

INTERNATIONAL TROPICAL TIMBER ORGANIZATION

ITTO

PROJECT DOCUMENT

TITLE:	STRENGTHENING OF THE FOREST STATISTICS AND INFORMATION CENTRE – CIEF
SERIAL NUMBER:	PD 443/07 Rev.1 (M)
COMMITTEE:	ECONOMIC INFORMATION AND MARKET INTELLIGENCE
SUBMITTED BY:	GOVERNMENT OF HONDURAS
ORIGINAL LANGUAGE:	SPANISH

SUMMARY:

This project is aimed at strengthening the FOREST STATISTICS AND INFORMATION CENTRE – CIEF of the National Forest Administration – Honduran Forest Development Corporation (AFE-COHDEFOR), through the establishment of an integrated forest statistics and information system that will increase the contribution and relevance of the forest sub-sector to the country's social, economic and environmental development, while at the same time strengthening local, regional and institutional capacities. The project will standardise and integrate methodologies, procedures and instruments for the collection, storage, analysis and dissemination of information in the following thematic areas: Economic Development, Protected Areas and Wildlife, Social Forestry System, Forest and Environmental Protection, Technical Auditing, and Management & Administration. An integrated system is expected to be developed based on a forest statistical and spatial database with Windows and Web interfaces, and training will be provided for the personnel in charge of the establishment and operation of the system and for system users, on the basis of partnerships to be established between public and private institutions and professional/trade organisations. A technological platform will be established to support the system in information technology and telecommunication aspects.

EXECUTING AGENCY: NATIONAL FOREST ADMINISTRATION – AFE-COHDEFOR

DURATION: 24 MONTHS

BUDGET AND PROPOSED SOURCES OF FINANCE:

Source	Contribution in US\$
ITTO	230,023
Government of Honduras	168,928
TOTAL	398,951

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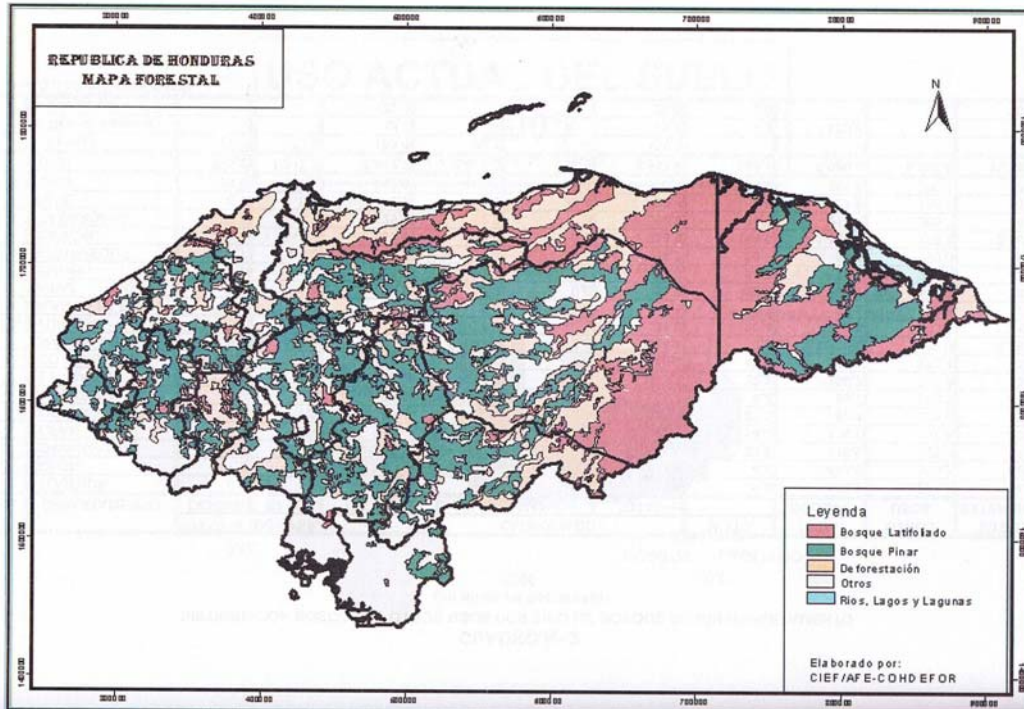
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PART I – CONTEXT

1. Origin

Honduras is a country with a clear natural forest potential (various studies have shown that between 87.7% of the national territory is suitable for forestry). Natural forests cover an area of 5,989,600 hectares, with pine forests accounting for 47% (2,512,700 ha) and broadleaved forests 53% (2,863,500 ha) of the total forest area in the country (including cloud, dry and mangrove forests). The broadleaved or tropical moist forests are found along the Atlantic coast, specifically in the Departments of Olancho, Gracias a Dios, Colón and Atlántida. The map below shows the forest distribution in the Republic of Honduras.



The Honduran forest sub-sector has a large economic, social and environmental potential for sustainable development as forests are the most abundant and richest resource in the country. Despite this potential, the development of forest resources has been limited, resulting in a low contribution of this sub-sector to the GDP, which is quantified on the basis of export/import values without taking into account environmental goods and services, the generation of value added to timber, employment rates and flow of foreign exchange into the country through eco-tourism, within a sustainable management and utilisation framework to promote economic growth.

Within the government institutional framework, the Secretariat for Agriculture and Livestock (Secretaría de Agricultura y Ganadería – SAG) is the policy regulatory agency in the agricultural sector, while the National Forest Administration (AFE-COHDEFOR) is responsible for policy implementation as well as regulating, monitoring and supervising the management of forest resources. There is also a strong link between AFE-COHDEFOR and the Secretariat for Natural Resources and the Environment (Secretaría de Recursos Naturales y Ambiente – SERNA), which is the agency in charge of regulating environmental policies in the country.

Since 1989, Project Hon/88/003/FAO/Holland launched the establishment of the Integrated Forest Statistics System (SIEF), to standardise, harmonise and update information on the public and private forest sectors, with a view to improving transparency of market transactions in forest products and facilitating strategic decision-making by AFE-COHDEFOR in the field of forest management, and identification of private sector investment opportunities in the forest sector. To this end, it was suggested that the operation of the Forest Statistical Information System - SIEF be centralised into a technical unit attached to the Department of Planning, strengthening it with field forest information and turning it into a Forest Statistical Information Centre (Centro de Información de Estadísticas Forestales - CIEF), with the following purposes:

- 1) Supplying logistic support in the area of forest information, land use, land tenure and forest statistics to AFE-COHDEFOR authorities so as to provide them with a broad and updated basis for decision-making.
- 2) Providing a guiding tool to agents involved in forest sub-sector development, through dissemination media and regular publications containing adequate and timely forest information to expedite and guide the decision-making process, leading to higher productivity, profitability and competitiveness.

Against this background, AFE-COHDEFOR developed project PD 6/98 Rev.1 (M) "Establishment of a Forest Information and Statistics Centre (CIEF) for the Implementation of Sustainable Forest Management in Honduras", which was submitted to ITTO by the Government of Honduras. The project was approved but it lapsed under ITTO's sunset provisions due to a lack of funding.. However, AFE-COHDEFOR still developed the CIEF and made it operational.

Subsequently, in 2001, AFE-COHDEFOR submitted project PD 90/01 (M) "Strengthening of the Forest Information and Statistics Centre – CIEF" to ITTO. This project was assessed by the 22nd Expert Panel, who formulated a number of comments and one recommendation.

One of the comments was that the Panel recognised the problems Honduras faced in obtaining reliable statistics and noted that the proposal was a timely effort to rectify such problems. Furthermore, the Panel suggested that a phased approach might be more feasible and felt that more background information on the nature of the problems Honduras faced would be useful, including a comprehensive review of the existing system(s) for data collection. It also felt that the strategy for obtaining timely and reliable data should be more clearly detailed in the proposal, including addressing the data needs of different levels of decision-makers/users. Moreover, the experts suggested that the new proposal should follow the Guidelines for Statistical Development Projects in liaison with the Secretariat and should incorporate the results and recommendations of the ex-post evaluation of Latin American statistical development projects conducted in 2002.

The Expert Panel also recommended the Government of Honduras to submit a pre-project proposal to ITTO to review the current Honduran forest statistical system and develop a revised project proposal taking into account and, where appropriate, incorporating the above comments.

Thus, Pre-Project PPD 93/04 (M) "Analysis of the Current Status and Development of a Project Proposal for the Strengthening of the Forest Statistical Information Centre in Honduras" was submitted to ITTO in 2004, and was later approved and financed.

The above reflects the serious concern shown by AFE-COHDEFOR since 1989 for the problems related to forest statistics in the country, and this phase of the project will contribute to finding a solution to those problems.

On the other hand, preliminary analyses carried out to propose clearer objectives and to define a system which would fulfil present general and market information management and processing requirements have strongly favoured the establishment of a more practical system consistent with new information technologies. The conclusions of these studies can be summarised as follows:

- a) A central CIEF should be established to adequately collect and coordinate the information produced by the various government institutions in the areas of poverty alleviation and reduction of environmental risks.
- b) The system development and operation should be based on the active involvement of public and private institutions which should undertake to generate the relevant information and subsequently provide it to the CIEF to be managed as appropriate.
- c) CIEF data produced by AFE-COHDEFOR should also be supplemented by various forest sector stakeholders and should be made available to the public.

2. Sectoral policies

AFE-COHDEFOR is the institution responsible for the management and administration of national forests and the monitoring of forest activities in private and municipal production forests in the country. Furthermore, AFE-COHDEFOR promotes the rational use, conservation and preservation of forest resources and encourages the development of the forest industry. In addition, it must also regulate and establish the necessary conditions to ensure that protected areas fulfil their Honduran natural heritage conservation purpose, with the participation and assistance of communities, municipal councils, private business sectors and the civil society with a view to contributing to sustainable national development while ensuring their biodiversity conservation function, in coordination with the Secretariat for Natural Resources and the Environment (SERNA) and the Secretariat for Agriculture and Livestock (SAG).

At present, both institutions are involved in the implementation of the Poverty Reduction Strategy (Estrategia de Reducción de la Pobreza - ERP), the National Biodiversity Strategy (Estrategia Nacional de Biodiversidad – ENB) and the National Policy for Women and Gender Equity (INAM) as well as the Honduran State Agricultural Policy (2003-2021) by SAG. Their involvement includes managing project proposals to channel resources to the sub-sector in order to reactivate the national economy, focusing on increasing agroforestry production and productivity through the implementation of a social market economy model, privatisation of technical services, promotion of non-traditional exports, reduction of poverty, control of environmental degradation, and reduction of the vulnerability of forest ecosystems in the country.

The mission of the National Forest Administration (AFE-COHDEFOR) is to ensure the conservation and efficient management of forest resources in Honduras. To this end, AFE-COHDEFOR has the legal authority and responsibility to propose plans and standards, monitor their compliance, and control and promote rational utilisation, conservation and preservation of resources. In addition, the Institution is jointly responsible for establishing, supervising and promoting the National Forestry Programme for Honduras 2004 2021 (Programa Nacional Forestal de Honduras - PRONAFOR).

PRONAFOR shares international concern over global environmental issues and proposes to involve the country in the process aimed at seeking solutions to these problems, based on sustainable management and use of forest and wildlife resources. Furthermore, it seeks to contribute to the reduction of rural poverty, the shortage of bio-energy resources, environmental vulnerability, low food production rates and the lack of new employment opportunities for a growing population.

PRONAFOR constitutes a basic framework of reference that is essential for the Forest Statistical Information System that is the focus of the proposed project. The 4 subprograms included in its implementation strategy define the scope and specifications of the system in terms of type of information to be entered (fields, variables, parameters, time series), and establish a baseline and targets to be achieved by 2021. Table 1 (approaches and major causes of forest problems), table 2 (PRONAFOR objectives and targets directly linked to national objectives), table 3 (subprograms and specific objectives), table 4 (financial requirements and potential sources), and table 5 (first cycle of proposed regional operational programs for forest development), with descriptions included for each of the subprograms (forests and production development, forests and community development, forests and water and environmental services, and forests and biodiversity) including objectives, guidelines, targets and actions, provide the terms for the conceptual and methodological framework that should be established for each field of information to be generated and contained in the system to be

developed. Thus, it represents a basic reference document. The structure of AFE-COHDEFOR (see 2005 Forest Statistical Yearbook) is fundamentally based on these 4 subprograms, which ensures adequate consistency in the future development of the system.

The Forest, Protected Areas and Wildlife Policy constitutes an operational instrument for information systems within the institutional, legal and policy framework. Similarly, the promotion and development of production, marketing and industrial diversification in production forests will require the management of information systems that are consistent with the current needs, to wit:

- Effective information and communication systems on technologies, products and markets;
- Updated information system on the potential of forest resources (coniferous and broadleaved forests);
- Technological systems on forest products supply and demand at the national, regional and local levels;
- Analysis of supply and demand trends, forestry costs, and various studies and research activities;
- Database on criteria and indicators and reduced impact assessments in logging areas under management plans as part of programs and projects with a gender focus.

Thus, the Forest Sub-Sector Policy is aimed at promoting the sustainable development of forests and related resources as an instrument for rural development, incorporating these resources into the national production system, increasing their share in the economy to meet domestic market needs, and increasing exports and improving product quality and productivity, taking into account the potential and constraints of forest and environmental resources.

In addition to the above, the National Reconstruction and Transformation Master Plan (Plan Maestro de Reconstrucción y Transformación Nacional – PMRTN) proposes to reactivate the national economy, focusing on increasing production and productivity through the implementation of a social market economy model, reducing and decentralising state bureaucracy, promoting exports, mitigating poverty and curbing environmental degradation.

It is for this reason that this project is considered to be a priority to meet forest sector goals in the country using cross-sectoral approaches based on equity, decentralisation and sustainable rural development.

Over the last decade, the forest sub-sector has been operating on the basis of the Law for Agricultural Sector Development and Modernisation (Ley para el Desarrollo y Modernización del Sector Agrícola – LMDSA) of 1992, which stipulates reforms for the forest sector in order to achieve its modernisation and the conservation of natural resources.

Within the same context, from mid-2003, AFE-COHDEFOR has experienced changes in its organisational structure, including the restructuring of its departments and a re-definition of its functions. The aim of this re-structuring process has been to increase the efficiency of the institution, turning it into a comprehensive regulatory agency for the sub-sector, with specific operational responsibilities in the management of national forests in accordance with the Honduran Agricultural Policy for 2002-2021 (Agricultural Bureau /SAG and Environmental Bureau /SERNA).

3. Programmes and operational activities

At present, various projects are being implemented with government and non-government funding. Major projects currently in progress in the country include the Biodiversity and Protected Areas Project (PROBAP), financed by the World Bank/UNDP, and the Rural Areas Administration Project (PAAR), financed by the World Bank and executed by the Secretariat of Agriculture and Livestock (SAG). The latter included an institutional development sub-component, which involved the conduction of consultancies and acquisition of equipment for the strengthening of CIEF. Other relevant projects include the TIERRA Programme, supported by the European Union; the Forest and Water Resources Project, supported by USAID; the Project for the Management of Natural Resources and Mitigation of Natural Disasters (PMA); the Project for the Management of Natural Resources in Priority Watershed Areas (MARENA); and the Rio Platano, Occidente and Oriente Biosphere Programme Components of the German Cooperation Agency GTZ/KFW, which supported the CIEF together with the PROFOR-

SIFOR Project by providing equipment and technical assistance over the last 10 years; and the Forest and Rural Productivity Project - PROBOSQUE and the Forest and Tree Inventory Evaluation Support Project, financed by FAO, among others.

The CIEF also received support in 1997-1998 from the Project on Radar-Sat Use for the Management of Natural Resources, funded by the Cooperation Unit of the Canadian Remote Sensing Centre.

The following ITTO-funded projects have been implemented by the Government of Honduras through the Honduran Corporation for Forest Development (COHDEFOR) and the National Forestry Science School (ESNACIFOR):

- PD44/95 Rev. 4 (F) Management and Conservation of Mangrove Forests in the Gulf of Fonseca, Honduras (PROMANGLE);
- Support to the formulation of a project for the participatory evaluation and monitoring of the Forest, Protected Areas and Wildlife Policy in Honduras;
- PD22/99 Rev. 2 (F) Study on the Behaviour of Native Timber Species of Commercial Value in the Tropical Moist Forests of Honduras (PROECEN).

PART II: THE PROJECT

1. PROJECT OBJECTIVES

1.1 Development Objective

Establish an integrated forest statistics and information system that will increase the contribution and relevance of the forest sub-sector to the country's social, economic and environmental development, while at the same time strengthening local, regional and institutional capacities.

1.2 Specific objectives

SPECIFIC OBJECTIVE 1

Standardise and integrate methodologies, procedures and instruments for the collection, storage, analysis and dissemination of information in the following thematic areas: Economic Development, Protected Areas and Wildlife, Social Forestry System, Forest and Environmental Protection, Technical Auditing, and Management & Administration.

SPECIFIC OBJECTIVE 2

Integrate and train the personnel in charge of the establishment and operation of the system as well as system users.

SPECIFIC OBJECTIVE 3

Establish a technological platform to support the system in information technology and telecommunication aspects.

2. JUSTIFICATION

2.1 Problem to be addressed

In accordance with the justification and problem identified in the Pre-Project, field work and various surveys, interviews and direct inspections helped confirm the elements presented in the Pre-Project and develop further the problem to be addressed, according to the comments and recommendations of the XXII Panel of Experts. The following aspects deserve special mention:

- There is a need for an **integrated forest statistics information and system** that includes a spatial and numerical data system that would make qualitative and quantitative information available to forest stakeholders so that they may perform their central role in sustainable forest development; this need has been entirely substantiated and has become the **central axis of the solution to the problem**. This must be an integrated system since some of its elements already exist - albeit at various stages of development and without the effective integration that should be its main feature as a system. This is a common objective and includes closely interrelated components and elements; this was the main weakness detected and confirmed by the study of the current situation during Pre-Project implementation. The entire country would fall under the scope of the project; the above map shows the regional distribution of forest resources.

The following elements or components must be interrelated to form the system.

- The Forest Statistics Information Centre, CIEF, which is already operational, but which faces certain integration failures. A Centre characterisation study was carried out, the results of which were presented in the Pre-Project Implementation Report.
- AFE-COHDEFOR has invested in the technology platform and several institutional projects have provided support, but this platform, particularly the software, is not up-to-date. In 11 regional offices this platform is extremely poor; there are no local networks and no interconnections.

- CIEF has a pool of human resources whose responsibilities and roles have been defined as a function of the development of this system, but there are weaknesses in their team integration and performance.
 - Databases have been developed in the various departments and projects, besides the ones operated by CIEF, although they are at different levels and have no standardised and unified procedures. These databases contain very valuable data and may be transferred to an integrated system such as the one proposed. The Pre-Project Implementation Report details the visits to the various agencies, and includes the specifications for these databases.
 - Physical files contain information that has not been processed; however, upon integration into digital bases, such information will provide large amounts of knowledge to the system; for example management and operational plans.
 - The theme areas that will constitute data modules will be clearly defined and, to a certain extent, will reflect the structure of the institution, consistently with PRONAFOR programmes.
 - The role of regional AFE-COHDEFOR offices will help define the data flow between the agencies generating primary data and central agencies; but in terms of these flows, there is no adequate integration either, as a result of the lack of procedures, instruments and technological platform.
 - Projects are being implemented that have a commonality of interest in terms of the information they require, and the willingness to contribute to the system has been expressed; they have been involved in the establishment of databases and in generating information.
 - There are also current relationships and agreements with key agencies from the information point of view, including the National Bureau of Statistics (INE) and the Central Bank of Honduras.
 - There is a permanent means of dissemination, i.e. the Forest Statistics Yearbook
- Under the item 'problem to be addressed', the Pre-Project stated that AFE prepares and publishes a Forest Statistics Yearbook, but that it does not have a modern and streamlined data input and output system to enable CIEF to perform better, and to have the necessary human, logistic and financial resources. In fact, the Yearbook has been a regular and up-to-date publication; the current issue is number 20, year 20, of April 2006, and it includes statistical data for 2005. Although it is not a modern data input and output system as indicated above, despite the lack of adequate integration and of a modern platform, the Yearbook has fulfilled a very important role in disseminating statistics and some associated analytical elements. The various agencies and stakeholders acknowledge the importance of this instrument; some studies such as the January 2002 FAO and European Commission "Status of Forest Information in Honduras", have based their analysis mostly on the data provided by the Yearbook; likewise the PRONAFOR Programme refers to the Yearbook's statistics. The latest Yearbook versions are available in digital format so they may be uploaded to pages and portals.
 - Different stakeholders consider that there is a varying degree of reliability of the available information; those who do not trust the quality of certain statistics point to inconsistencies or contradictory results submitted by different agencies. Solving this issue will require the definition of conceptual frameworks and very clear and well-founded methods that are duly standardised and communicated to the agencies generating the statistics.

The reliability of the forest sub-sector data, including both accurate information and statistics, generates private and public sector confidence in the decisions adopted when using such data. All stakeholders are aware of, and confirm the importance of reaching

agreements that will be mutually beneficial (availability of quality information) and will also allow for ongoing feedback and a systematic exchange of data and statistics at the national and international levels. This is a major aspect of the construction and development of the system; user confidence will be gained by demonstrating the accuracy of the primary data generated by the system.

In a strict sense, Regional Management Units do not generate primary data directly, such as management plan, operational plan and utilisation data. Primary data are generated by companies managing and using the forest, and regional offices capture the data and verify them; this is a crucial aspect of the process, since COHDEFOR must guarantee the accuracy of the data by establishing precise criteria and indicators that are sufficiently consolidated and applied by technical experts and companies.

In this sense, the FAO National Forest Evaluation project may provide important support to this specific issue if it is duly incorporated into the system.

Naturally, because there is no integrated system, there is no ongoing feedback and no systematic data and statistics exchange required by users.

- Another aspect examined by the Pre-Project is the estimated GDP of the forest sector, for which there is a lack of appropriate and timely information. This has an impact on the definition of priorities in national development plans that show the true potential of natural resources. This issue has been studied and examined by the CIEF and some studies, particularly a study carried out by the Central Bank, have sought to overcome this weakness. There is a method to estimate the internal product of the forest activity for 1974-2002; it was published in 2004, using regression statistical models. Such estimates are used today; however, project implementation will require a more detailed review of such methods and their estimates.
- The Pre-Project also stated that there is much valuable information in the sub-sector, but that it is little known or there is little sharing of experiences as a result of the lack of suitable tools to access the information. In fact, because there are no good database networks and telecommunications, no experiences can be shared.
- It also stated that the lack of training in any phase of the statistical process, both centrally and regionally and in the offices of agencies cooperating in the development of the system, is having a serious weakening effect and is holding up the solution to the above mentioned challenges. An enquiry into the matter was carried out and the people involved found that this was caused by the lack of an adequately planned training programme; they considered that training has been mainly an empirical process based on daily activities.
- There is also a weakness in data analysis and use after processing and storage; there is a long way between the amounts of data that have been stored somehow or other, and the analytical studies that would help improve the knowledge of forest sector systems and processes.
- As a result of the lack of such an integrated system, there are no conceptual or methodological frameworks based on the various statistical phases of data; each information field, variable, parameter and chronological series needs well-defined concepts and methods, as well as the instruments to help gather them. This is particularly important for timber stock and fire, for pest impacts and forest product utilisation and processing volumes.
- The Pre-Project provided a definition of the Forest Sector in terms of the activities associated with forest and wildlife resources, their administration, conservation, management and utilisation, as well as the processing and marketing of their products. Therefore, the scope of the actions of the project will include technical, economic, social and environmental aspects, in recognition of the very complex relation between the internal structure and the global economic system. With respect to technical aspects, in

order to solve the problem this proposal refers to the approach and modular or thematic components that the system should include.

- Here again there is a reference to the true contribution made by the forest sector to the country's gross domestic product; the system must be designed to be compatible with the United Nations' "International Standard Industrial Classification" (ISIC), to ensure the monitoring of National Accounts. In this classification the agricultural sector includes silviculture and management, plantations, agroforestry, wildlife management and conservation, forest timber and non-timber product and wildlife utilisation, and other (industrial, energy, tourism, internal and foreign trade) sectors include many products and services of the forest sub-sector under their responsibility, thus making it impossible to give the forest sector the actual importance in the political, social and economic development of the country. Earlier there was mention of the various studies of this problem and that it will be taken into consideration as one of the analytical studies of the new system that must be examined in further detail.
- There is mention of the conceptualisation of the universe of homogenous communities from the production point of view, so that the collection of important variables may be determined on the basis of four disaggregation areas: silviculture, management and utilisation, forest protection and water catchment management; primary and secondary forest manufacture; and forest services. In fact, this disaggregation is consistent with the study proposal and the results of the Pre-Project.
- In the field of Pre-Project development approach and methodology, the idea is to satisfy the needs of the system beneficiaries and users, taking into account that the problem is not only the storage of reliable information, but also that it is useful for analyses that provide guidance and reduce decision-making risks. To this purpose, there is a need for the convergence of the four disciplines, i.e.: the forest area, the statistics area, the I.T. area and the telecommunications area.
- In drafting the project, activities must be designed with an indication of the tasks to be performed and at what time, taking into account user interests; a review and information input and output must be carried out with the respective system tests. The Statistics Yearbook is a good reference point for the most important past and ongoing data outputs; such outputs will need to be used as a reference, and the reverse must be done for data inputs required to obtain the tables shown, which also indicate the source of data. The Yearbook and PRONAFOR will be two frames of reference to define the scope and range in variable and information field terms, for each module indicated in the results of the Pre-Project.

The following main issues can be identified as a summary of the above analysis:

- There exist elements of an information system, but they are not duly integrated.
- The technological platform is outdated.
- There is a lack of standardisation of procedures.
- There are no clearly defined conceptual and methodological frameworks to ensure the reliability of the updating and continuity of statistical information
- There is a need for greater human resource integration and training.

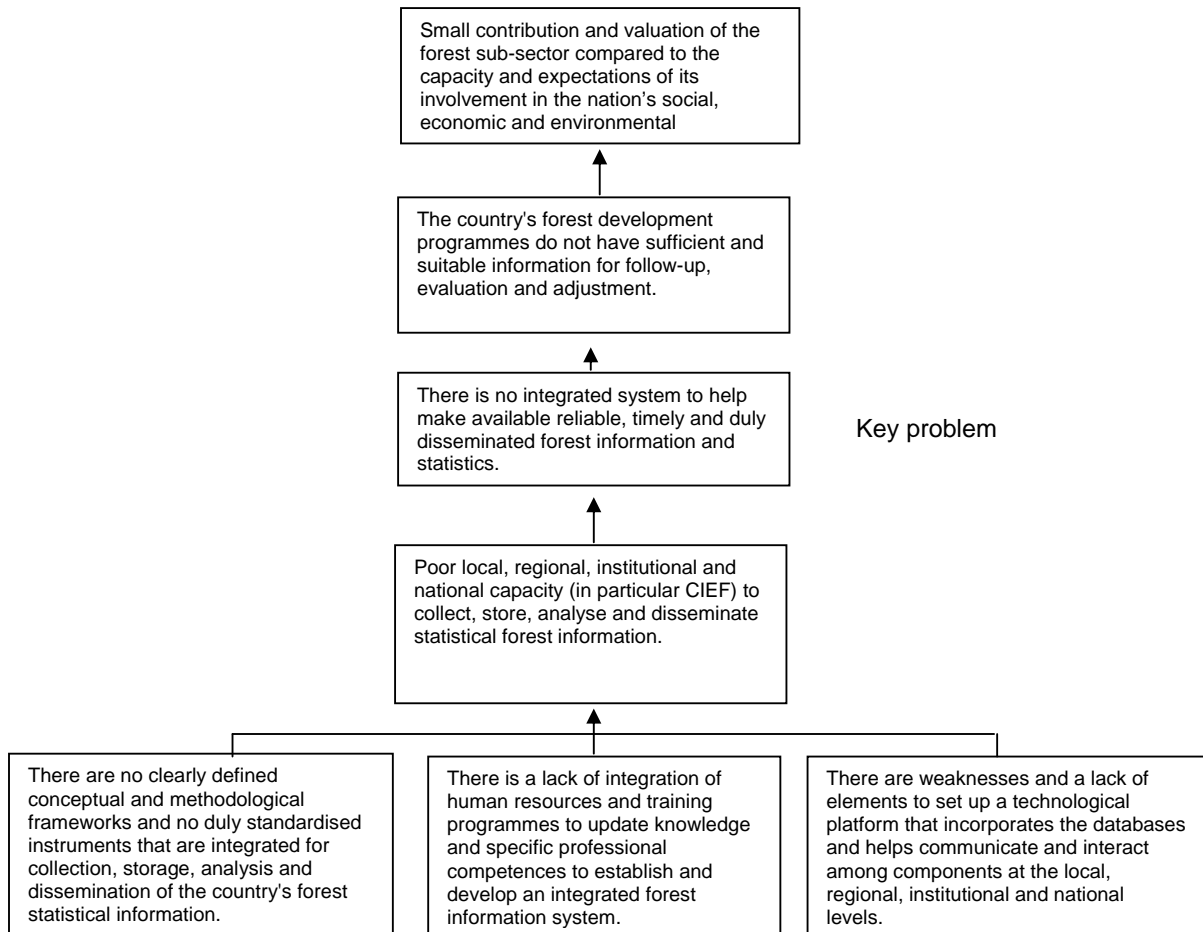
Regarding the specific issue of information technology, please see the analysis hereunder.

Current status of the technological platform.

- Pre-Project activities included an inventory of the equipment used by members of CIEF. The inventory was compared with the surveys and roles of each technical expert. The results of this activity showed that 100% of the computers used in CIEF must be upgraded.
 - The computers used for geographic information systems need more RAM and video memory.

- The computers used to generate forest statistics need to be replaced in full.
- Lack of licences: CIEF activities require software to edit documents, maps, satellite images, aerial photographs and statistical analyses. It is of the utmost urgency that the necessary licences be acquired to enable the use of the required software.
- Lack of training: Training must formalise and standardise the knowledge needed to use the technological platform and system. Interviews revealed that technical experts are making intense efforts to investigate how to carry out the processes they require to perform their daily duties; according to the information found on the subject, activities that would normally be easy with the adequate know-how, take days and sometimes weeks to complete (please note that Internet is not available either, although this tool is very helpful for research). Furthermore, surveys have revealed that most people agree there is a common need for training in their areas of interest.
- Inconsistencies with some data: It was often found that the data used by CIEF did not coincide with the data in the departments producing the information. This is due to the lack of standardised and known procedures to disseminate the information gathered by such departments. This is added to the fact that there is no interconnectivity within the institution that might facilitate the sharing of information among departments.
- Lack of a job description manual: Both COHDEFOR and, as a consequence, CIEF, are affected by the same problems as public institutions at the time of a change of administration, i.e. the change of personnel. New recruits are forced to start the process of learning their role, which in itself is a problem since there is nothing in writing, nor are there any induction process, etc. All of this leads to low productivity rates. Furthermore, where personnel are not replaced, it is very difficult to evaluate performance when there is no role description for each technical expert and, therefore, no expected outcomes of their work.
- There is a lack of interactivity between systems and computers: As indicated above, there is no connectivity between the various departments of COHDEFOR so productivity is low. This means that a greater effort is required to maintain data up-to-date and in many cases, there are inconsistencies in the data handled by the departments that do not generate the information.

For a summary of the above, please see this “Problem Tree” and the cause-and-effect relationships.



2.2 Intended situation after project completion

After project completion, there will be better quality forest statistics available, and CIEF will have become stronger through new equipment, communication networks and integrated systems for better management of the information it gathers. The specific details are as follows:

- An operational integrated system

CIEF will have an integrated data capture system that will allow the remote input of information at each of the regional offices.

The system will be able to compile automatically and consistently the information generated at each COHDEFOR department. Furthermore, each department will have their own data processing application and access to the data of the other COHDEFOR departments, thus mainstreaming the data analysis process.

Additionally, CIEF technical experts will have the analysis tools within the system to enable them to perform routine processes in a more productive manner, with data consistency, and the capacity to import and export data and to communicate and compare information with other government agencies and forest related projects.

They will also have a Web application to disseminate information and contact users and other collaborating institutions.

- Integrated and trained human resources.

CIEF technical experts will be trained to manage the software used to process spatial and statistical data, thus increasing their productivity in the generation of forest statistics. Furthermore, such training will become an incentive for each and every CIEF technical expert to increase their performance.

The Job Description Manual will provide a clearer idea of the roles and duties of each member of CIEF, as well as the results expected of them. This will translate into productivity gains for technical experts and also into better personnel management and better overall department performance.

- Technological platform installed

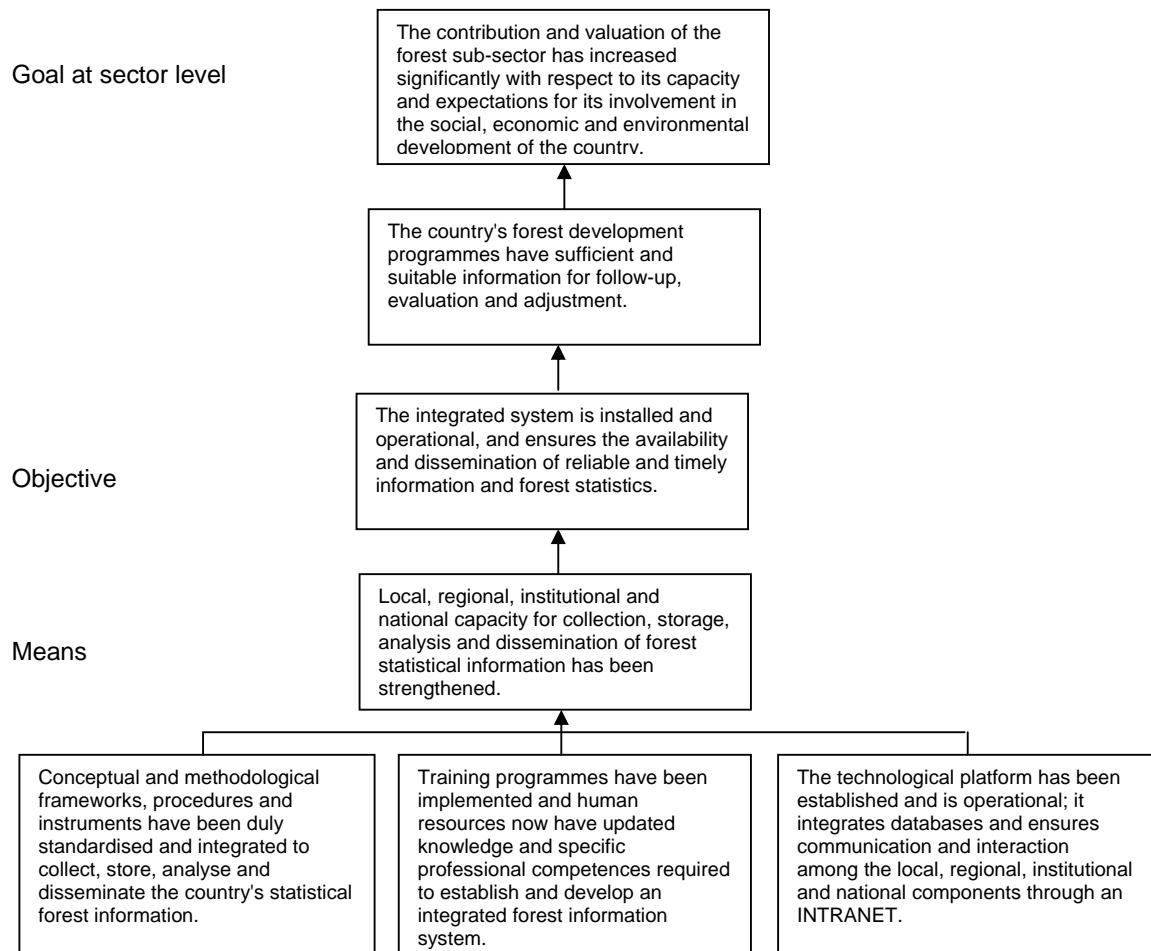
An INTRANET and local area networks (LANs) will provide CIEF with the interconnectivity it requires for faster information sharing, more consistent and up-to-date data, and communication channels between CIEF and the collaborating institutions and/or projects, close communication with system users and a means of communication with regional offices and departments of COHDEFOR (email, VoIP, etc.).

In this respect, CIEF will have a 128 Kbps INTERNET and INTRANET connection on a one-on-one basis in the best case scenario, and five-to-one in the worst case.

Furthermore, updated computer hardware will provide CIEF technical experts with the capacity and power needed for processing data more productively.

2.3 Project Strategy

In the formulation of the Objective Tree arising from the Problem Tree, relevant and viable strategies have been selected, taking into account cost, time and minimum risk criteria required to achieve the objectives, and taking into account also the executing agency's mission and the importance of the project for sectoral goals. The Objective Tree is shown below.



The strategies include:

- Internal and external partnerships with CIEF as the implementation axis; this will involve agreement on and sharing of processes and products.
- ITTO - AFE-COHDEFOR partnership; this partnership will help guide and better implement work plans.
- A systemic approach with respect to integration and definition of links among components which are currently scattered and disconnected.
- Integration, development and training of human resources both within CIEF and at the regional offices and institutions and projects.
- Use a project approach to define CIEF's work during the implementation period, i.e. define objectives, outputs, activities with a schedule and previously calculated budget, for which there will be follow-up and ongoing evaluation.
- Technological upgrade with local, regional and national cover
- Development of the project in two phases; the first phase will include the establishment of the system, covering only the absolutely necessary variables, data

fields, parameters and series in the defined thematic areas. These will be used to test and evaluate the system. This will be followed by a second phase to extend and consolidate the system. This project proposal will be the first phase and will be implemented over two years.

2.4 Target beneficiaries

The first level of beneficiaries - also system users - will be the stakeholders identified and studied in the Pre-Project.

- COHDEFOR, throughout its entire organisational structure
- Government institutions in partnership (suppliers and users of information): INE, Central Bank, National Agricultural Institute (INA), Secretariat of Agriculture and Livestock (SAG), Secretariat of Natural Resources and the Environment (SERNA).
- Professional/Trade associations: Honduras Timber Producers Association (AMAHDO), National Association of Timber Processing Industries (ANETRAMA), Honduran Federation of Agroforestry Cooperatives (FEHCAFOR).
- COHDEFOR's special projects: Multi-Phase Programme for Sustainable Forests (PROBOSQUE), Forest and Rural Productivity Project (PBPR), Management of Natural Resources in Priority Watershed Areas (MARENA) and FAO (National Forest Evaluation).
- ITTO

The second level of beneficiaries and users will include:

- Education and research centres
- Other public and private sector institutions
- Non Governmental Organizations in the development field
- Other international organisations
- Other civil society organisations.

The availability of a portal will help widen the range of user cover both nationally and internationally.

2.5 Technical and scientific aspects

The system must have the following characteristics:

- Relevance - it must contain information relating to National Forest Programme sub-programmes, and it must be presented in the way that the problem was analysed.
- Reliability - this will be the foundation of the entire system, particularly for the primary and secondary information collection process.
- Security in both directions: one, that the system information is protected from the risk of loss or damage; and two, that the various participating institutions or projects can rest assured that their information will be accessed and used in accordance with duly authorised levels of access.
- Currency - the entire statistical process needs to follow a schedule indicating the time when each collection, storage and dissemination activity will take place, in accordance with times defined in the design of the system.
- Continuity - there will be no interruptions to this process
- Timeliness - users and beneficiaries can have access to the information when they so require.
- User friendliness - there are simple and easy mechanisms to access information on the system for analysis, studies and decision-making purposes.
- Interactivity - the system allows direct connection and communication among the various components, removing unnecessary barriers or formalities.
- Coverage - the system has local, regional and national coverage.

The following criteria and guidelines, including the links among components, will govern the study and design of the system:

Subsystem worksheet for statistical process by thematic areas

Statistical Subsystems	Thematic Areas					
	Economic Development	Protected Areas and Wildlife	Social Forestry System	Forest and Environmental Protection	Technical Auditing	Management & Administration
➤ Collection of primary and secondary data	⋮	⋮	⋮	⋮	⋮	⋮
➤ Data processing (collection and storage)	⋮	⋮	⋮	⋮	⋮	⋮
➤ Information analysis	⋮	⋮	⋮	⋮	⋮	⋮
➤ Information dissemination and access	⋮	⋮	⋮	⋮	⋮	⋮

- The Economic Development area will include information on the phases of the forest production chain: standing timber production, utilisation, primary and secondary processing, and trade; it will also include pricing and market information.
- The Protected Areas and Wildlife Area will include watershed areas at the micro-watershed level.
- The Forest and Environmental Protection Area will include reforestation activities.
- Applied Forest Research will be included using a special process to help locate the material in libraries and agencies.

This worksheet shows that for each thematic area there is a process that follows the four statistical subsystems successively. Conceptual and methodological aspects of each field of information will need to be determined including variable, parameter or series for each thematic area. This will ensure procedure standardisation and unification, in particular for units of measurement and conversion factors.

This same worksheet serves as a reference to define intersections with requirements and needs of special projects and of the other cooperating institutions (INE, Central Bank, INFOAGRO, INA).

The first phase or statistical subsystem is the collection of data. As indicated above, this is a critical phase as it ensures the reliability and accuracy of the entire system. For AFE-COHDEFOR and its special projects, this collection is based on the Management Units of the respective regional offices where personnel numbers and training issues need to be strengthened. The personnel deals with all the thematic areas and needs to have the necessary inputs and resources to implement these activities; if this aspect fails, there will be a totally negative impact on the entire system. The personnel and regional offices require direct and ongoing support in guidance and training terms, both from CIEF and from the central units. A set of basic forest statistics for the country is generated by COHDEFOR activities.

The collection of other type of information from other institutions such as the Central Bank, INE, INFOAGRO and INA, will also require a control and checking process when this phase is reached. Industry information will require the definition of a methodology to help check the quality of statistical data, according to trends and links with other variables, and the agreement and inclusion of the relevant trade/professional sector through workshops and materials for awareness building and basic training.

Some data collection studies may be required based on specific samples designed to capture any kind of critical data such as the study of local regional and national prices and markets

During this phase, and with the support of the analysis phase, there will be a need to carefully study the utilisation and trade of timber and other forest products that have not been officially recorded. This issue goes beyond the scope of the project, but it must be borne in mind and clarified according to the analysis and use of system information, which contains mainly legally provided and acquired data.

The second phase of data processing and storage in databases will be duly integrated: spatial data with numerical and text data, for quantitative and qualitative variables (attributes) which are used to generate aggregate statistics at every level.

In this phase, rules and procedures must be defined to ensure the flow of information from collection and capture sites to the central site, i.e. CIEF, to ensure due interconnection and access for the relevant users.

The third phase of statistical analysis of data or use of data to improve knowledge on various phenomena and issues must be definitely strengthened by competent professionals in the statistical and forestry science fields. Uni-dimensional and multi-dimensional statistical methods need to be used, taking into consideration the time variable, to ensure the study of trends and to increase the potential offered by the use of predictive methods.

Lastly, the dissemination and communication phase must go beyond the single medium - the Yearbook - and take advantage of the network and portal proposed as technical supports; it is advisable to publish analytical studies in specialised newsletters or in the yearbook.

To improve the quality of forest statistics produced by CIEF, IT projects, networks, hardware upgrades, software licences and inter-institutional agreements are needed. The solution strategy recommended is in line with the characteristics of CIEF, the players involved, current conditions and the results of the interviews.

From the information system point of view, an integrated system is needed that is able to handle CIEF's spatial and statistical databases; this means that both databases must be organised beforehand. Furthermore, given the size of this system, it is suggested that this be done in two stages: the first phase will only deal with the basic variables needed to prepare forest statistics, as well as the following:

- Primary data capture systems installed in regional offices. These systems must transmit via the INTRANET, the collected information to a centralised database where the data will be processed and the relevant reports will be generated.
- Regional offices must be able to uptake via the system, the results of this process and/or analysis generated on the basis of the data sent to the centralised database, thus enabling feedback between CIEF and the regional offices.
- This system must be able to generate the necessary files in formats defined during the implementation phase, which will be sent to institutions with which there is an information sharing agreement. It is suggested that a Web based application be used with various levels of access privileges, through which collaborating institutions are able to consult and recover data.
- Centralised database applications to screen and analyse the information collected throughout the country.
- IT tools to analyse the information contained in the database.
- Thematic mapping, reflecting the summary of the analysis; this requires the collected information to include attributes that help locate it on a map. This could be done by including as part of the collected data, the coordinates, the code of the country's administrative division where the data is located or with which such data are related, or some polygon, point or line code handled as part of the spatial CIEF database.

Administrative division in this case refers to the quarter or community, the hamlet, village, municipality or even the department with which the data in question are related.

- Summary cards will need to be prepared for the primary data, for each aspect mentioned in this paragraph. Such cards will be input into the system for further analysis and screening.
- The quality of communications in Honduras is poor and Internet services are constantly interrupted, thus affecting their clients' connectivity. This system needs to be able to operate off-line in regional offices so that daily work there is not interrupted because of Internet service faults. Thus, it should be programmed as a modular system that allows databases to be synchronised later.

In this sense, a recording, control and enquiry mechanism needs to be included, for spatial information contained in the spatial database. A metadata register system will be needed, that is compatible with international standards so as to ensure the greatest possible transparency in information dissemination and comparison with other institutions.

Such an application needs to keep a record of modifications made to specific maps, keeping full control of the various versions of the map. Maps obtained from other institutions and that may have been subject to change over time need to have their own register with a record of the various versions on this database.

For the Web, an application that handles content is suggested, to provide CIEF with the possibility of publishing the content; it should also provide a secure means to share information with cooperating institutions. This application must include the following core modules:

- News, content publication module, including discussion fora, mailing list and newsletters.
- Search and enquiries module for the COHDEFOR public database.
- Private module for cooperating institutions to search and send information to and from COHDEFOR.
- A metadata search engine connected to the Honduras metadata Clearinghouse and thus, to the rest of the world.
- An institutional mail server to help communicate within the institution and with the public at large.

Communication channels require the implementation of an institutional connectivity project through a local area network (LAN) at the AFE-COHDEFOR offices as well as in regional offices. This connectivity must be extrapolated in such a way that it enables connection between regional offices and AFE-COHDEFOR. The following actions are suggested:

- Establish an internal LAN for AFE-COHDEFOR.
- Establish LANs at each of the 12 regional offices.
- Connect this network to Internet through a cable company or other viable means. It would be advisable to find out whether this service is possible using some government institution that already has Internet access in the region.
- Configure servers so that both remote and internal clients can connect to CIEF servers and applications.

The following training themes are suggested:

- Spatial map analysis using ArcGIS.

- Analysis of satellite images and aerial photographs using ERDAS Imagine.
- Statistical analysis methods
- Use of SPSS software.

In order to integrate the databases, the project will identify and establish the standard procedures to be used for the geo-spatial codification of information in accordance with the general guidelines of existing geo-spatial databases in the country; the integration will mainly involve geo-codification by departments, municipalities, villages and hamlets of all the statistical information currently available in hard-copy files.

Therefore, data gathering work will be minimal and will only be carried out in cases where there is a need to complete or verify the quality of the information available.

This means that most of the information-gathering work has already been done and all that remains to be done now is office work related to the organization, codification and digitalisation of the information that is now available in hard copy. Therefore, the main work to be carried out will be the organization and digitalisation of the information currently available in hard-copy files, most of which already contains the geographic component classified either by department, municipality, village and hamlet, or by geographic coordinates geo-referenced both for points, polygons or lines.

For those cases where new information needs to be compiled, data collection will be done through the use of forms supporting the geographic component with the use of the Global Positioning Systems (GPS) of AFE-COHDEFOR. If the information required extends over political divisions, only the corresponding geo-codes will be taken into account.

Therefore, the information technology to be used for the development of the different databases will be that which is already being used and is available at AFE-COHDEFOR.

However, it is possible to incorporate information technologies that will make the database development process more productive. To this end, AFE-COHDEFOR has the support of other agencies and, as part of the outputs of the information-technology consultancy, it will request the technological transfer of the process, thus allowing AFE-COHDEFOR to appropriate both the processes and technologies after project completion.

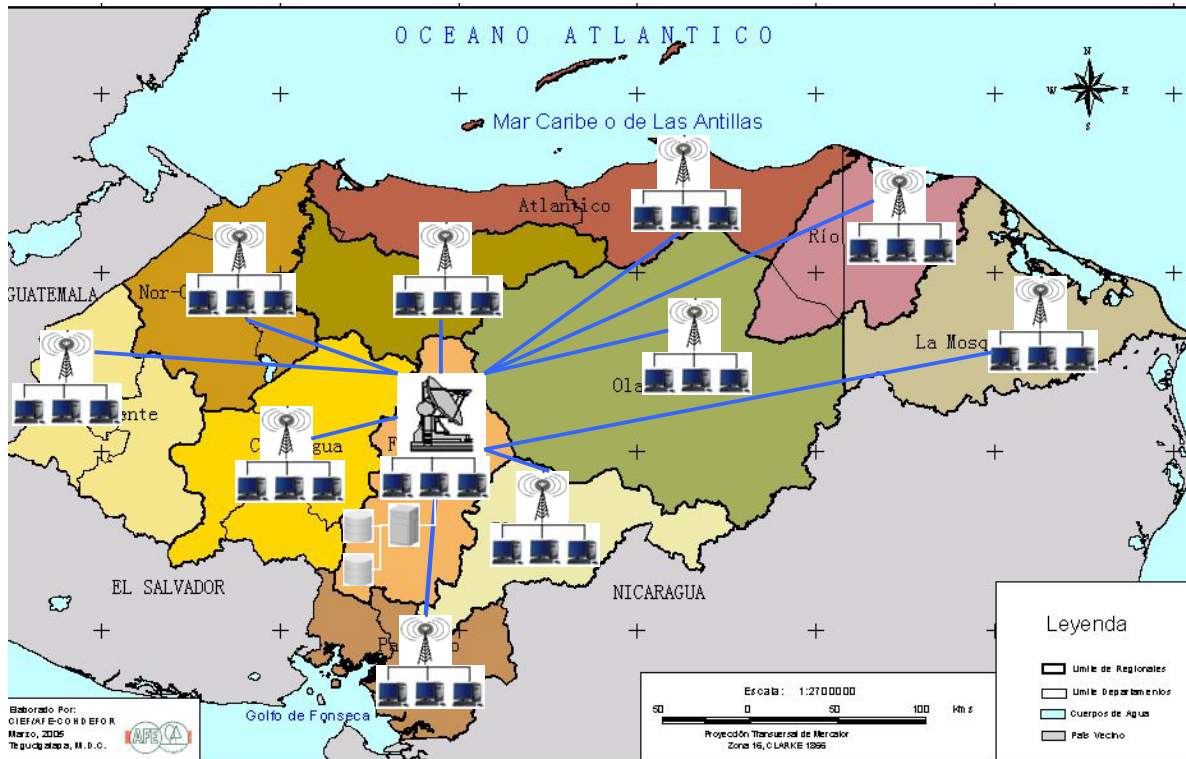
There is currently a great deal of spatial information available that will be interpreted through office-based spatial analysis processes, as well as other areas of interest for which there is statistical information available and for which AFE-COHDEFOR has the required level of precision.

Furthermore, the Project envisages the implementation of inter-institutional agreements (already available), so as to share spatial and statistical information and thus minimise the need to collect unnecessary field data.

One of the outputs of the information consultancy will be the organization of the information currently available in hard-copy files, converting it into spatial and statistical data. Geo-codification is the key to relating spatial and statistical information.

Intranet design

All regional offices will require Internet connections; a minimum 128 Kbps connection is suggested in one-on-one or the maximum allowable of five-on-one. In this sense, *La Mosquitia* and *Río Plátano* regions present the greatest difficulty for Internet access since they are very remote and have little or no road infrastructure. The following figure shows the links with the regional offices.

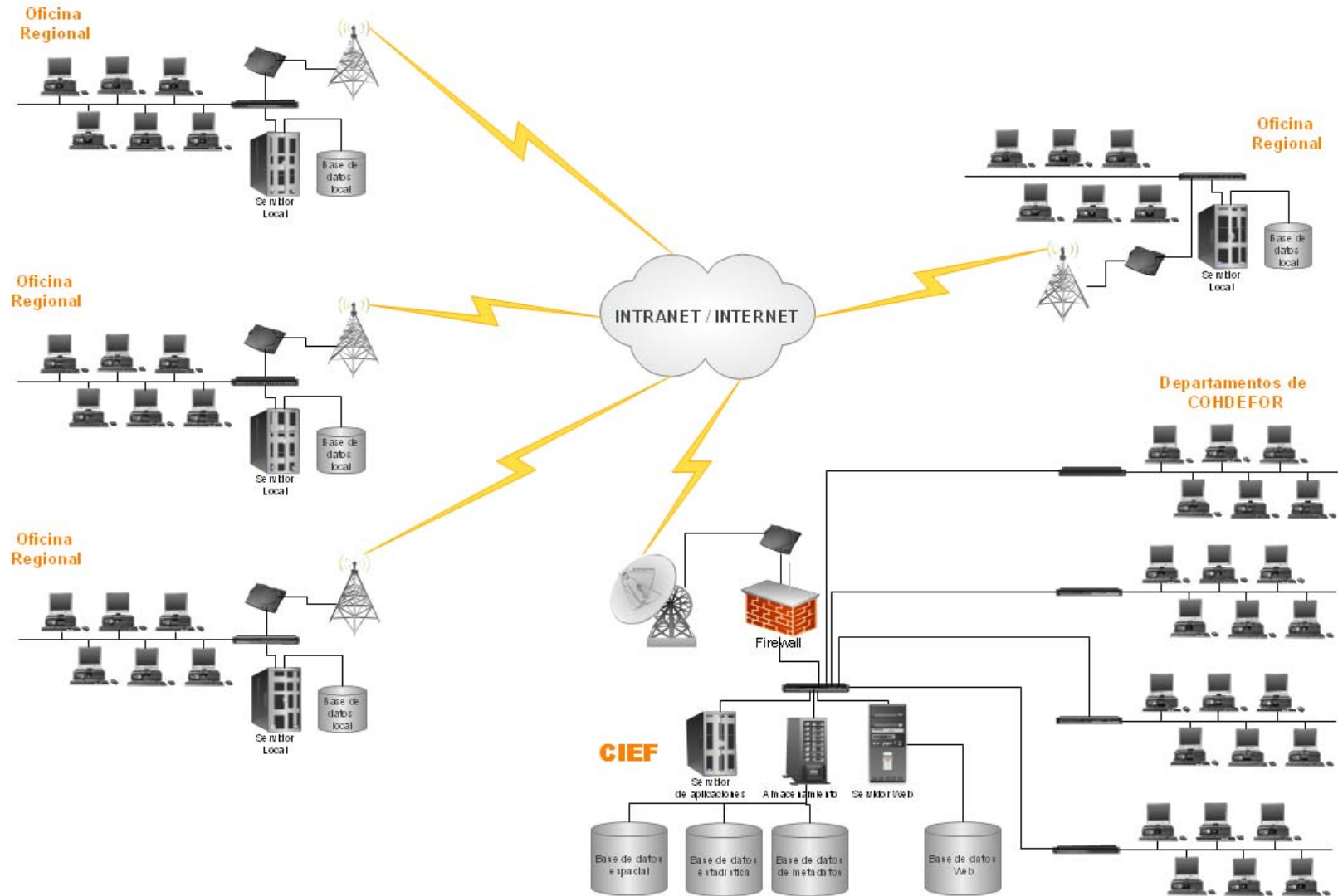


Technological platform possibilities

By establishing an INTRANET, COHDEFOR could install a telephone system over the network (VoIP), which would reduce telephone expenses. Furthermore, it would be able to implement a VPN to gain productivity throughout the institution.

An email system offers an alternative means of formal inter-institutional communication, thus replacing memos, printouts and helping save consumables.

AFE-COHDEFOR INTRANET STRUCTURE

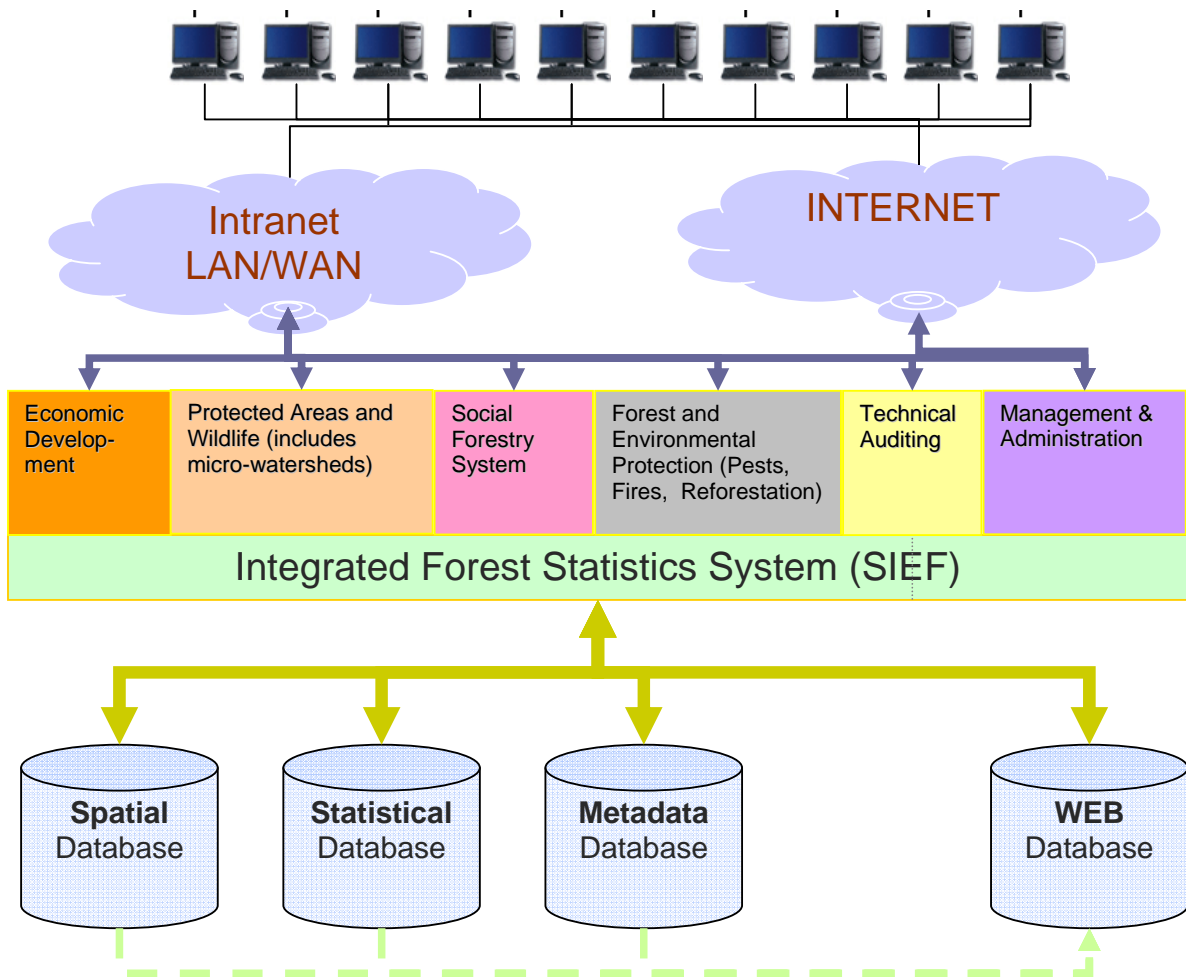


Application design

The design of this application needs to cater for different types of databases working in an integrated manner as if there was only one database in the eyes of the end user. Additionally, it must take into account the concept of a distributed application and the security of Internet transactions. Furthermore, some application needs to be used to manage metadata with each information element contained in the spatial database; this is to help search and compare information with other government institutions.

This application will also need security and backup methods to ensure the security and protection of the data handled by CIEF.

The following graph shows the design:



By their very nature, the completed Pre-Project and the proposed Project involve no negative impact risks for the environment; on the contrary, the system will be a basic tool to counteract factors that could potentially harm the environment.

2.6 Risks

The following assumptions are made for the project to be successful:

- The specific PRONAFOR - National Forest Programme - programmes and sub-programmes are in progress and gradually achieve their goals. There is a low risk or probability that this factor will endanger the success of the project.
- Institutions' and organisations' willingness to participate in the project is maintained, as expressed during the implementation of the Pre-Project. There is a low risk or probability that this factor will endanger the success of the project.
- The project personnel remains stable, both in AFE-COHDEFOR and in the other institutions. There is a low risk or probability that this factor will endanger the success of the project.
- Special projects' willingness to contribute their resources to this project is maintained. There is a low risk or probability that this factor will endanger the success of the project.

Below is a description of some of the potential risks that could occur during the implementation of the project and that are inherent in any activity of this type, as well as possible ways of mitigating their impact:

<u>TYPE OF RISK</u>	<u>MITIGATION STRATEGY</u>
<u>1.-POLITICAL CHANGES</u>	<u>Given the fact that this is an institutional project under the responsibility of a State organization, the State shall undertake a commitment to ensure its implementation and continuity.</u>
<u>2.- CHANGES IN PROJECT MANAGEMENT STAFF</u>	<u>A) AFE-COHDEFOR's counterpart will have access to additional personnel and will provide them with training and information so that they can be used as a back-up for unforeseen or unexpected staff changes.</u>
	<u>B) External consultancy services will be hired for the implementation of the Project. Therefore, despite the personnel changes that may occur, the consultancy company will be responsible for ensuring project completion.</u>
<u>3.-FINANCIAL COUNTERPART</u>	<u>It is envisaged that the project will receive financial support from other AFE-COHDEFOR projects, as part of their institutional strengthening and modernization objectives. These have already been approached and appropriate actions are being taken to this end.</u>
<u>4.- SUCCESSFUL PROJECT COMPLETION BY THE CONSULTANCY FIRM HIRED.</u>	<u>A) Clear identification of TORs, specifying commitments, outputs, and dates for the delivery of specified goods.</u>
	<u>B) Establishment of bank guarantees for compliance and quality.</u>
	<u>C) Project monitoring and control by AFE-COHDEFOR with the yearly support of an ITTO consultant.</u>

3. Outputs

3.1 Specific objective 1

Standardise and integrate methodologies, procedures and instruments for the collection, storage, analysis and dissemination of information in the following thematic areas: Economic Development, Protected Areas and Wildlife, Social Forestry System, Forest and Environmental Protection, Technical Auditing, and Management & Administration.

Output 1.1

Integrated system based on a forest statistical and spatial database established and operational.

Output 1.2

Six statistical analysis studies on system data implemented and disseminated for each thematic area.

Output 1.3

Two statistical yearbooks and four newsletters developed and disseminated for each thematic area.

3.2 Specific objective 2

Integrate and train the personnel in charge of the establishment and operation of the system as well as system users.

Output 2.1

Partnerships established and operational.

Output 2.2

Personnel from CIEF, Regional Departments and projects of AFE-COHDEFOR, and professional/trade organisations and institutions involved in the establishment of the system integrated and trained according to their level of responsibility.

Output 2.3

Users trained in the use of the system.

3.3 Specific objective 3

Establish a technological platform to support the system in information technology and telecommunication aspects.

Output 3.1

Hardware and software established.

Output 3.2

A network established and operational.

4. Activities

4.1 Output 1.1

Integrated system based on a forest statistical and spatial database established and operational.

Activity 1.1.1

Identify and analyse information requirements.

Activity 1.1.2

Design and program applications for each of the identified requirements.

Activity 1.1.3

Implement and test the system.

4.2 Output 1.2

Six statistical analysis studies on system data implemented and disseminated for each thematic area.

Activity 1.2.1
Identify specific analysis issues and the personnel responsible.

Activity 1.2.2
Carry out studies.

Activity 1.2.3
Disseminate results.

4.3 Output 1.3

Two statistical yearbooks and four newsletters developed and disseminated for each thematic area.

Activity 1.3.1
Develop yearbooks and newsletters.

Activity 1.3.2
Produce and distribute printed copies of yearbooks and newsletters.

Activity 1.3.3
Post digital versions of the yearbook and newsletters on COHDEFOR's web page.

4.4 Output 2.1

Partnerships established and operational.

Activity 2.1.1
Agree on the scope and terms of agreements with the officers of participating institutions.

Activity 2.1.2
Implement agreements.

4.5 Output 2.2

Personnel from CIEF, Regional Departments and projects of AFE-COHDEFOR, and professional/trade organisations and institutions involved in the establishment of the system integrated and trained according to their level of responsibility.

Activity 2.2.1
Identification and design of training programs.

Activity 2.2.2
Development and reproduction of training materials.

Activity 2.2.3
Implementation of training programs.

4.6 Output 2.3

Users trained in the use of the system.

Activity 2.3.1
Develop system user's manuals.

Activity 2.3.2
Post system user's manuals on COHDEFOR's web page.

4.6 Output 3.1

Hardware and software established.

Activity 3.1.1
Define characteristics and technical specifications of the hardware and software required.

Activity 3.1.2
Request quotes and purchase the hardware and software required.

4.7 Output 3.2

A network established and operational.

Activity 3.2.1

Design of local area networks for CIEF, COHDEFOR's Departments and regional offices.

Activity 3.2.2

Installation and testing of networks.

5. Logical framework worksheets

Project Components	Indicators	Means of Verification	Assumptions
<p>Development Objective Establish an integrated forest statistics and information system that will increase the contribution and relevance of the forest sub-sector to the country's social, economic and environmental development, while at the same time strengthening local, regional and institutional capacities.</p>	<ul style="list-style-type: none"> ➤ System established in regional offices and linked to central office. ➤ The information generated is used by institutions and organisations for decision-making and development of programs. 	<ul style="list-style-type: none"> ➤ System established in regional offices and linked to central office. ➤ Statistical information in official and unofficial documents. ➤ Publications based on system information. 	<ul style="list-style-type: none"> ➤ The National Forestry Programme makes progress and achieves targets, particularly in relation to PRONAFOR sub-programs.
<p>Specific objective 1 Standardise and integrate methodologies, procedures and instruments for the collection, storage, analysis and dissemination of information in the following thematic areas: Economic Development, Protected Areas and Wildlife, Social Forestry System, Forest and Environmental Protection, Technical Auditing, and Management & Administration.</p>	<ul style="list-style-type: none"> ➤ Methodologies established and applied for each thematic area. 	<ul style="list-style-type: none"> ➤ Reports. ➤ Monitoring visits. 	
<p>Output 1.1 Integrated system based on a forest statistical and spatial database established and operational.</p>	<ul style="list-style-type: none"> ➤ Statistical and spatial database established. ➤ Applications developed. 	<ul style="list-style-type: none"> ➤ Reports. ➤ Tests and monitoring. 	
<p>Output 1.2 Six statistical analysis studies on system data implemented and disseminated for each thematic area.</p>	<ul style="list-style-type: none"> ➤ Studies conducted. 	<ul style="list-style-type: none"> ➤ Reports disseminated. 	
<p>Output 1.3 Two statistical yearbooks and four newsletters developed and disseminated for each thematic area.</p>	<ul style="list-style-type: none"> ➤ Yearbooks and newsletters developed. 	<ul style="list-style-type: none"> ➤ Yearbooks and newsletters developed. 	

Project Components	Indicators	Means of Verification	Assumptions
Specific objective 2 Integrate and train the personnel in charge of the establishment and operation of the system as well as system users.	➤ Personnel trained according to training program.	➤ Reports. ➤ Certificates. ➤ List of participants.	➤ Stability of trained personnel.
Output 2.1 Partnerships established and operational.	➤ Agreements formalised.	➤ Reports and monitoring.	➤ Institutions and organisations are willing to work in partnerships.
Output 2.2 Personnel from CIEF, Regional Departments and projects of AFE-COHDEFOR, and professional/trade organisations and institutions involved in the establishment of the system integrated and trained according to their level of responsibility.	➤ Courses implemented according to training program. ➤ Attendance to national and international courses /workshops.	➤ Reports and certificates. ➤ List of participants. ➤ Workshop and course materials.	
Output 2.3 Users trained in the use of the system.	➤ Workshops implemented. ➤ Training materials on web page.	➤ Reports and certificates. ➤ Network enquiries/consultations.	
Specific objective 3 Establish a technological platform to support the system in information technology and telecommunication aspects.	➤ Hardware and software installed.	➤ Testing of applications. ➤ Hardware and software implemented and operational.	➤ Political will to cooperate with the different projects and institutions.
Output 3.1 Hardware and software established.	➤ Hardware and software used.	➤ Application tests.	
Output 3.2 A network established and operational.	➤ Network under implementation.	➤ Usage tests.	

6. Work Plan

Activities	Months																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Output 1.1 Integrated system based on a forest statistical and spatial database established and operational. Activity 1.1.1 Identify and analyse information requirements. Activity 1.1.2 Design and program applications for each of the identified requirements. Activity 1.1.3 Implement and test the system.	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■						
Output 1.2 Six statistical analysis studies on system data implemented and disseminated for each thematic area. Activity 1.2.1 Identify specific analysis issues and the personnel responsible. Activity 1.2.2 Carry out studies. Activity 1.2.3 Disseminate results.										■	■	■	■	■	■	■	■	■		■	■	■	■	■
Output 1.3 Two statistical yearbooks and four newsletters developed and disseminated for each thematic area. Activity 1.3.1 Develop yearbooks and newsletters. Activity 1.3.2 Produce and distribute printed copies of yearbooks and newsletters. Activity 1.3.3 Post digital versions of the yearbook and newsletters on COHDEFOR's web page.						■	■	■		■	■	■	■	■			■	■		■	■	■	■	■
Output 2.1 Partnerships established and operational. Activity 2.1.1 Agree on the scope and terms of agreements with the officers of participating institutions. Activity 2.1.2 Implement agreements.	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

Activities	Months																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Output 2.2 Personnel from CIEF, Regional Departments and projects of AFE-COHDEFOR, and professional/trade organisations and institutions involved in the establishment of the system integrated and trained according to their level of responsibility. Activity 2.2.1 Identification and design of training programs. Activity 2.2.2 Development and reproduction of training materials. Activity 2.2.3 Implementation of training programs.	■						■						■											
Output 2.3 Users trained in the use of the system. Activity 2.3.1 Develop system user's manuals. Activity 2.3.2 Post system user's manuals on COHDEFOR's web page.		■					■			■			■			■				■				
Output 3.1 Hardware and software established. Activity 3.1.1 Define characteristics and technical specifications of the hardware and software required. Activity 3.1.2 Request quotes and purchase the hardware and software required.	■	■	■	■	■	■																		
Output 3.2 A network established and operational. Activity 3.2.1 Design of local area networks for CIEF, COHDEFOR's Departments and regional offices. Activity 3.2.2 Installation and testing of networks.	■	■	■	■	■	■	■																	

Budget

Project budget by component and activity (overall and by source)

**TABLE 1
PROJECT BUDGET BY COMPONENT AND ACTIVITY IN US\$**

Description	COMPONENTS						TOTAL
	10 Personnel	20 Sub- contracts	30 Duty Travel	40 Capital Items	50 Consumable Items	60 Miscellaneous	
Output 1.1 Integrated system based on a forest statistical and spatial database established and operational.							
1.1.1 Identify and analyse information requirements.	\$ 22,260		\$ 2,485		\$ 325	\$ 1,129	\$ 26,199
1.1.2 Design and program applications for each of the identified requirements.		\$ 48,400					\$ 48,400
1.1.3 Implement and test the system.	\$ 33,000	\$ 12,100			\$ 325	\$ 1,129	\$ 46,554
SUBTOTAL 1.1	\$ 55,260	\$ 60,500	\$ 2,485		\$ 650	\$ 2,257	\$ 121,152
Output 1.2 Six statistical analysis studies on system data implemented and disseminated for each thematic area.							
1.2.1 Identify specific analysis issues and the personnel responsible.	\$ 15,658				\$ 325	\$ 752	\$ 16,735
1.2.2 Carry out studies.	\$ 8,942		\$ 2,485		\$ 650	\$ 752	\$ 12,829
1.2.3 Disseminate results.	\$ 7,150				\$ 650	\$ 752	\$ 8,552
SUBTOTAL 1.2	\$ 31,750		\$ 2,485		\$ 1,625	\$ 2,257	\$ 38,117

**TABLE 1
PROJECT BUDGET BY COMPONENT AND ACTIVITY IN US\$**

Description	COMPONENTS						TOTAL
	10 Personnel	20 Sub- contracts	30 Duty Travel	40 Capital Items	50 Consumable Items	60 Miscellaneous	
Output 1.3 Two statistical yearbooks and four newsletters developed and disseminated for each thematic area.							
1.3.1 Develop yearbooks and newsletters.	\$ 7,804				\$ 650	\$ 752	\$ 9,206
1.3.2 Produce and distribute printed copies of yearbooks and newsletters.	\$ 6,016		\$ 1,242		\$ 650	\$ 752	\$ 8,661
1.3.3 Post digital versions of the yearbook and newsletters on COHDEFOR's web page.	\$ 4,766				\$ 400	\$ 752	\$ 5,919
SUBTOTAL 1.3	\$ 18,587		\$ 1,242		\$ 1,700	\$ 2,257	\$ 23,787
Output 2.1 Partnerships established and operational.							
2.1.1 Agree on the scope and terms of agreements with the officers of participating institutions.	\$ 1,442		\$ 1,242		\$ 250	\$ 1,129	\$ 4,063
2.1.2 Implement agreements.	\$ 1,192		\$ 1,242		\$ 325	\$ 1,129	\$ 3,888
SUBTOTAL 2.1	\$ 2,633		\$ 2,485		\$ 575	\$ 2,257	\$ 7,951
Output 2.2 Personnel from CIEF, Regional Departments and projects of AFE-COHDEFOR, and professional/trade organisations and institutions involved in the establishment of the system integrated and trained according to their level of responsibility.							
2.2.1 Identification and design of training programs.	\$ 4,405				\$ -	\$ 752	\$ 5,158
2.2.2 Development and reproduction of training materials.	\$ 4,405				\$ 650	\$ 752	\$ 5,808
2.2.3 Implementation of training programs.	\$ 32,367		\$ 2,485		\$ 650	\$ 752	\$ 36,254
SUBTOTAL 2.2	\$ 41,177		\$ 2,485		\$ 1,300	\$ 2,257	\$ 47,220
Output 2.3 Users trained in the use of the system.							
2.3.1 Develop system user's manuals.	\$ 3,900				\$ 650	\$ 1,129	\$ 5,679
2.3.2 Post system user's manuals on COHDEFOR's web page.	\$ 1,490					\$ 1,129	\$ 2,618
SUBTOTAL 2.3	\$ 5,390				\$ 650	\$ 2,257	\$ 8,297

**TABLE 1
PROJECT BUDGET BY COMPONENT AND ACTIVITY IN US\$**

Description	COMPONENTS						TOTAL
	10 Personnel	20 Sub- contracts	30 Duty Travel	40 Capital Items	50 Consumable Items	60 Miscellaneous	
Output 3.1							
Hardware and software established.							
3.1.1 Define characteristics and technical specifications of the hardware and software required.	\$ 2,681					\$ 1,129	\$ 3,810
3.1.2 Request quotes and purchase the hardware and software required.	\$ 1,490		\$ 1,242	\$ 44,180		\$ 1,129	\$ 48,041
SUBTOTAL 3.1	\$ 4,171		\$ 1,242	\$ 44,180		\$ 2,257	\$ 51,851
Output 3.2							
A network established and operational.							
3.2.1 Design of local area networks for CIEF, COHDEFOR's Departments and regional offices.		\$ 19,600				\$ 1,129	\$ 20,729
3.2.2 Installation and testing of networks.	\$ 2,681	\$ 4,900				\$ 1,129	\$ 8,710
SUBTOTAL 3.2	\$ 2,681	\$ 24,500				\$ 2,257	\$ 29,439
TOTAL	\$ 161,648	\$ 85,000	\$ 12,425	\$ 44,180	\$ 6,500	\$ 18,059	\$ 327,812
ITTO SUBTOTAL	\$ 72,400	\$ 60,500	\$ 12,425		\$ 6,500	\$ 18,059	\$ 169,884
AFE-COHDEFOR SUBTOTAL	\$ 89,248	\$ 24,500		\$ 44,180			\$ 157,928

**TABLE 1.1
PROJECT BUDGET BY COMPONENT AND ACTIVITY IN US\$
ITTO CONTRIBUTION**

Description	COMPONENTS						TOTAL
	10 Personnel	20 Sub- contracts	30 Duty Travel	40 Capital Items	50 Consumable Items	60 Miscellaneous	
Output 1.1 Integrated system based on a forest statistical and spatial database established and operational.							
1.1.1 Identify and analyse information requirements.	\$ 6,500		\$ 2,485		\$ 325	\$ 1,129	\$ 10,439
1.1.2 Design and program applications for each of the identified requirements.		\$ 48,400					\$ 48,400
1.1.3 Implement and test the system.	\$ 33,000	\$ 12,100			\$ 325	\$ 1,129	\$ 46,554
SUBTOTAL 1.1	\$ 39,500	\$ 60,500	\$ 2,485		\$ 650	\$ 2,257	\$ 105,392
Output 1.2 Six statistical analysis studies on system data implemented and disseminated for each thematic area.							
1.2.1 Identify specific analysis issues and the personnel responsible.	\$ 5,000				\$ 325	\$ 752	\$ 6,077
1.2.2 Carry out studies.			\$ 2,485		\$ 650	\$ 752	\$ 3,887
1.2.3 Disseminate results.					\$ 650	\$ 752	\$ 1,402
SUBTOTAL 1.2	\$ 5,000		\$ 2,485		\$ 1,625	\$ 2,257	\$ 11,367
Output 1.3 Two statistical yearbooks and four newsletters developed and disseminated for each thematic area.							
1.3.1 Develop yearbooks and newsletters.	\$ 1,250				\$ 650	\$ 752	\$ 2,652
1.3.2 Produce and distribute printed copies of yearbooks and newsletters.	\$ 1,250		\$ 1,242		\$ 650	\$ 752	\$ 3,895
1.3.3 Post digital versions of the yearbook and newsletters on COHDEFOR's web page.					\$ 400	\$ 752	\$ 1,152
SUBTOTAL 1.3	\$ 2,500		\$ 1,242		\$ 1,700	\$ 2,257	\$ 7,700

**TABLE 1.1
PROJECT BUDGET BY COMPONENT AND ACTIVITY IN US\$
ITTO CONTRIBUTION**

Description	COMPONENTS						TOTAL
	10 Personnel	20 Sub- contracts	30 Duty Travel	40 Capital Items	50 Consumable Items	60 Miscellaneous	
Output 2.1							
Partnerships established and operational.							
2.1.1 Agree on the scope and terms of agreements with the officers of participating institutions.	\$ 250		\$ 1,242		\$ 250	\$ 1,129	\$ 2,871
2.1.2 Implement agreements.			\$ 1,242		\$ 325	\$ 1,129	\$ 2,696
SUBTOTAL 2.1	\$ 250		\$ 2,485		\$ 575	\$ 2,257	\$ 5,567
Output 2.2							
Personnel from CIEF, Regional Departments and projects of AFE-COHDEFOR, and professional/trade organisations and institutions involved in the establishment of the system integrated and trained according to their level of responsibility.							
2.2.1 Identification and design of training programs.	\$ 500					\$ 752	\$ 1,252
2.2.2 Development and reproduction of training materials.	\$ 500				\$ 650	\$ 752	\$ 1,902
2.2.3 Implementation of training programs.	\$ 20,250		\$ 2,485		\$ 650	\$ 752	\$ 24,137
SUBTOTAL 2.2	\$ 21,250		\$ 2,485		\$ 1,300	\$ 2,257	\$ 27,292
Output 2.3							
Users trained in the use of the system.							
2.3.1 Develop system user's manuals.	\$ 3,900				\$ 650	\$ 1,129	\$ 5,679
2.3.2 Post system user's manuals on COHDEFOR's web page.						\$ 1,129	\$ 1,129
SUBTOTAL 2.3	\$ 3,900				\$ 650	\$ 2,257	\$ 6,807
Output 3.1							
Hardware and software established.							
3.1.1 Define characteristics and technical specifications of the hardware and software required.						\$ 1,129	\$ 1,129
3.1.2 Request quotes and purchase the hardware and software required.			\$ 1,242			\$ 1,129	\$ 2,371
SUBTOTAL 3.1			\$ 1,242			\$ 2,257	\$ 3,500

**TABLE 1.1
PROJECT BUDGET BY COMPONENT AND ACTIVITY IN US\$
ITTO CONTRIBUTION**

Description	COMPONENTS						TOTAL
	10 Personnel	20 Sub- contracts	30 Duty Travel	40 Capital Items	50 Consumable Items	60 Miscellaneous	
Output 3.2							
A network established and operational.							
3.2.1 Design of local area networks for CIEF, COHDEFOR's Departments and regional offices.						\$ 1,129	\$ 1,129
3.2.2 Installation and testing of networks.						\$ 1,129	\$ 1,129
SUBTOTAL 3.2						\$ 2,257	\$ 2,257
TOTAL	\$ 72,400	\$ 60,500	\$ 12,425		\$ 6,500	\$ 18,059	\$ 169,884

**TABLE 1.2
PROJECT BUDGET BY COMPONENT AND ACTIVITY IN US\$
AFE-COHDEFOR CONTRIBUTION**

Description	COMPONENTS						TOTAL
	10 Personnel	20 Sub- contracts	30 Duty Travel	40 Capital Items	50 Consumable Items	60 Miscellaneous	
Output 1.1							
Integrated system based on a forest statistical and spatial database established and operational.							
1.1.1 Identify and analyse information requirements.	\$ 15,760						\$ 15,760
1.1.2 Design and program applications for each of the identified requirements.							\$ -
1.1.3 Implement and test the system.							\$ -
SUBTOTAL 1.1	\$ 15,760						\$ 15,760
Output 1.2							
Six statistical analysis studies on system data implemented and disseminated for each thematic area.							\$ -
1.2.1 Identify specific analysis issues and the personnel responsible.	\$ 10,658						\$ 10,658
1.2.2 Carry out studies.	\$ 8,942						\$ 8,942
1.2.3 Disseminate results.	\$ 7,150						\$ 7,150
SUBTOTAL 1.2	\$ 26,750						\$ 26,750
Output 1.3							
Two statistical yearbooks and four newsletters developed and disseminated for each thematic area.							\$ -
1.3.1 Develop yearbooks and newsletters.	\$ 6,554						\$ 6,554
1.3.2 Produce and distribute printed copies of yearbooks and newsletters.	\$ 4,766						\$ 4,766
1.3.3 Post digital versions of the yearbook and newsletters on COHDEFOR's web page.	\$ 4,766						\$ 4,766
SUBTOTAL 1.3	\$ 16,087						\$ 16,087

**TABLE 1.2
PROJECT BUDGET BY COMPONENT AND ACTIVITY IN US\$
AFE-COHDEFOR CONTRIBUTION**

Description	COMPONENTS						TOTAL
	10 Personnel	20 Sub- contracts	30 Duty Travel	40 Capital Items	50 Consumable Items	60 Miscellaneous	
Output 2.1							
Partnerships established and operational.							\$ -
2.1.1 Agree on the scope and terms of agreements with the officers of participating institutions.	\$ 1,192						\$ 1,192
2.1.2 Implement agreements.	\$ 1,192						\$ 1,192
SUBTOTAL 2.1	\$ 2,383						\$ 2,383
Output 2.2							
Personnel from CIEF, Regional Departments and projects of AFE-COHDEFOR, and professional/trade organisations and institutions involved in the establishment of the system integrated and trained according to their level of responsibility.							\$ -
2.2.1 Identification and design of training programs.	\$ 3,905						\$ 3,905
2.2.2 Development and reproduction of training materials.	\$ 3,905						\$ 3,905
2.2.3 Implementation of training programs.	\$ 12,117						\$ 12,117
SUBTOTAL 2.2	\$ 19,927						\$ 19,927
Output 2.3							
Users trained in the use of the system.							\$ -
2.3.1 Develop system user's manuals.							\$ -
2.3.2 Post system user's manuals on COHDEFOR's web page.	\$ 1,490						\$ 1,490
SUBTOTAL 2.3	\$ 1,490						\$ 1,490
Output 3.1							
Hardware and software established.							\$ -
3.1.1 Define characteristics and technical specifications of the hardware and software required.	\$ 2,681						\$ 2,681
3.1.2 Request quotes and purchase the hardware and software required.	\$ 1,490			\$ 44,180			\$ 45,670
SUBTOTAL 3.1	\$ 4,171			\$ 44,180			\$ 48,351

**TABLE 1.2
PROJECT BUDGET BY COMPONENT AND ACTIVITY IN US\$
AFE-COHDEFOR CONTRIBUTION**

Description	COMPONENTS						
	10 Personnel	20 Sub- contracts	30 Duty Travel	40 Capital Items	50 Consumable Items	60 Miscellaneous	TOTAL
Output 3.2							
A network established and operational.							\$ -
3.2.1 Design of local area networks for CIEF, COHDEFOR's Departments and regional offices.		\$ 19,600					\$ 19,600
3.2.2 Installation and testing of networks.	\$ 2,681	\$ 4,900					\$ 7,581
SUBTOTAL 3.2	\$ 2,681	\$ 24,500					\$ 27,181
TOTAL	\$ 89,248	\$ 24,500		\$ 44,180			\$ 157,928

Project budget by year and by source

TABLE 2
OVERALL AND YEARLY PROJECT BUDGET BY COMPONENT IN US\$

Description	TOTAL	YEAR 1	YEAR 2
10 PROJECT PERSONNEL			
11 National experts	\$ 89,248	\$ 50,250	\$ 38,998
12 Administrative personnel	\$ 6,000	\$ 4,500	\$ 1,500
14 Other labour	\$ 33,000	\$ 24,750	\$ 8,250
15 Training of system users	\$ 3,400	\$ 434	\$ 2,966
16 International expert	\$ 10,000	\$ 5,000	\$ 5,000
17 CIEF personnel training	\$ 20,000	\$ 1,457	\$ 18,543
19 COMPONENT TOTAL	\$ 161,648	\$ 86,391	\$ 75,257
20 SUB CONTRATOS			
21 Computer application for the integrated forest statistics and information system (including Web application)	\$ 60,500	\$ 47,311	\$ 13,189
22 COHDEFOR local area network and INTRANET	\$ 8,000	\$ 8,000	\$ -
23 Local area networks for regional offices	\$ 16,500	\$ 16,500	\$ -
29 COMPONENT TOTAL	\$ 85,000	\$ 71,811	\$ 13,189
30 DUTY TRAVEL			
31 DSA	\$ 8,925	\$ 5,319	\$ 3,606
32 Transport costs	\$ 3,500	\$ 2,086	\$ 1,414
39 COMPONENT TOTAL	\$ 12,425	\$ 7,405	\$ 5,020
40 CAPITAL ITEMS			
41 Hardware and software	\$ 44,180	\$ 44,180	
49 COMPONENT TOTAL	\$ 44,180	\$ 44,180	
50 CONSUMABLE ITEMS			
52 Office supplies	\$ 5,000	\$ 1,777	\$ 3,223
53 Utilities, telephone, fax, DHL	\$ 1,500	\$ 533	\$ 967
59 COMPONENT TOTAL	\$ 6,500	\$ 2,310	\$ 4,190
60 MISCELLANEOUS			
61 Sundry			
62 Auditing	\$ 7,000	\$ 4,172	\$ 2,828
63 Contingencies	\$ 11,059	\$ 6,592	\$ 4,467
69 COMPONENT TOTAL	\$ 18,059	\$ 10,764	\$ 7,295
70 ADMINISTRATION			
71 Executing Agency Management Costs	\$ 11,000	\$ 6,518	\$ 4,482
79 COMPONENT TOTAL	\$ 11,000	\$ 6,518	\$ 4,482
SUBTOTAL 1	\$ 338,812	\$ 229,379	\$ 109,433
80 ITTO ADMINISTRATION AND MONITORING			
81 Monitoring and review	\$ 15,000		
82 Evaluation costs			
SUBTOTAL 2	\$ 15,000		
83 Programme Support Costs - 8%	\$ 14,791		
89 COMPONENT TOTAL	\$ 29,791		
REFUND OF PRE-PROJECT COSTS [PPD 93/04 (M)]	30,348		
GRAND TOTAL	\$ 398,951		

**TABLE 2.1
OVERALL AND YEARLY PROJECT BUDGET BY COMPONENT IN US\$
ITTO CONTRIBUTION**

Description	Total	YEAR 1	YEAR 2
10 PROJECT PERSONNEL			
11 National experts			
12 Administrative personnel	\$ 6,000	\$ 4,500	\$ 1,500
14 Other labour	\$ 33,000	\$ 24,750	\$ 8,250
15 Training of system users	\$ 3,400	\$ 434	\$ 2,966
16 International expert	\$ 10,000	\$ 5,000	\$ 5,000
17 CIEF personnel training	\$ 20,000	\$ 1,457	\$ 18,543
19 COMPONENT TOTAL	\$ 72,400	\$ 36,141	\$ 36,259
20 SUB CONTRATOS			
21 Computer application for the integrated forest statistics and information system (including Web application)	\$ 60,500	\$ 47,311	\$ 13,189
22 COHDEFOR local area network and INTRANET			
23 Local area networks for regional offices			
29 COMPONENT TOTAL	\$ 60,500	\$ 47,311	\$ 13,189
30 DUTY TRAVEL			
31 DSA	\$ 8,925	\$ 5,319	\$ 3,606
32 Transport costs	\$ 3,500	\$ 2,086	\$ 1,414
39 COMPONENT TOTAL	\$ 12,425	\$ 7,405	\$ 5,020
40 CAPITAL ITEMS			
41 Hardware and software			
49 COMPONENT TOTAL			
50 CONSUMABLE ITEMS			
52 Office supplies	\$ 5,000	\$ 1,777	\$ 3,223
53 Utilities, telephone, fax, DHL	\$ 1,500	\$ 533	\$ 967
59 COMPONENT TOTAL	\$ 6,500	\$ 2,310	\$ 4,190
60 MISCELLANEOUS			
61 Sundry			
62 Auditing	\$ 7,000	\$ 4,172	\$ 2,828
63 Contingencies	\$ 11,059	\$ 6,592	\$ 4,467
69 COMPONENT TOTAL	\$ 18,059	\$ 10,764	\$ 7,295
70 ADMINISTRATION			
71 Executing Agency Management Costs			
79 COMPONENT TOTAL			
SUBTOTAL 1	\$ 169,884	\$ 103,931	\$ 65,953
80 ITTO ADMINISTRATION AND MONITORING			
81 Monitoring and review	\$ 15,000		
82 Evaluation costs			
SUBTOTAL 2	\$ 15,000		
83 Programme Support Costs - 8%	\$ 14,791		
89 COMPONENT TOTAL	\$ 29,791		
REFUND OF PRE-PROJECT COSTS [PPD 93/04 (M)]	30,348		
GRAND TOTAL	\$ 230,023		

TABLE 2.2
OVERALL AND YEARLY PROJECT BUDGET BY COMPONENT IN US\$
AFE-COHDEFOR CONTRIBUTION

Description	Total	YEAR 1	YEAR 2
10 PROJECT PERSONNEL			
11 National experts	\$ 89,248	\$ 50,250	\$ 38,998
12 Administrative personnel			
14 Other labour			
15 Training of system users			
16 International expert			
17 CIEF personnel training			
19 COMPONENT TOTAL	\$ 89,248	\$ 50,250	\$ 38,998
20 SUB CONTRATOS			
21 Computer application for the integrated forest statistics and information system (including Web application)			
22 COHDEFOR local area network and INTRANET	\$ 8,000	\$ 8,000	
23 Local area networks for regional offices	\$ 16,500	\$ 16,500	
29 COMPONENT TOTAL	\$ 24,500	\$ 24,500	
30 DUTY TRAVEL			
31 DSA			
32 Transport costs			
39 COMPONENT TOTAL			
40 CAPITAL ITEMS			
41 Hardware and software	\$ 44,180	\$ 44,180	
49 COMPONENT TOTAL	\$ 44,180	\$ 44,180	
50 CONSUMABLE ITEMS			
52 Office supplies			
53 Utilities, telephone, fax, DHL			
59 COMPONENT TOTAL			
60 MISCELLANEOUS			
61 Sundry			
62 Auditing			
63 Contingencies			
69 COMPONENT TOTAL			
70 ADMINISTRATION			
71 Executing Agency Management Costs	\$ 11,000	\$ 6,518	\$ 4,482
79 COMPONENT TOTAL	\$ 11,000	\$ 6,518	\$ 4,482
SUBTOTAL 1	\$ 168,928	\$ 125,448	\$ 43,480
80 ITTO ADMINISTRATION AND MONITORING			
81 Monitoring and review			
82 Evaluation costs			
SUBTOTAL 2			
83 Programme Support Costs - 8%			
89 COMPONENT TOTAL			
GRAND TOTAL	\$ 168,928		

TABLE 3
OVERALL PROJECT BUDGET BY COMPONENT AND BY SOURCE IN US\$

Descripción	TOTAL	OIMT	COHDEFOR
10 PROJECT PERSONNEL			
11 National experts	\$ 89,248		\$ 89,248
12 Administrative personnel	\$ 6,000	\$ 6,000	
14 Other labour	\$ 33,000	\$ 33,000	
15 Training of system users	\$ 3,400	\$ 3,400	
16 International expert	\$ 10,000	\$ 10,000	
17 CIEF personnel training	\$ 20,000	\$ 20,000	
19 COMPONENT TOTAL	\$ 161,648	\$ 72,400	\$ 89,248
20 SUB CONTRATOS			
21 Computer application for the integrated forest statistics and information system (including Web application)	\$ 60,500	\$ 60,500	
22 COHDEFOR local area network and INTRANET	\$ 8,000		\$ 8,000
23 Local area networks for regional offices	\$ 16,500		\$ 16,500
29 COMPONENT TOTAL	\$ 85,000	\$ 60,500	\$ 24,500
30 DUTY TRAVEL			
31 DSA	\$ 8,925	\$ 8,925	
32 Transport costs	\$ 3,500	\$ 3,500	
39 COMPONENT TOTAL	\$ 12,425	\$ 12,425	
40 CAPITAL ITEMS			
41 Hardware and software	\$ 44,180		\$ 44,180
49 COMPONENT TOTAL	\$ 44,180		\$ 44,180
50 CONSUMABLE ITEMS			
52 Office supplies	\$ 5,000	\$ 5,000	
53 Utilities, telephone, fax, DHL	\$ 1,500	\$ 1,500	
59 COMPONENT TOTAL	\$ 6,500	\$ 6,500	
60 MISCELLANEOUS			
61 Sundry			
62 Auditing	\$ 7,000	\$ 7,000	
63 Contingencies	\$ 11,059	\$ 11,059	
69 COMPONENT TOTAL	\$ 18,059	\$ 18,059	
70 ADMINISTRATION			
71 Executing Agency Management Costs			
79 COMPONENT TOTAL	\$ 11,000		\$ 11,000
SUBTOTAL 1	\$ 338,812	\$ 169,884	\$ 168,928
80 ITTO ADMINISTRATION AND MONITORING			
81 Monitoring and review	\$ 15,000	\$ 15,000	
82 Evaluation costs			
SUBTOTAL 2	\$ 15,000	\$ 15,000	
83 Programme Support Costs - 8%	\$ 14,791	\$ 14,791	
89 COMPONENT TOTAL	\$ 29,791	\$ 29,791	
REFUND OF PRE-PROJECT COSTS [PPD 93/04 (M)]	30,348	30,348	
GRAND TOTAL	\$ 398,951	\$ 230,023	\$ 168,928

TABLE 4

Capital equipment – Hardware and Software

Description	Quantity	Unit Cost	TOTAL
HARDWARE			
Servers (Regional Offices)	11	\$ 2,000	\$ 22,000
Computers (CIEF)	3	\$ 800	\$ 2,400
Computer upgrades (CIEF)	5	\$ 400	\$ 2,000
SUBTOTAL			\$ 26,400
SOFTWARE			
ArcGIS	4	\$ 1,500	\$ 6,000
ERDAS IMAGINE	1	\$ 2,200	\$ 2,200
SAS	1	\$ 1,600	\$ 1,600
Microsoft Office (CIEF + Regional Offices)	7	\$ 340	\$ 2,380
Databases	1	\$ 5,600	\$ 5,600
SUBTOTAL			\$ 17,780
TOTAL			\$ 44,180

Note 1: A Web Server and an applications server for a total of \$ 12,000 will be covered by the PROBOSQUE Project (AFE-COHDEFOR's special project) and has not been included in the proposal to be co-financed by ITTO..

Note 2: A Storage Server for a total cost of \$ 17,000 will be covered by the MARENA Project (AFE-COHDEFOR's special project) and has not been included in the proposal to be co-financed by ITTO.

These 3 servers together with the hardware and software specified in the above table will make up the basic technological platform to support the information system proposed in this project.

TABLE 5
PROJECT PERSONNEL BUDGET IN US\$
AFE-COHDEFOR CONTRIBUTION

Position	M/M	Time devoted to assignment	Cost /year	Name	TOTAL
NATIONAL EXPERTS					
Project Director	24	57%	\$ 15,668	Ricardo Lezama	\$ 17,862
Professional 1 –GIS	24	57%	\$ 11,437	Carlos Meza	\$ 13,038
Professional 2 –GIS	24	57%	\$ 9,871	Iris Castro	\$ 11,253
Professional 3 –GIS	24	57%	\$ 6,900	Alma Duarte	\$ 7,866
Professional 4 –GIS	24	57%	\$ 11,751	Cristobal Vasquez	\$ 13,396
Professional 5 – forest statistics	24	57%	\$ 13,161	Armando Zuniga	\$ 15,004
Professional 6 – economic statistics	24	57%	\$ 9,500	Martin Lagos	\$ 10,830
SUBTOTAL					\$ 89,248

**PROJECT PERSONNEL BUDGET IN US\$
ITTO CONTRIBUTION**

Position	M/M	Time devoted to assignment	Cost /month	Name	TOTAL
ADMINISTRATIVE PERSONNEL					
Secretary	24	100%	\$ 250		\$ 6,000
International expert	1.5	100%			\$ 10,000
OTHER LABOUR					
Assistant 1 - Regional	24	50%	\$ 250		\$ 3,000
Assistant 2 - Regional	24	50%	\$ 250		\$ 3,000
Assistant 3 - Regional	24	50%	\$ 250		\$ 3,000
Assistant 4 - Regional	24	50%	\$ 250		\$ 3,000
Assistant 5 - Regional	24	50%	\$ 250		\$ 3,000
Assistant 6 - Regional	24	50%	\$ 250		\$ 3,000
Assistant 7 - Regional	24	50%	\$ 250		\$ 3,000
Assistant 8 - Regional	24	50%	\$ 250		\$ 3,000
Assistant 9 - Regional	24	50%	\$ 250		\$ 3,000
Assistant 10 - Regional	24	50%	\$ 250		\$ 3,000
Assistant 11 - Regional	24	50%	\$ 250		\$ 3,000
SUBTOTAL					\$ 49,000

TABLE 6: SUBCONTRACTS IN US\$

SUBCONTRACT	Source	Cost
Development of computer application for the integrated forest statistics and information system (including web application)	ITTO	\$ 60,500
Design, installation and testing of local area networks and intranet for CIEF and COHDEFOR Departments	COHDEFOR	\$ 8,000
Design, installation and testing of local area networks for COHDEFOR's regional offices	COHDEFOR	\$ 16,500
TOTAL		\$ 85,000

PART III – OPERATIONAL ARRANGEMENTS

1. Monitoring, reporting and evaluation

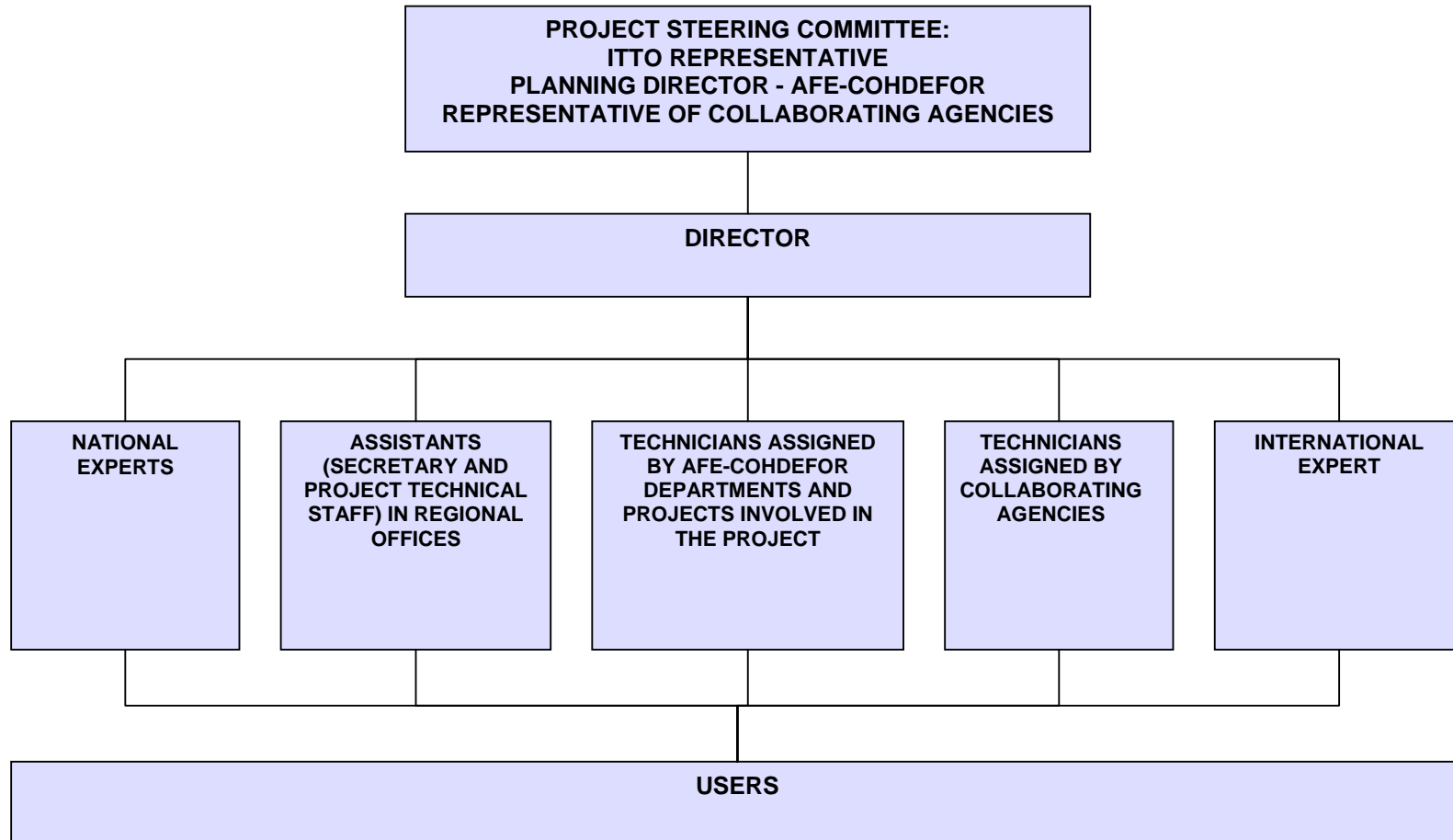
Description	Date
1. First disbursement request	Month 1, Year 1
2. First project progress report	Month 4, Year 1
3. First monitoring visit	Month 8, Year 1
4. First technical report	Month 10, Year 1
5. Second project progress report	Month 12, Year 1
6. Second technical report	Month 6, Year 2
7. Second monitoring visit	Month 6, Year 2
8. Project completion report	Month 12, Year 2

2. Future operation and maintenance

Future project sustainability will be supported by AFE-COHDEFOR. This institution will provide the human resources required to ensure the continuity of project activities, and the equipment, tools and materials to be acquired by the project will be left under its responsibility.

CIEF has an institutional work program that will ensure the continuity and dissemination of the system and its outputs, thus maintaining interaction and connectivity with collaborating institutions and users in general. The project has been defined as an institutional and sectoral priority and therefore its implementation will continue for an indefinite period of time, which will require updating and ongoing maintenance.

PROJECT ORGANISATIONAL CHART



PART IV: THE TROPICAL TIMBER FRAMEWORK

1. Compliance with ITTA 1994 objectives

The project on “Establishment of an Integrated Forest Information and Statistics System in Honduras” is fully consistent with the objectives of the International Tropical Timber Agreement (ITTA), because it will provide relevant information on the Honduran forest sector, including information on forest products and by-products supply and demand, as well as general information on the sub-sector, thus making a valuable contribution to development.

- a. *“To provide an effective framework for consultation and cooperation with regard to all relevant aspects of the tropical timber economy”.* In compliance with this objective, the System, through CIEF, will contribute increasing information both on supply and demand of (timber and non-timber) forest products, along the whole chain of value of the forest sector.
- b. *“To contribute to the process of sustainable development”.* The availability of updated and validated statistics will facilitate CIEF’s medium and long term planning for timely decision-making by the sector’s institutions and organisations.
- c. *“To promote the expansion and diversification of international trade in tropical timber and the improvement of structural conditions in its markets”.* By taking into account, on the one hand, a long-term increase in consumption and continuity of supplies, and, on the other, prices which are remunerative for producers and equitable for consumers, as well as the production of better quality products for diversified markets, the System and CIEF will promote opportunities and improve the country’s competitiveness.
- d. *“To promote and support research and development with a view to improving forest management and wood utilization”.* This objective will also be fulfilled with the involvement of research institutions such as the Central Bank of Honduras, the National Bureau of Statistics (INE), the National Agricultural Institute (INA) and others. In this context, CIEF will promote and support research by making its databases and publications available.
- e. *“To improve market intelligence with a view to ensuring greater transparency in the international timber market”.* One of the key elements of the project is the generation of primary information on production activities, with the quantification of the main variables. Such information will be processed and disseminated throughout the country and submitted to ITTO, so that it may be disseminated to its members. Thus, reliable forest sector data and analytical studies will be available to AFE-COHDEFOR.
- f. *To encourage tropical timber reforestation and forest management activities”.* The project will contribute to this objective by improving market signals on the profitability of forestry, on the one hand, and improving information available to authorities, on the other, so that they may implement reforestation policies.
- g. *To improve marketing and distribution of tropical timber exports from producing members”.* Information will be provided on supply and demand of forest goods and services at the national and international levels, with special emphasis on tropical forest products. This will enable the expansion of trade for this sector.
- h. *“To encourage members to develop national policies aimed at sustainable utilization and conservation of tropical forests and their genetic resources and at maintaining the ecological balance in the regions concerned”.* The project will carry out indicative studies on these areas, and will therefore fully comply with this objective.

2. Compliance with ITTO Action Plan

The project is consistent with the Yokohama Action Plan 2002-2006, which came into force in November 2001 and replaced the Libreville Action Plan. This new plan seeks an integrated approach for the three ITTO fields of action.

Economic Information and Market Intelligence:

Goal 1: Improve transparency of the international timber market

- Promote the collection and dissemination of accurate and timely trade and economic data relevant to the global timber market, in cooperation with international organizations and other sources, with a view also to reducing duplication where possible.
- Compile and disseminate information on the marketing of lesser-used species and the development of markets for them.
- Where feasible and in cooperation with relevant organisations, fill key data gaps through regular assessments and special studies, particularly on the marketing of certified products.
- Encourage members and assist them to provide inputs to ITTO market outlook studies.
- Develop and improve national data gathering, reporting and disseminating mechanisms.

Goal 2: Promote tropical timber from sustainably managed sources

- Promote public awareness of progress made in implementing sustainable forest management and in the increased availability of tropical timber from sustainably managed sources.
- Monitor progress being made regarding the comparability and equivalence of certification systems.
- Examine the market and product requirements that may have to be met in order to develop exports of added-value products.
- Undertake regular studies of the competitiveness of tropical timber and tropical timber products compared with non-tropical timber and non-timber substitutes.
- Encourage members and assist them, where appropriate, to:
 - Use LCA information and similar studies as tools to improve the competitiveness of tropical timber;
 - Identify trade barriers, shortcomings in forest law enforcement and other factors that may affect the access and marketability of tropical timber, and propose measures to overcome them;
 - Develop awareness of market and end-use requirements for tropical timber;
 - Prepare and implement research and development projects covering marketing trials, marketing methods and opportunities, particularly for lesser-used species;
 - Develop and promote wider use of their tropical timber, both primary and added-value products.

Reforestation and Forest Management:

Goal 1: Support activities to secure the tropical timber resource base

- Support networking and the exchange of information with relevant international organizations to maintain the integrity of the resource base, including protected area networks.
- Encourage members and assist them, as appropriate, to:
 - Assess the current and potential productivity of major tropical forest types, taking into account the need to promote future growth and effective regeneration;
 - Incorporate operational knowledge of forest ecosystem behaviour in planning and management prescriptions.
 - Secure the forest resource base through the implementation of forest policy, legislation and associated strategies, revised and updated where appropriate.

Goal 2: Promote sustainable management of tropical forest resources

- Promote the implementation of ITTO guidelines and C&I and review and improve these as necessary.
- Monitor and assess the environmental, social and economic costs and benefits of forest plantation development and utilize that information to promote new plantations, where appropriate.
- Contribute appropriately to national and international efforts in the area of prevention and management of fire in relation to tropical timber-producing forests.

- Monitor and assess the social, economic and environmental costs and benefits of sustainable management of natural forests.
- Assist members, as appropriate, to build capacity to engage in voluntary certification to enhance market acceptance of tropical timber and tropical timber products.
- Encourage members and assist them, where appropriate, to:
 - Promote the implementation of ITTO guidelines and C&I and review and improve these as necessary.

Forest Industry

Goal 1: Promote increased and further processing of tropical timber from sustainable forest sources

- Study and promote policies and other measures to increase timber industry competitiveness.
- Encourage members and assist them, where appropriate, to;
 - Attract private capital;
 - Formulate research and development proposals which assist with the piloting and commercialisation of new processing and manufacturing technologies;
 - Undertake sector-wide training needs analyses; development of training strategies, training facilities and course curricula; preparation of training manuals; and delivery of training courses.

Goal 2: Improve industry's efficiency of processing and utilization of tropical timber from sustainable sources

- Promote development of marketing, production and commercial skills in forest industry.
- Develop, publish and disseminate recommendations for increasing efficiency throughout the production chain through the utilization of residue and through recycling.
- Encourage members and assist them to undertake research into wood properties and end-use requirements, paying particular attention to the properties and availability of lesser-used species and timber plantation species and the potential markets for them.

ANNEXES

A. PROFILE OF THE EXECUTING AGENCY

The National Forest Administration (AFE) is made up of institutions such as the Secretariat of Agriculture and Livestock (SAG), the Secretariat for Natural Resources and the Environment (SERNA) and the Honduran Corporation for Forest Development (COHDEFOR) as the agency responsible for the implementation of the national forest policy.

Legal aspects

AFE-COHDEFOR is a semi-autonomous institution established by Decree Law No. 103 of 10 January 1974; it has legal capacity and its own equity. According to the mandate established by the Law on the Modernisation of the Agricultural Sector (Decree No. 31-92) in relation to forest resources, AFE-COHDEFOR stipulates that all forest harvesting operations in public and private areas can only be carried out on the basis of a forest management plan submitted by the landowners and approved by the Institution in order to regenerate and establish a new forest according to the conditions stipulated in the said management plan.

AFE is under the direct authority of the President of the Republic and is responsible for regulating and administrating 5,989.6 thousand hectares as follows:

Pine forests:	2,512.70
1.1.1 Closed forest	695.20
1.1.2 Open forest	1,817.50
Broadleaved forest:	2,863.50
Mangrove forest:	54.30
Mixed forest:	559.10
Total:	8,502.30

Mission:

AFE-COHDEFOR's mission is to manage national forest resources in the short term and within the framework of sustainable development, to educate and raise public awareness to guarantee better utilisation of forest resources, while ensuring their protection, improvement, conservation and development.

Expertise of the executing agency:

The following projects are currently under implementation:

Occidente and Oriente Component (PRORENA /GTZ)
Rio Platano Biosphere Component
Management and Conservation of Mangrove Forests in the Gulf of Fonseca, Honduras (PROMANGLE)
Rural Areas Administration (PAAR)
Priority Areas Biodiversity (PROBAP)
Management of Resources in Priority Watershed Areas (MARENA)
Management of Natural Resources and Mitigation of Natural Disasters (PMA)
Sustainable Management and Utilisation of Coniferous Forests in Honduras (MAFOR)
Management and Protection of Three Sub-Watershed Areas in Choluteca River
Regional Strategy for Forest Management and Health in Central America
Corazon Transboundary Biosphere Reserve

Infrastructure:

AFE-COHDEFOR has both the technical and physical infrastructure required at the central and regional levels. It has 11 regional offices and 58 forest management units.

Its technical staff includes 161 professionals specialised in the forestry field.

Budget:

The Institution currently operates with a budget of **271,732.3 million Lempiras** as shown below:

- ✓ Running expenses Lps. 105,131.2
- ✓ Capital items 160,123.9
- ✓ Financial transactions 6,477.2

Personnel: 402 employees

Permanent staff:

Personnel	No. of employees
Executive staff	2
Technical and professional staff	197
Para-technicians	49
Administrative staff	78
General Services	69
Total	395

Temporary staff:

Personnel	No. of employees
Technical and professional staff	7
Total	7

B. CURRICULA VITAE OF THE KEY STAFF

NAME	Ricardo Nelson Lezama P.
Date and place of birth and nationality	17/01/65, Siguatepeque, Honduran
Field and institution of graduation.	Forester, National School of Forestry Science - ESNACIFOR; 1991
Field and institution of post-graduation	BSc. in forest resources specialised in ecosystem management, University of Idaho U.S.A.; 1997
Relevant work undertaken in the last 3 years	Director, Forest Information and Statistics Centre -CIEF-AFE-COHDEFOR (to date); GIS Analyst, CIEF; Head of Protected Areas Section of the Olancho Management Unit

NAME	Héctor Armando Zúniga R.
Date and place of birth and nationality	4/01/60 Tegucigalpa, Honduran
Field and institution of graduation.	Forester specialised in Forest Management and Timber Industry Administration, ESNACIFOR, 1981; Administrative Information Technology; National Autonomous University of Honduras-UNAH, 1997.
Field and institution of graduation	
Relevant work undertaken in the last 3 years	Head of Forest Statistics, CIEF-AFE-COHDEFOR (to date); Technical Forest Adviser, Standards and Monitoring Department. AFE-COHDEFOR, 2001; Project Director, Teupasentí, JICA-AFE-COHDEFOR.

NAME	Carlos Manuel Meza Castillo
Date and place of birth and nationality	1976, Siguatepeque, Comayagua, Honduran
Field and institution of graduation.	Forest Engineer, José Cecilio del Valle University and ESNACIFOR.
Field and institution of post-graduation	
Relevant work undertaken in the last 3 years	GIS Technician - AFE-COHDEFOR; GIS Consultant, Forest Development Project-ESNACIFOR; Head of GIS Section, CIEF-AFE-COHDEFOR (to date)

NAME	Alma Yolanda Duarte Noriega
Date and place of birth and nationality	18/04/77, Department of Olancho, Honduran
Field and institution of graduation.	Forester, National School of Forestry Science- ESNACIFOR, 1998, and Forest Engineer specialised in Watershed Management, 2004.
Field and institution of post-graduation	
Relevant work undertaken in the last 3 years	Head of Digitalising Area-CIEF-AFE-COHDEFOR, (to date); Head of Yoro and Gualaco Management Units -AFE-COHDEFOR, 2003; Forest Technician, ECOLEÑA Plantations Project, 2000.

NAME	Iris Dayanira Castro
Date and place of birth and nationality	06/01/65, Department of Choluteca, Honduran
Field and institution of graduation.	Forester, National School of Forestry Science-ESNACIFOR, 1991.
Field and institution of post-graduation	
Relevant work undertaken in the last 3 years	GIS Forest Technician CIEF-AFE-COHDEFOR; Forest Technician- Department of Forest Management, 2002; Coordinator of Forest Management Component AFOCO, 2002.

NAME	Martín Lagos López
Date and place of birth and nationality	18/06/34, San Buena Ventura, Department of Francisco Morazán, Honduran
Field and institution of graduation.	Degree in General Economics, UNAH, 1968
Field and institution of post-graduation	
Relevant work undertaken in the last 3 years	Forest Statistics Section (to date); Trust Fund Management, Ministry of Finance and Public Credit.

NAME	José Cristóbal Vásquez Valladares
Date and place of birth and nationality	08/01/48 San Juancito, Department of Francisco Morazán, Honduran
Field and institution of graduation.	Forest Engineer, Austral University of Chile 1976.
Field and institution of post-graduation	
Relevant work undertaken in the last 3 years	Tripartite Analysis Commission CIEF-AFE-COHDEFOR (to date); Independent Consultancy, Management Plans, 2002-2006.

C. RESPONSE TO THE COMMENTS AND RECOMMENDATIONS OF THE 22ND EXPERT PANEL ON PROJECT PD 90/01 (M): “STRENGTHENING OF THE FOREST STATISTICAL INFORMATION CENTRE”

- Phased approach: This observation has been taken into consideration. This project proposal comprises the first 2-year phase focused on the establishment and launching of the System. The second phased will be developed on the basis of the results of the first phase, considering a two-year period for its extension and consolidation.
- Review of existing data collection system(s): the implementation of ITTO-approved pre-project PPD 93/04 (M) “Analysis of the Current Status and Development of a Project Proposal for the Strengthening of the Forest Statistical Information Centre in Honduras” (August 2006) included a comprehensive study on the subject. Relevant reports have been submitted and have been referred to in the sections on “Origin” and “Problem to be addressed” of this proposal.
- Strategy for obtaining timely and reliable data and description of data needs of different levels of decision-makers/users: this specific issue was addressed during the implementation of the aforementioned pre-project. The information has been provided in the relevant reports and has also been referred to in the sections on “Technical Aspects” and “Beneficiaries” of this proposal.
- The proposal should adhere to the ITTO format: this recommendation has been addressed in the text of this project proposal.
- The development and specific objectives should be simplified and the links between these, the project outputs and activities should be more clearly described: the logical framework of the project is clearly described in both the reports on pre-project results and this project proposal.
- Budget by activity and budgetary allocations for international experts: this proposal contains budget tables specifying international expert costs.
- The logical framework matrix should be completed in full: this requirement has been duly met in this proposal.
- The development of this proposal has taken into account the Guidelines for Statistical Development Projects formulated by ITTO and the recommendations and results of the ex-post evaluations of Latin American statistical development projects.
- The pre-project was submitted to ITTO and its implementation set the basis for the formulation of this revised project proposal.
- The ITTO Programme Support Costs were recalculated, as specified in the budget, so as to conform to the current standard fees.

In the discussions and recommendations that arose from several events held with the participation of stakeholders during the implementation of the pre-project, it was suggested that the project scope should not be limited to the strengthening of the Forest Statistics and Information Centre – CIEF – AFE-COHDEFOR but it should also take account of all other elements and components involved in the establishment and development of an information system. Thus, the key problem identified and addressed was the lack of integration between the different elements and components that make up the current forest statistics and information framework, as described in the problem analysis. However, CIEF will continue to be the focus of the system development process, and this project will not only be aimed at the strengthening of the centre but also at the integration and development of its components.

D. TERMS OF REFERENCE FOR THE INTERNATIONAL EXPERT IN STATISTICAL INFORMATION SYSTEMS

Objective:

Advise the project director and team of experts in the implementation of the system, particularly the application of conceptual and methodological frameworks and the use of statistical tools for information analysis. This professional will also participate in the training courses and/or programs to be developed.

Consultant qualifications:

- Expert in Geographic Information Systems with experience in the agroforestry sector and wide knowledge on the use and application of statistical analysis packages and digital and manual database management.
- A minimum of 10 years experience in the development of studies and documents in the relevant field.
- Desirable qualification: experience in the implementation of ITTO-approved projects and pre-projects.
- Command of the Spanish language.
- Nationality: from any of the ITTO member countries.

The international expert will be proposed by the executing agency and selected by ITTO. He/she will work in close cooperation with the project director and the team of experts in charge of system development.

Work base:

The work base will be in Tegucigalpa, with possible visits to various forest regions and Management Units in the project's area of influence so as to liaise with the Institution's agencies at its 3 levels of administration and other relevant stakeholders as appropriate, in order to assess and contribute to the structuring and implementation of the system.

Duration:

The duration of this consultancy will be six weeks and will be divided into two 3-week periods at project start-up and mid-term.

E. TERMS OF REFERENCE FOR ASSISTANTS AND SECRETARY

Objective:

Assist in the development and implementation of databases for the regional offices in accordance with the guidelines and definitions provided by the Project Steering Committee and the Project Director.

Requirements:

- Minimum requirement: mid-level education.
- Skills in the use and management of computer equipment and peripherals.
- Preferably with a knowledge of forestry and statistical elements.
- Nationality: from any of the ITTO member countries.

Work base:

Work bases will be in the different regional offices of AFE-COHDEFOR.

Duration and time devoted to assignment:

As determined by the Project Steering Committee or Project Director according to project implementation requirements.

F. TERMS OF REFERENCE FOR THE LEADER OF THE SYSTEM DEVELOPMENT TEAM

Objective:

Design and coordinate the development of an integrated computer application for forest statistics, ensuring consistency between different system modules and applying the necessary procedures to guarantee the capacity of the system to work online and offline with CIEF's central database.

Consultant qualifications:

- Expert in Information Systems and in Geographic Information Systems with experience in the development of applications using both technologies.
- A minimum of 10 years experience in the information technology area and 5 years in geographic information systems.
- Desirable qualification: experience in the implementation of ITTO-approved projects and pre-projects, particularly in relation to forest statistics.
- Command of the Spanish language.
- Nationality: from any of the ITTO member countries.

This expert will be proposed by the executing agency and selected by ITTO. He/she will work in close cooperation with the project director, the international expert and the team of experts in charge of system development.

Work base:

The work base will be in Tegucigalpa, with possible visits to various forest regions and Management Units in the project's area of influence so as to liaise with the Institution's agencies at its 3 levels of administration and other relevant stakeholders as appropriate, in order to develop a system according to AFE-COHDEFOR (CIEF) requirements.

Duration:

The duration of this consultancy will be 15 months, to begin during the 1st quarter and finish during the 6th quarter.

G. MINIMUM REQUIREMENTS FOR NETWORK AND INTRANET SUBCONTRACTS

- More than 5 years experience in the installation of local area networks.
- More than 3 years experience in the installation of extended area networks at the national level.

FORM 1

Code Department

Code Municipality

Code Village

Code Hamlet

Code Management Unit

Code Forest Region

"Other Codes"

RELATED INDICATORS:

1.- ENVIRONMENTAL PROTECTION

1.1 FOREST FIRES

- 1.1.1 Number of fires detected – No.**
- 1.1.2 Number of fires fought – No.**
- 1.1.3 Affected area – ha**
- 1.1.4 Average affected area /Number of fires - ha**
- 1.1.5 Number of fires according to property ownership – No.**
- 1.1.6 Location of fire, Point (UTM coordinates)**
- 1.1.7 Area under intensive protection, Polygon (UTM coordinates)**
- 1.1.8 Area under extensive protection, Polygon (UTM coordinates)**
- 1.1.9 Location of fire detection towers, Point (UTM coordinates)**
- 1.1.10 Location of firebreaks (km), Line (UTM coordinates)**

1.2 FOREST PESTS AND DISEASES

- 1.2.1 Outbreak location, Point (UTM coordinates)**
- 1.2.2 Affected area – ha**
- 1.2.3 Identified insect species**
- 1.2.4 Affected tree species**
- 1.2.5 Affected volume - m³**
- 1.2.6 Rescued volume - m³**

2.- PROTECTED AREAS

- 2.1 Location of protected area polygon (UTM coordinates)**
- 2.2 Location of buffer zone polygon**
- 2.3 Location of core zone polygon**
- 2.4 Location of visitors centres, Point (UTM coordinates)**
- 2.5 Location of micro-watershed polygon**

3.- THE FOREST RESOURCE BASE

- 3.1 Location of different forest types (polygons)**
- 3.2 Location of non forested areas (polygons)**

4.- OTHER AREAS COVERED

- 4.1 Location of water resource network (lines)**
- 4.2 Location of road network (lines)**
- 4.3 Location of departments (polygons)**
- 4.4 Location of municipalities (polygons)**
- 4.5 Location of villages (points)**
- 4.6 Location of hamlets (points)**
- 4.7 Location of schools (points)**
- 4.8 Location of health centres (points)**
- 4.9 Location of sawmills (points)**
- 4.10 Location of.....(points, lines, polygons, etc.)**

5.- FOREST MANAGEMENT

5.1 LOCATION OF FOREST NURSERIES

- 5.1.1 Production of seedlings**
- 5.1.2 Species produced**
- 5.1.3 Type of nursery**
- 5.1.4 Other**

- 5.2 **FOREST PLANTATIONS**
 - 5.2.1 **Location of plantations**
 - 5.2.2 **Area**
 - 5.2.3 **Species planted**
 - 5.2.4 **Number of plants per hectare**
 - 5.2.5 **Year of plantation**
 - 5.2.6 **Height of plants**
 - 5.2.7 **Diameter of plants**
- 5.3 **MANAGEMENT PLANS**
 - 5.3.1 **Management Plan Code**
 - 5.3.2 **Name of site**
 - 5.3.3 **Name of municipality**
 - 5.3.4 **Name of department**
 - 5.3.5 **Total area covered by the plan**
 - 5.3.6 **Area to be managed**
 - 5.3.7 **Area to be logged**
 - 5.3.8 **Annual allowable cut**
 - 5.3.9 **Date of approval**
 - 5.3.10 **Validity**
 - 5.3.11 **Other details**
- 6.- **YEARLY PLANS OF OPERATION (YPO)**
 - 6.1 **YPO Code**
 - 6.2 **Name of site**
 - 6.3 **Name of municipality**
 - 6.4 **Name of department**
 - 6.5 **Affected area**
 - 6.6 **Authorised volume**
 - 6.7 **Technician in charge of preparation of management plan No.**
 - 6.8 **Other details.....**
- 7.- **SOCIAL FORESTRY**
 - 7.1 **Areas allocated to rural groups**
- 8.- **ADDITIONAL INFORMATION.....**

Most of the aforementioned information as well as other additional information not included in this short list has already been converted into digital format. This means that the project will not start from scratch as substantial progress has already been made in this area because part of this information has been and is still being collected in the field by other government institutions in addition to AFE-COHDEFOR.