technical and financial support
BCIE, IDB, KFW	Accompaniment, technical and financial support
Facility	Accompaniment, technical and financial support



National stakeholders	
National legislative assemblies	Approval of legal frameworks
Interior ministries	Budgetary support
Ministries of the environment/energy/mines	Formulating, adapting, adjusting national policies; training and regulation
Ministries of education/tourism	Formulating, adapting, adjusting national policies; training and regulation
Ministries of trade and economy	Formulating, adapting, adjusting national policies; training and regulation
Ministries of agriculture/forests	Formulating, adapting, adjusting national policies; training and regulation
Municipalities	Coordination and territorial planning, political support
National forestry institutes/forests	Execution of actions in their field of competency within the context of the PFNs
Forest forums	Promoting dissemination and analysis of subject areas and/or experiments of interest, political/technical endorsement
Conferences and/or forestry colleges	Promoting dissemination and analysis of subject areas and/or experiments of interest
Coordination assemblies/local development councils	Coordination across sectors
Chambers of Commerce	Stakeholders and beneficiaries of Perfor in matters of production and commercialization
Universities/research and/or training centers	Training, research, accompaniment
Reforestation companies	Forest promotion
Associations of producers (regional and/or national)	Stakeholders and beneficiaries of Perfor in matters of production and commercialization
Indigenous groups and ethnic communities	Stakeholders and beneficiaries of Perfor in matters of production and commercialization
Nongovernmental organizations	Accompaniment, research, training, monitoring and evaluation
Community agroforestry organizations	Stakeholders and beneficiaries of Perfor in matters of production and commercialization

Chapter VI

Monitoring and evaluation system





6.1. Elements to be considered when establishing the system of monitoring and evaluation

Perfor's time perspective is some 15 years or more, with a first operational stage of five years from 2008 to 2012, and with periodic revisions both at regional level and at the level of the PFNs. The objective of the revisions is to help to adapt the programs, plans, measures and actions programmed in the PFNs depending on the conditions existing in each of the countries.

The revisions of Perfor will be submitted in principle to an internal participation process between the technicians of CCAD and the CTB. They will also enable account to be given to the Councils of Ministers of CCAD and CAC and the different social agents involved in the forest environment.

The program evaluation and monitoring will take place periodically through the regional strategic indicators established for that purpose. The evaluation must take into account actions named as high priorities in the program's strategic guidelines, so as to comply with the three specific objectives established and to achieve the four desired results. The regional strategic indicators will be established on the basis of the measures provided for in the development and implementation of Perfor.

In order to guarantee the good functioning of the program, formal establishment of the Monitoring and Evaluation Unit (UME) is required and also the establishment of a system of regional and national indicators of performance, time and impact, in harmony with the specific objectives and results and their strategic guidelines.

6.2. Monitoring and evaluation unit

The UME must be created as part of the CCAD Forests Committee and linked to the Mesoamerican System of Environmental Information; it must have a link to the corresponding ministries in each country. A formal monitoring report will be drawn up at least every 12 months and an evaluation every two years.

A budget must be assigned for program monitoring and evaluation as a percentage (never higher than 10%) of the budget assigned to Perfor. There must also be a national monitoring and evaluation budget for the PFNs, complementary to the monitoring and evaluation budget at regional level.

Formal relationships must be established through monitoring and evaluation agreements with regional and national research institutions, with relevant NGOs and with the donors connected to Perfor.

The UME must have a minimum team of professionals of an interdisciplinary nature:

- Experts in sustainable forest development
- Experts in social or behavioral sciences
- Experts in data processing and statistics
- Experts in dissemination of information

6.2.1. Clear goals

For the good functioning of the Monitoring and Evaluation Unit, the formulation of programmatic regional and national goals and objectives that are well-defined and in harmony with the PFNs is required. This task will be one of the priority actions for Perfor. Moreover, technical support documents for the monitoring and evaluation will have to be drawn up, such as:

- Periodic national revisions/evaluations of progress in the execution of the plans of the regional program and of the PFNs.
- Guidelines and monitoring and evaluation guides for the strategic areas of regional interest (AEIRs)
- Models for relating the monitoring and evaluation with other sectors
- Coordination of monitoring and evaluation needs (national and those of the donors).

6.2.2. Indicators

The designing of a regional and national system of indicators for the monitoring and evaluation of Perfor will be required, which will consider the following elements, among others:

- Indicators of quantitative Performance, impact and time
- A set of priority and additional indicators for different levels of monitoring and evaluation



- Indicators that will be comparable throughout a period of time.
- Various key indicators that will be comparable with those of other countries.

6.2.3. Data compilation and analysis

To guarantee the timely and efficient recording of data, the following items will be required, among others:

- Developing global national plans for the compilation and analysis of data
- Formulating plans for the compilation and analysis of indicators at the different levels of monitoring and evaluation

6.2.4. Data dissemination

The monitoring and evaluation system will be completed with the following elements:

- Development of global national plans for dissemination of information.
- A widely published annual regional report from the monitoring and evaluation unit
- Annual meetings with political and planning decision makers in order to publish and discuss the results of the monitoring and evaluation of the research findings.
- An information center to generate and publish the findings and that is linked to the forestry information systems (SIF-SIAM).
- A centralized database that will contain all the information related to Perfor, including that regarding research underway that is being generated by the program.
- Coordination of national monitoring and evaluation needs and those of the donors.





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