INTERNATIONAL TROPICAL TIMBER ORGANIZATION

ITTO

PROJECT PROPOSAL

TITLE	ESTABLISHING A GEOGRAPHIC INFORMATION SYSTEM FOR THE SUSTAINABLE MANAGEMENT OF THE FOREST AREAS OF TOGO
SERIAL NUMBER	PD 581/10 Rev. 2(F)
COMMITTEE	REFORESTATION AND FOREST MANAGEMENT
SUBMITTED BY	THE GOVERNMENT OF TOGO
ORIGINAL LANGUAGE	FRENCH

SUMMARY

The forest sector of Togo is characterized by a lack of geo-spatial organization and insufficiently reliable data. This represents a barrier to planning and forestry development. Therefore it is important for Togo to organize and improve information on the forestry sector. This project will establish a Geographic Information System (GIS) in this sector, which, through the committed involvement of the entire forestry administration, will facilitate the operation of a centralized management system for the geo-spatial data of the forest sector; it will also enable the fast production of forest maps and facilitate the management of logging concession agreements. It will thus provide a decision tool for understanding ongoing forestry activities and the development of future policies to help sustainably manage forests in the country.

EXECUTING AGENCY	OFFICE DE DÉVELOPPEMENT ET D'EXPLOITATION DES FORÊTS (ODEF)
COOPERATING GOVERNMENTS	---
DURATION:	36 MONTHS
APPROXIMATE STARTING DATE	TO BE DECIDED

BUDGET AND PROPOSED:

SOURCES OF FUNDING	Source	Contribution in USD	Local Currency Equivalent
	ITTO:	**345 840**	
	Gov of Togo:	219 683	
	TOTAL:	**565 523**	

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LIST OF ACRONYMS

FDS	: Faculté Des Sciences de l'Université de Lomé
FLEGT	**: Forest Law Enforcement, Gouvernance and Trade**
GDP	: Gross Domestic Product
GIS	: Geographic Information System
GPS	: Global Positioning System
MAT	: *Ministère de l'Administration du Territoire* (Ministry of Lands Administration)
ITTA	: International Tropical Timber Agreement
ITTO	: International Tropical Timber Organization
MCC	: Ministry of Mapping and Land Registry
MCL	: Ministry in charge of Local Communities
MERF	: Ministry of the Environment and Forest Resources
ODEF	: *Office de Développement et d'Exploitation des Forêts* (Forest Development and Exploitation Board)
NGO	: Non-Governmental Organization
PAFN	: National Forest Action Plan
PANSEA	**: National Action Plan for Water Sector and Sanitation**
PCI	**: Principles, Criteria and Indicators**
PNAE	: National Environmental Action Plan
PNIASA	: **National Programme for Agricultural Investment and Food Security**
PNIERN	**: National Programme of Investments for the Environment and National Resources**
$US	: Dollars of United States
UK	: University of Kara
UL	: University of Lomé

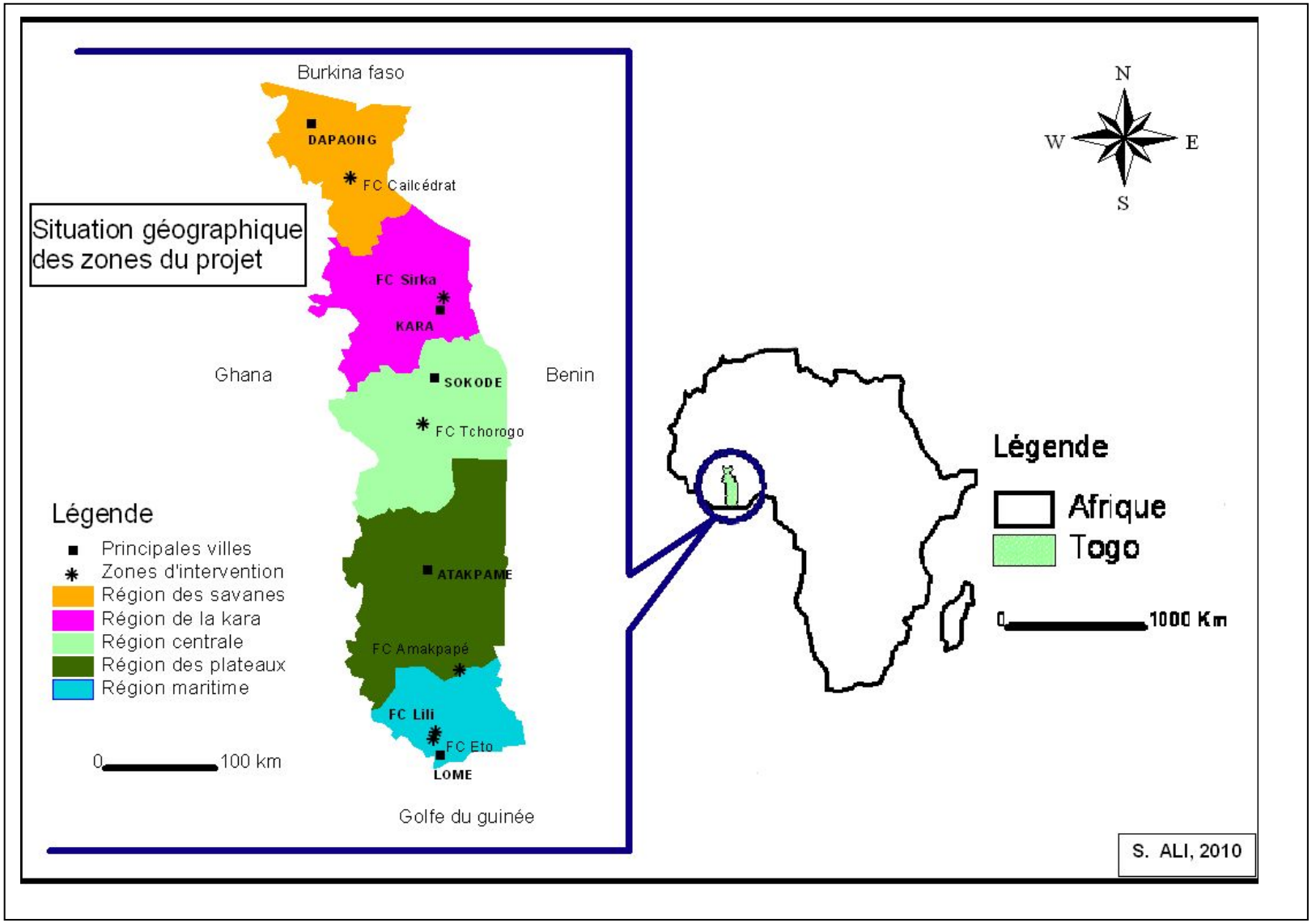

Figure 1: Carte des sites du projet

PART ONE: CONTEXT OF THE PROJECT

1.1 Origin

The sustainable forest management requires the availability and control of related statistical and geographical information. The Geographical Information System has enabled Togo neighbouring countries such as Benin to collect, manage, analyze and present data to contribute to the sustainable management of their forests.

At the Forest Development and Logging Office (ODEF) which is responsible for the management of state forests in the country, producing maps of the permanent forest estate and other forms of afforestation is provided by the Topography and Engineering Division. Until today, the development of these maps and data processing to assist in decision making have been done manually and is a slow and imprecise process. In this context, the multiple analysis of data, detailed identification of forest acreages and forestry information are goals the Ministry of Environment and Forest Resources (MERF) has yet to achieve.

Act No. 2008-009 providing the Forestry Code in Chapter 2 defines the management scope of the national forest estate and described in several articles appropriate practices to make forest management and development sustainable.

In order to support sustainable forest management in Togo, ODEF has put forward the idea to implement this project which will establish a forest policy based on the knowledge, as comprehensive as possible, of relevant data and potentials of the national forest estate.

1.2 Relevance

1.2.1 Conformity with ITTO's objectives and priorities

The project meets the following objectives of Article 1 of the ITTA, 2006:

> ***(D)*** *Enhancing the capacity of members to implement strategies for achieving exports of tropical timber and timber products from sustainably managed sources.*

This project will help build the capacities of forest managers in Togo in terms of geo-spatial information and mapping work for the sustainable management of forests.

> ***(L)*** *Strengthening the capacity of members for the collection, processing and dissemination of statistics on their trade in timber and information on the sustainable management of their tropical forests.*

This project will provide the tools to collect, process, distribute and centrally manage data on the SFM progress being achieved in Togo.

This project is also consistent with the 2nd overarching objective of the ITTO Action Plan 2008-2011

- *Promote the sustainable management of tropical timber producing forests*

It is linked to three outputs including actions C and D of the ITTO.

> ***(C)*** *In cooperation with relevant organizations, collate, analyse and publish information on the production of and trade in tropical and non-tropical timber, trends and data discrepancies and on the management of the permanent forest estate (PFE).*

The project will develop and enhance the national data collection, reporting and dissemination mechanisms.

> ***(D)*** *Enhance the capacity of member countries, in particular developing member countries, to meet the statistical and reporting requirements of the ITTA.*

The project will identify deficient skills and the capacity needed to meet the statistical reporting requirements provided for in the ITTA.

It is also linked to ITTO cross-cutting actions referring to building databases and information system.

> ***(J)*** *Support the sharing of information, knowledge and technology with a view to improving SFM, product processing and utilization, and understanding of the marketplace as related to ITTO's priorities.*

This project will establish and make functional a centralized data management structure of the Togolese forest sector.

1.2.2 Relevance to the submitting country's policies

This project is consistent with the policies and strategies of the Togolese Government and its implementation will complement other efforts deployed at national level to secure sustainable forest management in the forests of the country.

Article 29, Act No. 2008-009 providing the Forest Code stipulates as follows:

Article 29: *In the forests of the National Forest Estate, the Forest Authority shall enact forest management rules, develop forest management plans and have these plans implemented by third parties under its direct supervision and responsibility. For the forests under the jurisdiction of local authorities or own by individuals, these authorities and/or individuals shall develop the relevant forest management plans. They may implement these plans by themselves or sub-contract the implementation to third parties.*

The establishment of a management system database and a mapping tool is an important element in efforts by the Togolese government to promote sustainable forest management.

This project complies with the Act No. 2008-005, article 48 of 30 May 2008 providing the framework law on the environment which states as follows:

Article 48: *The State shall create environment monitoring networks to enable the establishment and updating of quality standards and the control of their implementation.*

The National Forestry Action Plan (NFAP) highlights the need for reliable information on the country's forest resources.

The National Environmental Action Plan (NEAP) which is developed and validated with support from the World Bank highlights the need for a reliable database to facilitate the conduct of environmental impact studies in Togo.

1.3 Target Area

1.3.1 Geographic Location

Located between the 6th and the 11th degree north and between the Greenwich Meridian and 2nd degree east, Togo is a country in West Africa covering an area of 56,600 km ^{2}. Its territory assumes the shape of a corridor that stretches 600 km from north to south and extends from east to west over 50 to 150 km.

Togo is bordered to the north by Burkina Faso, to the south by the Atlantic Ocean, to the east by Benin and to the west by Ghana.

With a coastal area about 50 km long, it is characterized by a succession of mountain and plains. With nearly a quarter of the national territory occupied by mountains, Togo has an intertropical climate due to its latitude. It is influenced by the southwest monsoon (wet oceanic wind) which brings rain and is swept by *harmattan* (a dry and hot, although sometimes cold, Saharan wind) which causes drought.

As far as forests go, Togo as a particular case in relation to other West African countries of the Gulf of Guinea coast. Apart from some dense forest stands present in the central Southwest part of the country owing to favourable landscape conditions, there are only a few blocks of more or less extensive semi-deciduous forests in the southern and central regions and galleries of riparian forests along water courses. The rest of the national territory is covered with savannah parklands and shrub savannah. The forests where the novel techniques to be introduced by the project will be implemented are scattered over the national territory.

At least one demonstration forest has been identified in each administrative region where activities will take place during the project implementation period. They are the Eto Lili forest complex in the Maritime region; the Amakpapé gazetted forest in the Plateaux region, the Tchorogo forest in the central region, the Sirka forest in the Kara region, and Caïlcedras gazetted forest in the Savannah region as shown in the map of the project area on page iv.

1.3.2 Social, cultural, economic and environmental

1.3.2.1. Socio-cultural aspects

Togo population is around 6.2 million inhabitants with a growth rate of 2.5% and the country has an HDI of 0.512, ranking it at 152 th out of 177. This population consists of three main ethnic groups (Adja-Ewe, Kabyè-Tem, and Para-Gourma-Akan) speaking some forty dialects. The socio-professional composition of Togo population is heavily weighted towards the peasantry. Population growth is causing some problems specific to primary industries, and include deforestation, bush fires, reduction of fallow periods, overgrazing, soil depletion and erosion. These features are common to each of the regions mentioned above.
The implementation of this project will provide more effective capacities for real-time monitoring of logging, forestry and farming activities taking place within forest areas and will help bring about smoother relations between these forests and surrounding communities.

1.3.2.2. Economic aspects

The main features of the Togolese economy sector distribution show that the forest sector is vital for the country. Most studies in the 1990s estimate its contribution to GDP (gross domestic product) at around 11% while investments in this sector are very low (estimated at 1% of public investment budget).
Through a lack of adequate resources, for several decades, no national-level forest inventory that would provide up-to-date and accurate data has been undertaken in these natural forest stands. Faced with the depletion of natural resources, forest policy development has more strongly geared towards reforestation projects in recent years, which appear to play a key role in this context. While government subsidies for these forest plantations are still minimal or virtually non-existent, there is a significant level of activity in this area which is often financed mainly by external funding. Nowadays, the economic imperatives for the Togolese forest sector require that profit goals and as much rational management as possible be associated with these plantation programmes. These are characteristics commonly found in every region mentioned above.
Effective control of reliable information data for this sector, as targeted through the implementation of this project, would be very useful and be a key asset for guiding Togo's national policy choices and decisions towards sustainable forest management.

1.3.2.3. Environmental aspects

Since the socio-political unrest experienced by Togo in 1990, the encroachment of residual forests for illegal logging and wood harvesting has increased and has even taken on frightening proportions, brazenly flaunting the law. The majority of gazetted forests have been settled.
Serious environmental problems result from rapid population growth and population pressure on the natural resource base.
In the case of the demonstration forests which will provide the implementation ground of novel techniques to be introduced by the project, there are several environmental aspects to be noted:

- ***Eto-Lili Forest Complex***

The Eto-Lili complex covers a total area of 14,720 hectares stretching over five (5) *Cantons*: Gblainvié, Gapé, Bolu and Agbélouvé Tsévié.
Climate: the whole area has an Equatorial Guinean climate having four (4) seasons (two rainy seasons and two dry seasons) with rainfall ranging between 1000 and 1200 mm and approximately 90 days of annual rainfall.
Hydrography: The forest complex is bordered to the west and east by the river Zio Tamagni, and Golopé Atatohuin (for the Eto gazetted forest) and Lili and Kouni (for the Lili forest reserve). These rivers are low flow, Zio (5-10 m ^{3} / second) and Lili (1 to 5 m ^{3} / second).
Vegetation: The area is covered with trees shrubs and grasses in thicket formations and is affected by forest degradation. It should be noted that the area is undergoing a rapid deforestation for fuel wood, charcoal and timber. This induces a conversion process to a savannah-type of landscape. Today, natural tree species such as *Cyperaceae* are disappearing in favour of exotic species such as *Teak, Gmelina* and E*ucalyptus* introduced by ODEF. The communities grow oil palm and banana trees.

- ***The Amakpapé gazetted forest***

The Amakpapé gazetted forest covering 8,733 hectares has a humid climate characterized by an average annual rainfall of 900-1200 mm and an average interannual temperature of 26-27 ° C, ranging

from 30 °C in February to 21 °C in July. It is covered by a shrub savannah (bushland). On the higher reliefs of the forest there are savannah woodlands with *Bombax, Antiaris, Anogeissus, Cola,* and a few *Afzelia Milicia excelsa.* The strips of gallery forests remain in place. The southern part is dominated by a shrub savannah under strong farming pressure. In order to produce timber, more than 880 hectares have been planted with teak trees and 130 hectares with trees such as *Cordia alliodora, Cedrela odorata, Khaya senegalensis, Sterculia foetida, Terminalia superba.* In places, soils are characterized by a pronounced tendency to erosion, inadequate water regime and impaired drainage. There are burrowing animals, monkeys, warthogs, snakes, partridges and some giant snails.

 The Tchorogo gazetted forest

This gazetted forest is located in the Blitta Prefecture. Covering 1,500 hectares, it has a Guinean-type of tropical climate and annual rainfalls amounting to 1286 mm, with annual variations from 808 mm to 2,229 mm. The average temperature is 26 °C and ranges between 22 °C and 30 °C within a year. The natural vegetation in this area region is savannah woodland derived from ancient tropical woodland formations. Dominant forest tree species are *Terminalia superba, Triplochiton scleroxilon, Milicia excelsa, Khaya grandifoliola, Celtis zenkeri, Cola cordifolia, Parkia biglobosa, Ceiba pentandra Diospiros mespiliformis, Antiaris africana, Ficus spp, Bosqueia angolensis Holoptelia grandis Millettia thonningii.* On its ferruginous lateritic and hydromorphic soil, species such as *Anogeissus leiocarpus, Isoberlinia doka, Afzelia africana* are found in places, as are many other species. The forest is now substantially enriched with several hundred hectares of teak which only provide a wildlife habitat to small animals such as hares, cane rats, rats, partridges and doves.

 The Sirka gazetted forest

The Sirka forest reserve is located in Binah prefecture and covers an area of 1,000 *hectares.* It is located in the mountain range of northern Togo, which extends roughly from the latitude of Sokodé Défalé-Kanté in the Sudanese-type of climate with two seasons. This Sudano-Guinean climate zone receives an annual rainfall of 1,308 mm with a 262-mm in August. Temperatures vary from 25 °C to 30 °C with a 27 °C average. The Sirka forest has a relatively diverse flora dominated by *Anogeissus leiocarpus, Monotes kertingii* and *Uapaca togolensis;* there are isolated *Isoberlinia doka* and *Isoberlinia tomentosa* individuals and places where Combretaceae are dominant.

 The Caïlcédrat gazetted forest

The Caïlcédrat gazetted forest is located in the OTI prefecture covered 950 hectares when it was gazetted, but today, with the rampant population growth, nearly 50% of its area has been encroached and settled, although this figure should be verified. It enjoys a tropical climate with an average Sudanese type of rain pattern just over 1066 mm per year and an average temperature of 34 °C. The vegetation becomes dryer and corresponds to a rather dry tropical lowland akin to a a Sudanese-type of savannah. On its ferruginous and hydromorphic soils different vegetation types thrives that are found among other shrub lands, wetlands, gallery forests and agro-forest parks. As to the flora, ligneous and shrubby strata are dominated by *Parkia biglobosa, Vitellaria paradoxa, Prosopis africana, Borassus aethiopum, Diospyros mespiliformis, Tamarindus indica, Lannea microcarpa, Lannea acida, Acacia sieberiana, Acacia senegalensis, Terminalia glaucescens, T. avicennioides T. macroptera, Combretum glutinosum, Parinari culaterifolia, Dichrostachys cinerea Khaya senegalensis, Azadirachta indica* etc.., while Gramineae and Cyperaceae occupy the grassy stratum.

The implementation of this project is to improve the environment management by providing decision-makers of the forest sector more detailed information to move towards proper conservation measures. By providing the capacities to have a database on the forests of Togo, this project will also identify the dynamics of their evolution in time and space and therefore will afford a better consideration of environmental issues in the country's forest decisions. In terms of logging operations, the GIS will optimize the route network and alignment of forest tracks and help better manage the use of equipment and minimize the impact of logging activities on the environment.

1.4 Expected outcomes at project completion

The development of a Geographic Information System in the forest sector of Togo will facilitate:

- the digitization and rapid development of maps,
- the availability of data for the national forest inventory,
- the management of forest concessions and forest landscapes,
- the operation of a database management system and mapping tools,
- the establishment of a forest policy based on thorough knowledge and sound management of forest data and resource potentials,

- centralized management of geo-spatial information from the forestry and environmental sector,
- the involvement of local communities in forest management,
- the rehabilitation and sustainable management of forests,
- the development of a land-use master plan.

PART II: PROJECT RATIONALE AND OBJECTIVES

2.1 Rationale

2.1.1 Institutional set up and organizational issues

Project implementation will involve several stakeholders including primary beneficiaries who are those who will be designing the enabling institutional environment and who will meet all other organizational conditions to achieve project implementation. That is one more reason to ensure that no link is missing to make this project a success.

The *Office de Développement et d'Exploitation des Forêts* (ODEF) will be the host structure of the project; it is a public industrial and commercial corporation established by Order No. 71-204 of 13 November 1971 and it has an administrative and financial autonomy. The Ministry of Environment and Forest Resources (MERF) will be the governing body of the project. A Steering Committee will be established within ODEF to conduct implementation, monitoring and evaluation tasks.

Since project work consists in both office-based activities and field work, the implementation structure will be based in Lomé and its national-scope activities will be relayed by the Regional Directorates of ODEF and MERF.

The governing Ministry with its central directorates and other institutions having relevant technical capacities will be an indispensable source of expertise and support for the training and/or capacity building programmes provided for in this project.

2.1.2. Stakeholder Analysis

The implementation of this project is proving to be beneficial for all identified stakeholders as they almost all have similar or more or less interconnected problems and needs. The very basic state of data management in the forest sector affects all these stakeholders, each in its own remit:
- ODEF, which manages some of the state forests has great difficulty in its manual developing maps and in processing other data on these forests, and find planning of its field-level activities a challenge.
- The private forest owners cannot know exactly their plantation area nor have they maps of their plantations to enable sustainable management.
- For landowners, the traditional mode of transmission from one generation to another of land boundaries creates land conflicts with the forestry administration or with their neighbours because of virtual nature of these boundaries (natural boundaries such as trees, termite mounds, trails, villages, etc..)
- Logging companies have no control of their operating costs due to poor planning of operations. In addition, they frequently receive logging permits for parcels already under loggin and there are case where different permit-holders can be found on one same parcel or that they operate beyond the limits of their permit.
- The decentralized services of the forest administration that are responsible for monitoring the implementation of logging permits are very often powerless in the face of potential boundary conflicts because such permits were issued by their very ministry (MERF).
- The Ministry in charge of Mapping and Cadastre is having difficulties in regard to the estimation of forest areas encroached by the communities and the changes introduced to the national forest estate that are actually data meant to assist land-use planning efforts.
- Universities and NGOs that use and disseminate data in the forestry sector are faced with issues caused by data unavailability and unreliability. Academics whose research work is broadly focused on species and stand dynamics have difficulty in monitoring the study sites and their activity planning.

As all stakeholders were driven by a burning desire to find a way to work around their various problems mentioned above, several meetings between the forestry administration and other stakeholders were held during the year 2010, resulting in a first training workshop involving a number of stakeholders (see appendix: Workshop Report). All stakeholders have agreed on actions to be taken including:

- Collect and develop a geospatial database for environment monitoring and land management purposes;
-Generate and make available information from geo-spatial statistics for monitoring and evaluating environmental parameters;
-Set up an intelligence system for the prevention and monitoring of both natural and man-made phenomena and disasters (bush fires, floods, marine pollution, drought, etc.).
- Equip and train forest management stakeholders in GIS at both regional and local levels
These meetings have opened up new prospects and outlooks among participants on core issues and especially on the challenges of appropriate decision-making in resource management i.e protected areas, forests and the environment as a whole.

To this end, under MERF supervision, ODEF proposes to acquire, through this project, suitable equipment and build the capacities required for the collection of geospatial data, build a database and develop digital forest maps, which will facilitate the work of the decentralized services of the forestry administration and operators. Therefore ODEF will want to seek the support of NGOs involved with local forest communities and access academic expertise in return for providing academic institution with digitized and reliable data.

Stakeholder groups	**Characteristic**	**Problems, needs, interests**	**Potentials**	**Involvement in the project**
Primary stakeholders				
ODEF	Develop maps of plantations and gazetted forest	Lack of modern mapping equipment and tools. . inadequate GIS skills	Experience in the management of gazetted forests and implementation of projects	Prime beneficiary, . Participation in the execution of all project activities
Land owners	Live near forests, sub-contract land-use tenure	Tenure issues inadequately settled, land parcels not properly demarcated, perceived encroachment on their parcels by third parties	Have local knowledge; know the actual forest boundaries since formal gazetting	Participation in geographical data acquisition work on forest boundaries
Private forest owners	Manage private plantations and forests	Lack of reliable mapping data for the monitoring and managing their forests	Have small holds that can be used as testing grounds for novel techniques	. Benefit from training provided for under the project proposal, . To be actively involved in survey data acquisition on their forest lands
Logging interests/Logging companies	Identify and log forests	. Logging activities planning Reporting accuracy problem for data provided in forestry surveys and during cross-assessment missions	Desire to receive technical assistance	Direct project beneficiaries

Secondary stakeholders				
MERF	Collects, analyzes and disseminates data	Lack of reliable data, . indiscriminate data	Institutional framework for forest management	Participation in supervision during project implementation
Decentralized services of the Forest Administration	Represent ODEF and MERF in Togo regions (sub-national level)	Lack of reliable data, problems with enforcement of decisions at field level	. Skills and technical capacity	Will relay the execution of activities at sub-national level. Will participate in data collection
Ministry in charge of Cartography and Land Registry	Develops various maps and plans at national level	Gaps in current data on forests and new plantations	. Despository of Government Land Records Has the monopoly on subdivision and apportioning of the national forest estate (State forest lands)	Will collaborate in project implementation. May assist in harmonizing and coordinating the development of thematic maps
Tertiary stakeholders				
Universities of Lomé and Kara	Are vested with the training and research mission	Lack of reliable and recent forest data, promotion of forestry research	Experience in data collection and technical expertise	Outsourcing of research and capacity building
NGOs	Disseminate data and implement environmental sector projects	Need for reliable data, lack of effective of data collection capacity	Experience in working with people, may help the project to disseminate the data collected	Can be subcontracted by and cooperate with the project
Ministry in charge of Local Communities	Administers local communities matters	Has problems handling tenure disputes, lacks maps of rural areas	Extensive experience working with the communities, has the capacity to influence communities' views	Collaboration in the implementation of the project, facilitation of outreach and training campaigns planned under the project

2.1.3 Problem Analysis

The management of forest complexes requires the sound command of a very large amount of diversified information characterized primarily by their spatial component.

In Togo there is no system of centralized, geo-spatially managed information. Data collection, processing and dissemination equipment is not effective because they do not allow for easy collection and management of combined multiple data packages. Satellite imagery is easily accessible but even if when were acquired, they were not used due to lack of adequate equipment and tools. The technical know-how required for the use of software,

hardware and modern management of this data is very scarce, and it should be noted that there is no such training at the national level. In short, the management of geo-spatial information from the forests of Togo is rudimentary.

As a result, data processing and preparation of maps of forests and plantations are done manually. Moreover, very little forest has data and and geo-referenced digital maps. As rural land belong to individuals, many land conflicts are often driven primarily by the virtual nature (natural boundaries such as trees, termite mounds, trails, villages, etc..) of undemarcated land boundaries.

Most frequently there logging permits overlap, and the execution of non-overlapping ones sometimes goes beyond their assigned boundaries, which justifies tolerance for corruption. Monitoring of forest stands and their environment as well as the updating of thematic forest maps are nearly impossible. This situation explains the unavailability and unreliability of the data, making the decision-making process difficult when managing the forests of the country.

Overcoming this situation will require action at many levels and in many ways. The forest sector stakeholders should be aware of the importance of GIS in forest management and be trained in its use. The acquisition of GIS equipment for forest use, the mobilisation of skills made available and the operation of an effective system for collecting, processing and disseminating data will significantly improve the management of geo-spatial information for forestry in Togo.

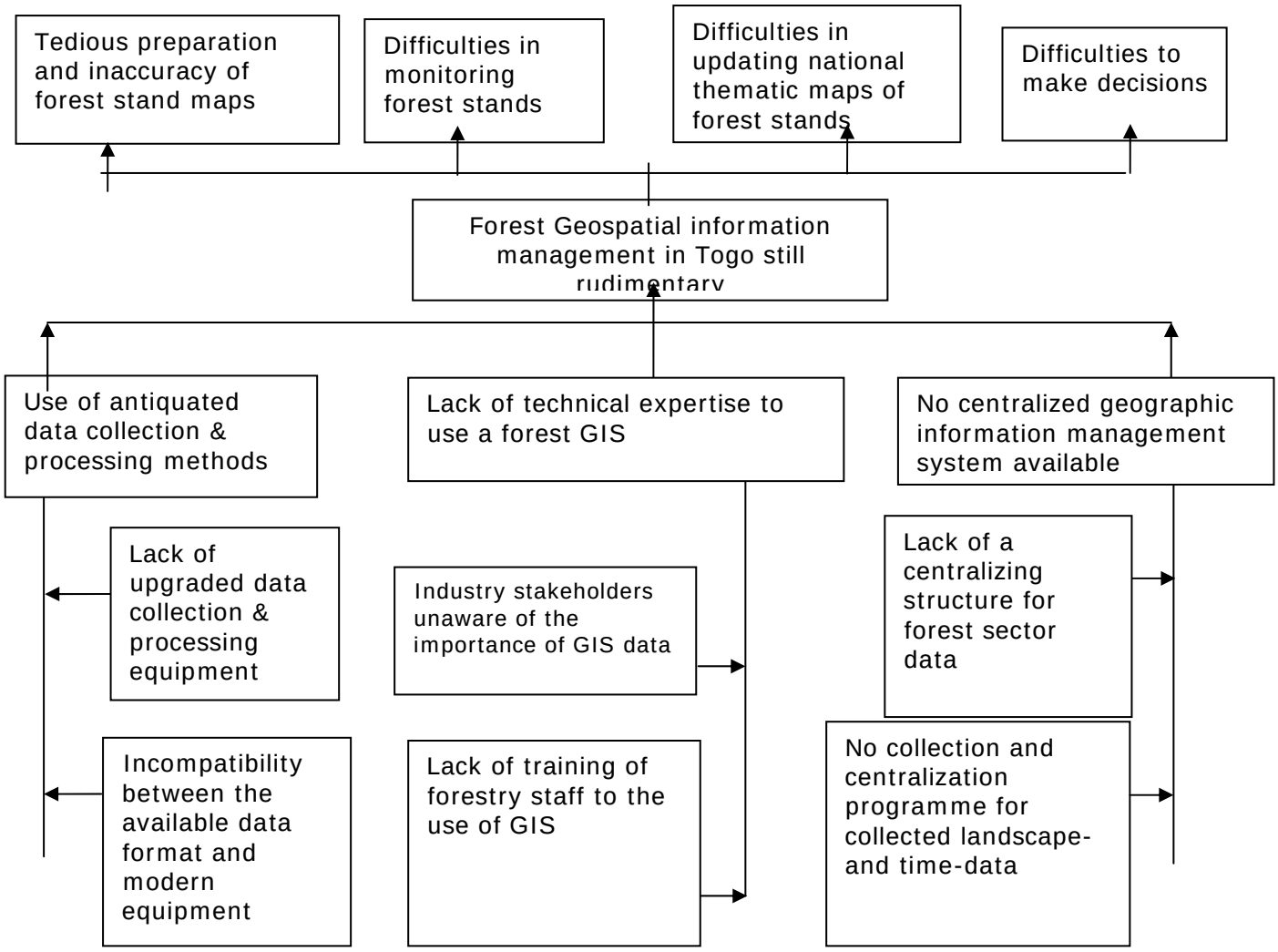

Figure 2: Problem Tree

2.1.4 Logical Framework Matrix

Intervention strategy	**Measurable indicators**	**Means of verification**	**Assumptions Work**
Development objective: To contribute to maximizing the potentials of forestry and the sustainable management of the forest estate in Togo.	- **From 2011 to 2020**, the level of the forest sector's contribution to GDP is up from 11% to 22% - **From 2014 to 2018**, at least five (5) forests have had their own development plan - The National Forest Inventory has been carried out **no later than 2020**	- ODEF Annual Reports and reports from MERF directorates - Updated maps of forests - Forests Thematic Maps	- Strong and sustained commitment from the part of the government to improve forest management in Togo
Specific Objective: To improve the management of geo-spatial information on the forests of	- **One (1) database comprising reliable geo-spatial data on the forest sector is available at national**	- Project Completion Report - Digital Forest Data	**- The management of forest resources is transparent**

Togo.	**level by the third year of the project** **- By the 3rd year of project life, the decision-making process for forest management is based on reliable scientific data.** **- By the 2nd year of project life, one (1) central structure for collecting and managing centralized geospatial information on forests is operational**	**-** Digital maps of forests	
Output 1: The collection and processing of forest sector data are based on the use of modern equipment and methodologies	- 100% of maps developed on computer systems - microcomputers and software are installed. - Increasing the proportion of data documented forests from 5% to 50% by project completion date. - Reduction by over 60% of the time needed for having the desired data available	- New forests maps - Receipts for the purchase of modern equipment - Old forests maps scanned	- The stakeholders involved use the equipment on a continual basis and skills are acquired
Output 2: Stakeholders trained in the use of forestry GIS Forest do make use of the skills they have acquired	- 100% of forest stakeholders know the importance of GIS in forest management - At the end of the project the number of **MERF staff** using forestry GIS has increased from 7 to **20.** - **75%** of forest sector stakeholders are made aware of the merits of the project	- Inventories are updated - Data availability - Decentralized development of maps	- Full participation in the project by staff trained to collect and centralize data
Output 3: A system of centralized geo-spatial information management for forests is in place	- 5 and 10 senior forest officers are trained and assigned to centralized data management structure - Data of forest area available - Uniformity of thematic maps	- Staff and structure of centralized data management - Workshop and briefing reports - Maps	- All branches of MERF and decentralized forest administrations are working together to build a geo-spatial database in the forestry sector

2.2 Objectives

2.2.1 Development objective and impact indicators

To contribute to the optimization of forestry potential and sustainable management of forest areas in Togo.

Indicators of long-term impact are:

- **from 2011 to 2020,** the level of forest sector's contribution to GDP is up from 11% to 22%
- **from 2014 to 2018**, at least five (5) forests have been allocated a management plan
- the National Forest Inventory is complete **no later than 2020.**

2.2.2 Specific Objective (s) and performance indicators

Improve the management of forest geo-spatial information in Togo.

Impact indicators in the short and medium terms are as follows:

- **in the 2nd year of the project one (1) central structure for collecting and managing centralized geospatial information on forests is operational**

- in the 3rd year of the project one (1) database containing reliable geo-spatial data for the forest sector is available at national level

- As of the 3rd year of project life, the decision-making process for forest management is based on reliable scientific data.

- Better efficiency and efficacy of forest-related decisions by project completion.

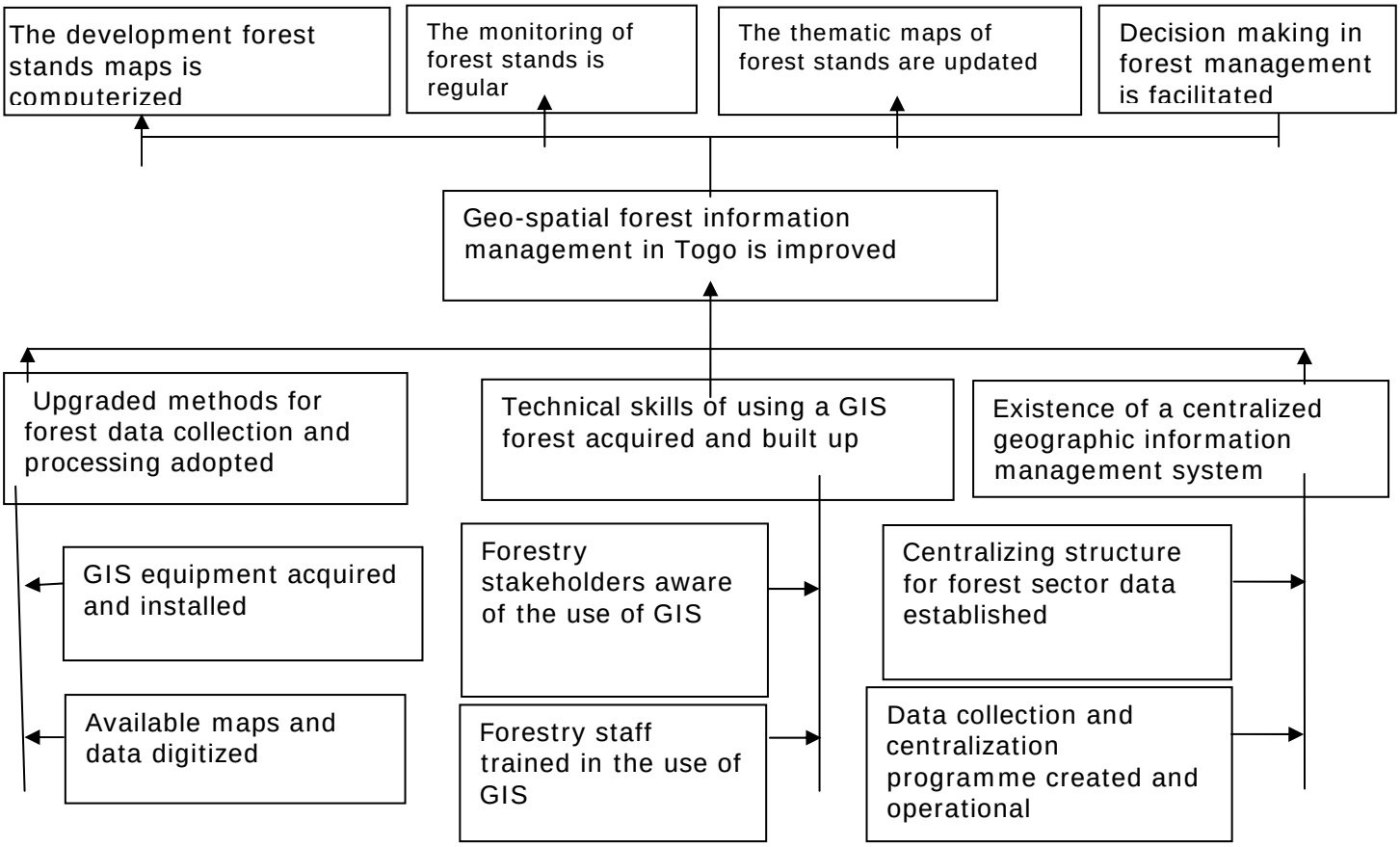

Figure 3 : Tree of objectives

PART THREE: DESCRIPTION OF PROJECT INTERVENTIONS

3.1 Outputs and activities

3.1.1 Outputs

Output 1: The collection and processing of forest sector data are based on the use of modern equipment and methodologies

Output 2: Stakeholders trained in the use of forestry GIS Forest do make use of the skills they have acquired

Output 3: A system of centralized geo-spatial information management for forests is in place

3.1.2 Activities

A1.1 Acquire and install the GIS equipment
A1.2 Digital scanning of maps and available data
A2.1 Raising awareness of the forestry sector on the importance of using GIS
A2.2 To train forest officers on the use of GIS
A3.1 To establish a framework for centralized data management of the forestry sector
A3.2 To make a data collection and centralization programme operational

3.2 Implementation approaches and methods

In Togo data collection, processing and storage and the establishment of plantation and forest maps are conducted in a rudimentary way, which explains the non-availability on time and the lack of reliable data, making appropriate forest management decisions difficult.

Indeed, the demarcation of plots for afforestation is done at ODEF level using a compass and a measuring tape. Data reporting is done manually using duplicating carbons. Acreage estimates are made using a pantograph or by counting tiles. By contrast, in private growers' areas demarcation work is carried out using surveyor's tapes and data are never processed (hence acreage values are mere estimates). For the daily management of maps drawn by hand, a non-coloured copy is always retained for each map, to be photocopied and coloured whenever the need arises. The processing of these map data is also carried out by hand as it often happens that errors on paper are translated into very large discrepancies in the planning of field activities.

The private forest owners who are generally small producers cannot obtain the services that would enable them to know acreage values in detail or accurately, nor do they have maps of their plantations that would enable them to engage in appropriate SFM practices.

For landowners, land inheritance law and procedures are still traditional, relying on natural landmarks such as trees, termite mounds, trails, villages, etc.. that are used to materialize land estate boundaries.

Once these natural boundaries are displaced or found missing, these landowners or private forest owerners often encroach on neighbouring estates or Government land estates.

This state of affairs is such that the management of geo-spatial information on Togo forests has remained in infancy till now.
The acquisition and installation of equipment and the definition and implementation of a centralized management structure will make new data collection and digitization of existing ones operational. This project will be run in direct or indirect collaboration with all GIS stakeholders in general and in particular those having an interest in GIS applications to forestry. By using a participatory approach, stakeholder groups will be involved at various levels after the consultations, advocacy and capacity building efforts provided for in the project.

- *Organizing a consultation to assess the existing status of data collection and processing:*

At the start of the project, a meeting with all the stakeholders mentioned above will provide the opportunity to present an overview of the status statistical, geo-spatial and geographical data in connection with the forests in Togo; this will be followed by an awareness-raising effort towards these stakeholders on the importance of using a GIS. This will motivate them to increase their level of participation and / or cooperate with each level requiring their input and expertise in the project.

- *Acquisition and installation of hardware:*
  The acquisition of equipment will be by tender with the technical assistance of an expert who will ensure the implementation of the GIS.

- *Capacity building*
  For its sustainability, the project requires a well-trained and permanent staff, daily operation and adaptation to the organization of services. To this effect, the GIS expert assisted by the counterparts will be responsible for training personnel. The personnel to receive training will be both from decentralized MERF services and private planters

- *Data collection, processing and dissemination*
  Once the equipment is installed, and staff trained, there will be the establishment of a centralized data management structure for the sector that will be responsible for creating a set of benchmarks for developing the basis of the spatial data to be collected.
  Data acquisition will be from:
  - Documents: from paper (plan, map) to digital materials obtained from scanning existing maps or drawings
  - Photos: from photographs (scanned) to the vector data
  - Satellite images obtained through remote sensing;
  - Alphanumeric data
  - field-level data from GPS surveys using theodolites.

  Note that for its first experience in Forest GIS, Togo will have to deal more with this latest method of data acquisition during the execution of this project.

  To help acquire these data, a program of data collection, **verification** and centralization will be made operational with the participation of those people who have benefited from the capacity building exercise and the first phase of awareness-raising campaign.
  For this purpose, within each of the five administrative regions, a data collection and centralization programme officer will be appointed.

  One officer responsible for the maritime region covering a 610,000-ha area distributed over 7 prefectures
  One officer responsible for the Plateaux Region – the largest forested area covering 1,697,500 ha distributed over 12 prefectures,
  One officer responsible for Central Region covering 1,350,000 ha distributed over 4 prefectures,
  One officer responsible for the Kara Region covering 1,162,500 ha distributed over 7 prefectures,
  One officer responsible for the Savannah Region covering 853,400 ha distributed over 5 prefectures.

  The tasks of these **trained** officers will consist in ensuring the regional coordination of the various data collection work on natural forests and forest plantations in **these regions** and forward the data to the centralized structure for the creation of the database. To accomplish their task, each manager will have one (1) terrain motorcycle to:
  - Monitor the management of private and state forests from their usually scattered, various locations which are typically difficult to access by vehicles
  - collect data from operational staff at field level (ODEF sector managers and MERF prefectural superintendents) in each region;
  - monitor data collection activities
  - training / retraining of staff.

  One (1) complete computer unit will also be made available to him for recording primary data before sending them to the regional centralization structure.

After having been analysed by the mapping media, these data will be processed, posted, disseminated and filed.

Taking into consideration the difficulties to access the forest areas (due to poor road/track conditions) and the great number of monitoring and data confirmation missions to be conducted at local level (prefectures, canton/district and village levels) and the outreach and awareness-raising missions targeting field-level stakeholders, acquiring an appropriate liaison vehicle will be necessary. This vehicle will be made available to the project coordination unit and will be used, inter alia, to

- implementing advocacy / awareness-raising work and build the capacities of stakeholders in the regions,

- The conduct of field-level missions by IT experts specialists in GIS, forest-mapping experts and their local counterparts.

To conduct project computer equipment installation and maintenance mission within the country,

By project completion date, the vehicle and motorcycles acquired by the project will enable the continuation and extension of awareness-raising and data collection activities beyond the pilot forests targeted by this project.

3.3 Work Plan

Outputs /Activities	**Responsible Party**	**Year 1** Qtr.				**Year 2** Qtr.				**Year 3** Qtr.			
		1	2	3	4	1	2	3	4	1	2	3	4
Output 1 : The collection and processing of forest sector data are based on the use of modern equipment and methodologies													
A1.1 Acquire and install the GIS equipment	Coordinator												
A1.2 Digital scanning of maps and available data	Computer expert specialising in GIS & Forester Cartographer												
Output 2: Stakeholders trained in the use of forestry GIS Forest do make use of the skills they have acquired													
A2.1 Raising awareness of the forestry sector on the importance of using GIS	Coordinator												
A2.2 To train forest officers on the use of GIS	Coordinator & Forester-Cartographer												
Output 3 : A system of centralized													

geo-spatial information management for forests is in place													
A3.1 To establish a framework for centralized data management of the forestry sector	Coordinator et Forester-Cartographer												
A3.2 To make a data collection and centralization programme operational	Computer expert specialising in GIS												

Budget

3.4.1 Main budget table

UTPUTS / ACTIVITES	DESCRIPTION	Budget component	Quantity			Units	Unit cost $US	Total cost $US	ITTO			Agence d'exécution
			Year 1	Year 2	Year 3				Year 1	Year 2	Year 3	
Output 1	**The collection and processing of forest sector data are based on the use of modern equipment and methodologies**											
A1.1	Acquire and install the GIS equipment											
	7 computers	**44**	7			Unit	1 600	11 200	11 200			
	6 A4 Printers	**44**	6			Unit	600	3 600	3 600			
	1 A1 printer	**44**	1			Unit	1 350	1 350	1350			
	7 Power-surge protector	**44**	7			Unit	300	2 100	2 100			
	1 Laptop computer	**44**	1			Unit	2 000	2 000	2 000			
	1 Software (ArcGis 9.4)	**44**	1			Unit	16 000	16 000	16 000			
	1 Horizontal scanner A2	**44**	1			Unit	4 100	4 100	4 100			
	1 Photocopy machine A3	**44**	1			Unit	2 000	2 000	2 000			
	Five (5) office spaces made available, incl. air con, maintenance	**41**	**6**			**Monthly rent**	**1 750**	**10 500**				**10 500**
	Servicing of Basic computer and support structure	**22**	**9**			month	**444**	4 000	4000			
	Support equipment	**44**	**1**	**1**	**1**	**Year**	1 000	3 000	1 000	1 000	1 000	
	Communication facilities, subscription costs	**611**	**9**			Subscription /month	**667**	6 000				**6 000**
	1 Project coordinator	**112**	**9**				**550**	4 950				**4 950**

UTPUTS / ACTIVITES	DESCRIPTION	Budget component	Quantity			Units	Unit cost $US	Total cost $US	ITTO			Agence d'exécution
			Year 1	Year 2	Year 3				Year 1	Year 2	Year 3	
	1 messenger boy	**12**	**9**			**Pers. / month**	**150**	**1 350**				**1 350**
A1.2	**Digital scanning of maps and available data**											
	1 Training workshop in digitization of existing data and development of digital maps (20 pers. In 3 days) ; data acquisition test at field-level after map is complete.	**313**		**60**		**Workshop**	**50**	**3 000**	**3 000**			
	6 GPS	**44**	6			Unit	800	4 800	4 800			
	6 compasses	**44**	6			Unit	300	1 800	1 800			
	1 Digital camera	**44**	1			Unit	600	600	600			
	Differntial GPS station	**44**	2			Unit	3 250	6 500	6 500			
	1 Clinometre-compass	**44**	2			Unit	300	600	600			
	Printing and mapping paper including all formats and ink types	**543**	**1**			**Year**	**1 000**	**1 000**	**1 000**			
	Computer equipment	**541**	**1**	**1**	**1**	**Year**	900	2 700	900	900	900	
	Office equipment	**542**	**1**	**1**	**1**	**Year**	1 000	3 000	1 000	1 000	1 000	
Output 2	**Stakeholders trained in the use of forestry GIS Forest do make use of the skills they have acquired**											
A2.1	**Raising awareness of the forestry sector on the importance of using GIS**											
	1 Forester cartographer	**113**	**9**			**Pers. / month**	**450**	**4 050**				**4 050**
	1 Admin. and financial assistant	**122**	**9**			**Pers. / month**	**300**	**2 700**				**2700**

UTPUTS / ACTIVITES	DESCRIPTION	Budget component	Quantity			Units	Unit cost $US	Total cost $US	ITTO			Agence d'exécution
			Year 1	Year 2	Year 3				Year 1	Year 2	Year 3	
	1 Secretary / accountant	**124**	**9**			**Pers. / month**	**150**	**1 350**				**1 350**
	1 1 National workshop (50 Persons) at the end of the 1st phase of the advocacy campaign	315	**50**			Pers. / day	50	2 500	2 500			
	Institutional capacity support	**617**	1	1	1	Support	1 000	3 000	1 000	1 000	1 000	
	Acquisition of one (1) 4WD vehicle for the Project Coordination	**431**	**1**			**Unit**	**34 000**	**34 000**	**34 000**			
	1 Driver / mechanic	**135**	**12**	**12**	**12**	**Personne/ month**	**150**	**5 400**				**5 400**
	Fuel and lubricants	**532**	**720**			**Litre/yr**	**1,19**	**857**	**857**			
	Vehicle maintenance (servicing per month)	**531**	**4**	**4**	**4**	**Semester / yr**	**583**	**7 000**	**2 500**	**2 500**	**2 000**	
	Vehicle insurance (one car for 3 years)	533	1	1	1	Vehicle / yr	**2 000**	**6 000**	**2 000**	**2 000**	**2 000**	
A2.2	**To train forest officers on the use of GIS**											
	IT expert specialised in GIS for 6 months	**111**	**3**	**9**		**Pers. / month**	**1 667**	**20 000**	**5 000**	**15 000**		
	1 Forester cartographer	**113**	**3**			**Pers. / month**	**450**	**1 350**				**1 350**

UTPUTS / ACTIVITES	DESCRIPTION	Budget component	Quantity			Units	Unit cost $US	Total cost $US	ITTO			Agence d'exécution
			Year 1	Year 2	Year 3				Year 1	Year 2	Year 3	
	1 National workshop at the end of the establishment of the forest sector data centralization structure (50 pers.)	315		50		Pers. / day	50	2 500	2 500			
	Room rental to hold various workshops, training and seminars	**21**	**3**	**4**	**3**	**Room rental**	**800**	**8 000**	**2 400**	**3 200**	**2 400**	
Output 3	**A system of centralized geo-spatial information management for forests is in place**											
A3.1	**To establish a framework for centralized data management of the forestry sector**											
	1 Project coordinator	**112**	**3**	**9**		**Pers. / month**	**550**	**6 600**				**6 600**
	1 Admin. and financial assistant	**122**	**3**			**Pers. / month**	**300**	**900**				**900**
	1 Secretary / accountant	**124**	**3**			**Pers. / month**	**150**	**450**				**450**
	1 messenger boy	**125**	**3**			**Pers. / month**	**150**	**450**				**450**
	Training of data collection officers + field-level testing (20 pers. for 3 days, transport and DSA)	**31**	**60**			**Participant /day**	**50**	**3 000**	**3 000**			
	Training in data input, processing & compilation (10 pers. 4 days, transport and DSAs)	**31**	40			Participant /day	**50**	2 000	2 000			

UTPUTS / ACTIVITES	DESCRIPTION	Budget component	Quantity			Units	Unit cost $US	Total cost $US	ITTO			Agence d'exécution
			Year 1	Year 2	Year 3				Year 1	Year 2	Year 3	
	2 Training workshops in GIS management (10 persons 3 days)	**31**	**30**	**30**		**Participant /day**	**50**	3 000	3 000			
	1 Data storage disk (500 Go)	**44**	1			Unit	300	300	300			
	Fuel and lubricants	**532**	**240**			**Litre/yr**	**1,19**	**286**	**286**			
	Five (5) office spaces made available incl. Air-con, maintenance, etc.	**41**	**6**			Monthly rent	**1 750**	**10 500**				**10 500**
	Printing and mapping paper including all formats and ink types	**543**		**1**	**1**	**Year**	**2 500**	**5 000**		**2 500**	**2 500**	
	Communication facilities, subscription fee	611	**3**			Monthly subscription	**667**	**2 000**				**2 000**
	Subscription to satellite imagery	**23**	**3**	**12**	**12**	Monthly subscription	**704**	**19 000**	**2 110**	**8 445**	**8 445**	
	Other reports (4 per year)	614	4	4	4	**Report /quarter**	175	2 100				2 100
	Audits	**62**	1	1	1	Audit/yr	4 000	12 000	4 000	4 000	4 000	
	Steering Committee meeting (**Transport and organisation**)	61	**1**	**1**	**1**	**Meeting / yr**	**1 500**	4 500				4 500
	Advisory Committee meeting (**Transport and organisation**)	61	**1**	**1**	**1**	**Meeting / yr**	**1 500**	4 500				4 500
A3.2	**To make a data collection and centralization programme operational**											
	1 Project coordinator	**112**		**3**	**12**	**Pers. / month**	**550**	**8 250**				**8 250**

UTPUTS / ACTIVITES	DESCRIPTION	Budget component	Quantity			Units	Unit cost $US	Total cost $US	ITTO			Agence d'exécution
			Year 1	Year 2	Year 3				Year 1	Year 2	Year 3	
	1 Forester cartographer	**113**		**12**	**12**	**Pers. / month**	**450**	**10 800**				**10 800**
	1 Admin. and financial assistant	**122**		**12**	**12**	**Pers. / month**	**300**	**7 200**				**7 200**
	1 Secretary / accountant	**124**		**12**	**12**	**Pers. / month**	**150**	**3 600**				**3 600**
	1 messenger boy	**12**		**12**	**12**	**Pers. / month**	**150**	**3 600**				**3 600**
	Fellowship Introductory course to GIS operation in Bénin (Coordinator)	**15**	**1**			Pers. / month	**3 000**	3 000				3 000
	Acquisition of 5 motorcycles	**432**		**5**		**Unit**	**2 000**	**10 000**		**10 000**		
	Insurance for rolling stock (5 motorcycles for **2** years)	**533**		**5**	**5**	**motorcycles/yr**	**500**	**5 000**		**2 500**	**2 500**	
	Fuel and lubricants	**532**		**2460**	**2460**	**Litre/yr**	**1,19**	**5 857**		**2 928**	**2 929**	
	Five office spaces, including air-conditioning and maintenance made available	**41**		**1**	**1**	Annual rent	**21 000**	**42 000**				**42 000**
	Data collection (10 pers. for **24** month)	612		**120**	**120**	Pers. / month	**33**	8 000		4 000	4 000	
	Communication facilities, subscription fee	**611**		12	12	Monthly subscription	**667**	**16 000**				**16 000**
	2 Data capture and processing assistant	**121**	**24**	**24**	**24**	**Pers. / month**	**300**	**21 600**				**21 600**

UTPUTS / ACTIVITES	DESCRIPTION	Budget component	Quantity			Units	Unit cost $US	Total cost $US	ITTO			Agence d'exécution
			Year 1	Year 2	Year 3				Year 1	Year 2	Year 3	
	Publication and dissemination of data (4 times a year)	613		3	3	Publications /yr	700	4 200		2 100	2 100	

US$ 1 = FCFA 500

3.4.2 Consolidated budget by component

Category		Description	TOTAL	Year 1	Year 2	Year 3
10.	**Project personnel**					
	11	*National experts (long-term)*				
		Computer expert specialising in GIS	20 000	20 000		
		1 Project coordinator	19 800	6 600	6 600	6 600
		1 Forester cartographer	16 200	5 400	5 400	5 400
	12.	*Other staff*				
		2 Data capture and processing assistant	21 600	7 200	7 200	7 200
		1 Admin. and financial assistant	10 800	3 600	3 600	3 600
		1 Driver / mechanic	5 400	1 800	1 800	1 800
		1 Secretary / accountant	5 400	1 800	1 800	1 800
		1 Messenger	5 400	1 800	1 800	1 800
	13.	***National consultants***	**-**	**-**	**-**	**-**
	14.	***International consultants***	**-**	**-**	**-**	**-**
	15.	***Fellowship and training***				
		Beginner's training course on GIS operation in Benin (Coordinator)	3 000	3 000		
	19.	**Component total**	**107 600**	**51 200**	**28 200**	**28 200**
20.	**Sub-contracting**					
	21	Organizational structure for running various training sessions and workshops	8 000	8 000		
	22	Basic computer and support structure	4 000	4 000		
	23	Subscription to satellite imagery services	19 000	**2 110**	**8 445**	**8 445**
	29.	**Component total**	**31 000**	**14 110**	**8 445**	**8 445**
30.	**Duty travels**					
	31.	*DSAs*				
		Training of data collection staff	**3 000**	**3 000**		
		Training of data capture and dissemination officers	2 000	2 000		
		Training in computerised map development	3 000	3 000		
		Training in GIS management	3 000	3 000		
		2 National workshops	5 000	5 000		
	32	***International travels***	**-**	**-**	**-**	**-**
	33	***Domestic travels***	**-**	**-**	**-**	**-**
	39.	**Component total**	**16 000**	**16 000**		
40.	**Capital Goods**					
	41.	***Office space***				
		Five (5) office spaces made available, Incl. Air-con, maintenance, etc.	63 000	21 000	21 000	21 000
	42.	***Land plots***	**-**	**-**	**-**	**-**
	43.	*Vehicles*				
		4WD Vehicle	34 000	34 000		

Category		Description	TOTAL	Year 1	Year 2	Year 3
		5 Motorcycles	10 000	10 000		
	44.	*Capital goods*				
		7 computers	11 200	11 200		
		6 A4 Printers	3 600	3 600		
		1 A1 printer	1 350	1350		
		7 Power-surge protector	2 100	2 100		
		1 Laptop computer	2 000	2 000		
		1 Software (ArcGis 9.4)	16 000	16 000		
		1 Horizontal scanner A2	4 100	4 100		
		1 Clinometre-compass	600	600		
		1 Digital camera	600	600		
		1 Photocopy machine A3	2 000	2 000		
		6 GPS	4 800	4 800		
		6 compasses	1 800	1800		
		2 Differential GPS stations	6 500	6 500		
		Data storage disk (500 Go)	300	300		
		Support equipment made available	3 000	1 000	1 000	1 000
	49.	**Component total**	**166 950**	**122 950**	**22 000**	**22 000**
50.	**Consumables**					
	51.	***Raw materials***	**-**	**-**	**-**	**-**
	52.	***Spare parts***	**-**	**-**	**-**	**-**
	53.	*Fuel and services*				
		Vehicle maintenance	7 000	2 500	2 500	2 000
		Fuel and lubricants	7 000	2 000	2 500	2 500
		Insurance for rolling stock	11 000	**2 000**	4 500	4 500
	54.	*Office supplies*				
		IT Equipment	2 700	900	900	900
		Office equipment	3 000	1 000	1 000	1 000
		Printing and mapping paper including all formats and ink types	6 000	1 000	2 500	2 500
	59.	**Component total**	**36 700**	**9 400**	**13 900**	**13 400**
60.	**Miscellaneous**					
	61.	*Sundries*				
		Communication facilities, subscription fee	24 000	8 000	8 000	8 000
		Data collection costs	8 000		**4 000**	**4 000**
		Data publication and dissemination	4 200		2 100	2 100
		Other reports	2 100	700	700	700
		Steering Committee meeting	4 500	1 500	1 500	1 500
		Advisory Committee meeting	4 500	1 500	1 500	1 500
		Institutional capacity support	3 000	1 000	1 000	1 000
	62.	***Audit costs***	12 000	4 000	4 000	4 000
	63.	***Contingencies***				

Category		Description	TOTAL	Year 1	Year 2	Year 3
	69.	**Component total**	**62 300**	**16 700**	**22 800**	**22 800**
		Sub-total 1	**420 550**	**230 360**	**95 345**	**94 845**
70.	**EA's management costs**					
	71.	***EA's monitoring costs***	**63 083**			
	72.	***Focal point's Monitoring cost***				
	79.	**Component total**	**63 083**			
80.	**Project monitoring and administration**					
	81.	***ITTO Monitoring***	***30 000***			
	82.	Eval. costs	10 000			
	83.	***ITTO support costs (8% of items 11 to 82)***	***41 890***			
	89.	**Component total**	**81 890**			
		Sub-total 2	**144 973**			
90.	**Pre-project cost refund**		**-**			
100.	**GRAND TOTAL**		**565 523**			

En dollars, 1 US$ = 500 FCFA

Consolidated budget by funding sources

Category		Description	TOTAL	ITTO	TOGO
10.	**Project personnel**				
	11	*National experts (long-term)*			
		Computer expert specialising in GIS	20 000	20 000	
		1 Project coordinator	19 800		19 800
		1 Forester cartographer	16 200		16 200
	12.	*Other staff*			
		2 Data capture and processing assistant	21 600		21 600
		1 Admin. and financial assistant	10 800		10 800
		1 Driver / mechanic	5 400		5 400
		1 Secretary / accountant	5 400		5 400
		1 Messenger	5 400		5 400
	13.	***National consultants***	**-**	**-**	**-**
	14.	***International consultants***	**-**	**-**	**-**
	15.	***Fellowship and training***			
		Beginner's training course on GIS operation in Benin (Coordinator)	**3 000**	**3 000**	
	19.	**Component total**	**107 600**	**23 000**	**84 600**
20.	**Sub-contracting**				
	21	Organisational structure for running various training sessions and workshops	8 000	8 000	
	22	Basic computer and support structure	4 000	4 000	
	23	Subscription to satellite imagery services	19 000	19 000	
	29.	**Component total**	**31 000**	**31 000**	

Category		Description	TOTAL	ITTO	TOGO
30.	**Duty travels**				
	31.	*DSAs*			
		Training of data collection staff	**3 000**	**3 000**	
		Training of data capture and dissemination officers	2 000	2 000	
		Training in computerised map development	3 000	3 000	
		Training in GIS management	3 000	3 000	
		2 National workshops	5 000	5 000	
	32	***International travels***	**-**	**-**	**-**
	33	***Domestic travels***	**-**	**-**	**-**
	39.	**Component total**	**16 000**	**16 000**	
40.	**Capital Goods**				
	41.	***Locaux***			
		Five office spaces, including air-conditioning and maintenance made available	**63 000**		**63 000**
	42.	***Land plots***	**-**	**-**	**-**
	43.	*Vehicles*			
		4WD Vehicle	34 000	34 000	
		5 Motorcycles	10 000	10 000	
	44.	*Capital goods*			
		7 computers	11 200	11 200	
		6 A4 Printers	3 600	3 600	
		1 A1 printer	1 350	1350	
		7 Power-surge protector	2 100	2 100	
		1 Laptop computer	2 000	2 000	
		1 Software (ArcGis 9.4)	16 000	16 000	
		1 Horizontal scanner A2	4 100	4 100	
		1 Clinometre-compass	600	600	
		1 Digital camera	600	600	
		Photocopieuse A3	2 000	2 000	
		6 GPS	4 800	4 800	
		6 compasses	1 800	1800	
		2 Differential GPS stations	6 500	6 500	
		Data storage disk (500 Go)	300	300	
		Support equipment made available	3 000	3 000	
	49.	**Component total**	**166 950**	**103 950**	**63 000**
50.	**Consumables**				
	51.	***Raw materials***	**-**	**-**	**-**
	52.	***Spare parts***	**-**	**-**	**-**
	53.	*Fuel and services*			
		Vehicle maintenance	7 000	7 000	

Category		Description	TOTAL	ITTO	TOGO
		Fuel and lubricants	7 000	7 000	
		Insurance for rolling stock	**11 000**	**11 000**	
	54.	*Office supplies*			
		IT Equipment	2 700	2 700	
		Office equipment	3 000	3 000	
		Printing and mapping paper including all formats and ink types	6 000	6 000	
	59.	**Component total**	**36 700**	**36 700**	
60.	**Divers**				
	61.	*Sundries*			
		Communication facilities, subscription fee	24 000	24 000	
		Data collection costs	8 000	8 000	
		Data publication and dissemination	4 200	4 200	
		Other reports	2 100	2 100	
		Steering Committee meeting	4 500		4 500
		Advisory Committee meeting	4 500		4 500
		Institutional capacity support	3 000	3 000	
	62.	***Audit costs***	12 000	12 000	
	63.	***Contingencies***			
	69.	**Component total**	**62 300**	**53 300**	**9 000**
70.	**EA's management costs**				
	71.	***EA's monitoring costs***	**63 083**	**-**	**63 083**
	72.	***Focal point's Monitoring cost***	**-**	**-**	**-**
	79.	**Component total**	**63 083**		**63 083**
80.	**Project monitoring and administration**				
	81.	***ITTO Monitoring***	30 000	***30 000***	**-**
	82.	Eval. costs	10 000	10 000	
	83.	***ITTO support costs (8% of items 10 to 82)***	**41 890**	***41 890***	
	89.	**Component total**	**81 890**	**81 890**	
90.	**Pre-project cost refund**		**-**	**-**	**-**
100.	**GRAND TOTAL**		**565 523**	**345 840**	**219 683**

En dollars, 1 US$ = 500 FCFA

Yearly detailed budget by funding sources

3.4.3 ITTO Budget by component

Category		Description	TOTAL	Year 1	Year 2	Year 3
10.	**Project personnel**					
	11	*National experts (long-term)*				
		Computer expert specialising in GIS	20 000	20 000		
	12.	*Other staff*	**-**	**-**	**-**	**-**
	13.	*National consultants*	-	-	-	**-**
	14.	*International consultants*	-	-	-	**-**
	15.	*Fellowship and training*				
		Beginner's training course on GIS operation in Benin (Coordinator)	3 000	3 000		
	19.	Component total	23 000	23 000		
20.	**Sub-contracting**					
	21	Organisational structure for running various training sessions and workshops	8 000	8 000		
	22	Basic computer and support structure	4 000	4 000		
	23	Subscription to satellite imagery services	19 000	2 110	8 445	8 445
	29.	**Component total**	**31 000**	**14 110**	**8 445**	**8 445**
30.	**Duty travels**					
	31.	*DSAs*				
		Training of data collection staff	**3 000**	**3 000**		
		Training of data capture and dissemination officerss	2 000	2 000		
		Training in computerised map development	3 000	3 000		
		Training in GIS management	3 000	3 000		
		2 National workshops	5 000	5 000		
	32	*International travels*	-	-	**-**	**-**
	33	*Domestic travels*	-	-	**-**	**-**
	39.	Component total	**16 000**	**16 000**		
40.	**Capital Goods**					
	41.	*Office space*	**-**	**-**	**-**	**-**
	42.	*Land plots*	**-**	**-**	**-**	**-**
	43.	*Vehicles*				
		4WD Vehicle	34 000	34 000		
		5 Motorcycles	10 000	10 000		
	44.	*Capital goods*	0			
		7 computers	11 200	11 200		
		6 A4 Printers	3 600	3 600		
		1 A1 printer	1 350	1 350		
		7 Power-surge protector	2 100	2 100		
		1 Laptop computer	2 000	2 000		
		1 Software (ArcGis 9.4)	16 000	16 000		
		1 Horizontal scanner A2	4 100	4 100		
		1 Clinometre-compass	600	600		
		1 Digital camera	600	600		

Category		Description	TOTAL	Year 1	Year 2	Year 3
		Photocopy machine A3	2 000	2 000		
		6 GPS	4 800	4 800		
		6 compasses	1 800	1800		
		2 Differential GPS stations	6 500	6 500		
		Data storage disk (500 Go)	300	300		
		Support equipment made available	3 000	1 000	1 000	1 000
	49.	**Component total**	**103 950**	**101 950**	**1 000**	**1 000**
50.	**Consumables**					
	51.	*Raw materials*	-	**-**	**-**	**-**
	52.	*Spare parts*	-	**-**	**-**	**-**
	53.	*Fuel and services*				
		Vehicle maintenance	7 000	2 500	2 500	2 000
		Fuel and lubricants	7 000	2 000	2 500	2 500
		Insurance for rolling stock	11 000	**2 000**	4 500	4 500
	54.	*Office supplies*				
		IT Equipment	2 700	900	900	900
		Office equipment	3 000	1 000	1 000	1 000
		Printing and mapping paper including all formats and ink types	6 000	1 000	2 500	2 500
	59.	Component total	**36 700**	**9 400**	**13 900**	**13 400**
60.	**Miscellaneous**					
	61.	*Sundries*				
		Communication facilities, subscription fee	24 000	8 000	8 000	8 000
		Data collection costs	8 000		4 000	4 000
		Data publication and dissemination	4 200		2 100	2 100
		Other reports	2 100	700	700	700
		Institutional capacity support	3 000	1 000	1 000	1 000
	62.	***Audit costs***	12 000	4 000	4 000	4 000
	63.	***Contingencies***				
	69.	**Component total**	**53 300**	**13 700**	**19 800**	**19 800**
		Sub-total	**263 950**	**178 160**	**43 145**	**42 645**
70.	**EA's management costs**		*See Executing Agency's budget*			
80.	**Project monitoring and administration**					
	81.	*ITTO Monitoring*	*30 000*			
	82.	*Eval. costs*	*10 000*			
	83.	*ITTO support costs (8% of items 10 to 82)*	*41 890*			
	89.	Component total	**81 890**			
90.	Pre-project cost refund		-			
100.	**GRAND TOTAL**		**345 840**			

In dollars, US$ 1 = FCFA 500

3.4.4 Executing agency's budget by component

Category		Description	TOTAL	Year 1	Year 2	Year 3
10.	**Project personnel**					
	11	*National experts (long-term)*				
		1 Project coordinator	19 800	6 600	6 600	6 600
		1 Forester cartographer	16 200	5 400	5 400	5 400
	12.	*Other staff*				
		2 Data capture and processing assistant	21 600	7 200	7 200	7 200
		1 Admin. and financial assistant	10 800	3 600	3 600	3 600
		1 Driver / mechanic	5 400	1 800	1 800	1 800
		1 Secretary / accountant	5 400	1 800	1 800	1 800
		1 Messenger	5 400	1 800	1 800	1 800
	19.	Component total	84 600	28 200	28 200	28 200
40.	**Capital Goods**					
	41.	***Office space***				
		Five office spaces, including air-conditioning and maintenance made available	63 000	21 000	21 000	21 000
	49.	**Component total**	**63 000**	**21 000**	**21 000**	**21 000**
60.	**Miscellaneous**					
	61.	*Sundries*				
		Steering Committee meeting	4 500	1 500	1 500	1 500
		Advisory Committee meeting	4 500	1 500	1 500	1 500
	69.	Component total	9 000	3 000	3 000	3 000
		Sub-total 1	**156 600**	**52 200**	**52 200**	**52 200**
70.	**EA's management costs**					
	71.	*EA's monitoring costs*	63 083			
	72.	*Focal point's Monitoring cost*				
	79.	Component total	63 083			
	GRAND TOTAL		**219 683**			

In US dollars; US$ 1 = FCFA 500

3.5 Assumptions, risks and sustainability

3.5.1 Assumptions and Risks

The use of different contributions and the implementation of planned activities will in the short term improve management and availability of reliable geo-spatial forest information and in the long run it will contribute to the optimization of forestry potential and the sustainable management of Togo forest estate.
Achieving these objectives will be possible if:

- The marked and sustained commitment of the government to improve forest management in Togo is continued.

Indeed the government has committed in the process of developing its new forest policy and updating its National Forest Action Plan (NFAP) with the technical and financial assistance of FAO, the validation of the action plan is expected before the end of 2011, these two documents take full account of the concept of sustainable forest management and participation of all stakeholders to contribute to the 30% expansion of the forest cover to be achieved by 2050.

In addition, the Government of Togo held from 8 to 9 June 2011 the Round Table of Technical and Financial Partners, which mobilized all stakeholders for the presentation of Togo's national investment programme for the environment and natural resources (PNIERN) and its National Action Plan for the Water Sector and Sanitation (PANSEA) in synergy with the PNIASA (National Programme for Agricultural Investment and Food Security). All programs are designed to ensure environmental sustainability.

- The management of forest resources is transparent

To achieve transparency, Togo has expressed interest in December 2010 to join the FLEGT process with the European Union to ensure the legality and timber tracking along the forest products marketing chain. In addition, as part of PD 124/01 Rev .2 (M), the country has undertaken the drafting of national PCIs, which paves the way for forest certification.

- The stakeholders involved continuously use all acquired equipment and skills.

The interest displayed by stakeholders for the use of GIS in sustainable forest management, coupled with the obligation under the Forest Code for forest managers to rely on a forest management plan will lead to a more intensive use of GIS.

- Staff trained in collecting and centralizing data do not fully participate in the project.

The obvious enthusiasm of the forestry administration staff to become more professional in the use of GIS applied to forest management and the benefits of reducing the tediousness and hardship associated with the collection and processing of geospatial data at field level through the use of this tool enhance the chances of having all stakeholders supporting and participating in project activities.

- Full participation in the project staff trained in collecting and centralizing data

Most of the stakeholders of the project prove to be the primary beneficiaries and considering the interest of a large number of stakeholders for the desired results, there is a guarantee that everyone will work to achieve the project objectives. But memos and decisions will be made in support of the liberalization of the collection of industry information data. These memos and decisions will prevent unwanted assignments of trained agents and help secure their position, allowing them to fully participate in the activities leading to the achievement of the project objectives.

3.5.2 Sustainability

After completion of this project, all parties will be equipped with a sustainable tool kit. The equipment installed will help continue developing digital maps. With the coupling of satellite data with those

collected and disseminated at regular intervals, there will be daily monitoring of any changes occurring in relation to the national coverage map.

Once installed the GIS will be an effective decision tool for the forest sector of Togo as long as possible. During the project, and especially in its last year of implementation, project outcomes and operations will be taken over by the Government of Togo and all stakeholders.

At present, the ODEF management has a *Surveying And Engineering Work Service* and a Statistics And Planning Service that are both all but nascent and currently use rudimentary means and methodology. Through its activities, the project will provide the establishment of a centralized data management structure for the forestry sector which will be attached to an ODEF division and working with both services. The collection, processing and dissemination of geo-spatial forestry sector information should return to this division after the project; ODEF will then include all these activities in its annual operational plan and budget to ensure continuity.

Once the communities are involved and play an active part in forest development, this new structure will supply services such as mapping of private plantations that generate income to contribute to its sustainability. It will maintain a functional link with the land registry and will be supplied with data by trained officers who are now paid by the state and ODEF for their current functions. The management of the project will be, as it were, entrusted to the implementing agency who will ensure the sustainability of project achievements.

This will help continue developing and updating maps of forest stands and have complete and accurate knowledge of the potential of forests for sustainable management.

PART FOUR: IMPLEMENTATION ARRANGEMENTS

4.1 Organization structure and stakeholder involvement mechanisms

4.1.1 Executing Agency and Partners

The executing agency of this project is ODEF (*Office de Développement et d'Exploitation des Forêts*). It works in partnership with the central governance structures of MERF, NGOs in the forestry sector, rural communities associations and groups based around the forest areas, decentralized services of related sectors and the private sector (planters and farmers). ODEF is a parastatal agency whose mission includes the management, equipment and development of State forest areas. This agency has extensive experience in implementing projects funded either by the state or by development agencies, in this case ITTO.

It has a Technical Department in its Topography and Engineering Work Division that has to manually develop and update maps of gazetted forests and other reserve forests of the State.

This division will provide the organization structure for the computerization and digitization of maps planned in this project.

ODEF is in charge of appointing the coordinator and accountant of the project. It has a skilled and numerous staff available for the implementation of this project. ODEF's field-level actions provide the agency sufficient knowledge of forests and people who live there.

Using the premises of its new headquarters and those of its regional offices, ODEF will provide the project several office spaces.

4.1.2 Project Management Team

Members of the project management team are as follows:

The Project Coordinator

One computer expert specializing in GIS management

One forest cartographer

1 Accountant/ Secretary

2 Data entry and processing assistants

1 Driver / Mechanic

1 Messenger boy

4.1.3 Project Steering Committee

As part of its responsibilities, ODEF will establish a steering committee to oversee the project. This committee membership will be as follows:

One representative of ITTO

One representative of MERF, MUAT

One representative of the University of Lomé (SDS or Geography)

One representative of the forestry sector NGOs

One representative of the project donors

One project coordinator.

One representative of local communities.

4.1.4 Stakeholder involvement mechanisms

With the existing partnership between the executing agency and the various stakeholders, the participation of the latter will only consist in appropriately associate them to the corresponding activities. A platform will be provide through which these stakeholders will be able to provide inputs to the project. The Ministry of Environment and Forest Resources (MERF) will act as governing institution for the project. The project steering committee will take charge of project implementation, monitoring and evaluation. The Executing Agency will also establish an advisory committee to provide information to stakeholders and provide a platform through which they can provide inputs to the project. It has no jurisdiction in the project but will pass on his comments to the Chair of Project Steering Committee.

Its membership will include

One representative of trade associations of the timber industry;
One representative of the National Working Group for Togo (GNT / GDF-Togo);
One independent expert;
One representative of the cadastre/Land Registry Department and national cartography department
Two representatives of the University of Lomé (FDS and Geography)
2 representatives of local communities benefitting from certain taxe receipts, logging, research institutions and civil society organisations and/or NGOs.

The Chair shall be elected at the first meeting convened by the Coordinator, who will be acting as Secretary of the meeting.

With the assistance of the Ministry in charge of Cartography and the Cadastre (Land Registry) and participation of local communities, the identification of gazetted forest boundaries or the delimitation of new plantations will be easier to map out. The officers to be trained for data collection will be supported in the performance of their duties by the Regional and decentralized services of Waters and Forests of both MERF and ODEF. At the implementing agency's headquarters in Lomé, there will be a data centralising and processing structure. Processed data will be used for mapping the forest and the production of maps of the area will now be coordinated with support from the Ministry in charge of Cartography and the Land Registry (CMC). These data will also be broadcast by the communication channels of MERF and NGOs in the forestry sector.

Universities and other institutions with a technical potential will be an indispensable source of expertise and support in training or capacity building under this project. The other stakeholders (farmers and private operators) will take part in the various workshops planned.

4.2 Reporting and review, monitoring and evaluation

After the first Steering Committee meeting following the effective funding of the project, ODEF, acting through the Project Coordinator, shall submit a project inception report. This report must describe the arrangements required to undertake project implementation.

The annual operational plan for the first year must already incorporate an internal monitoring system to enable ODEF and the project coordination unit to improve project performance. The internal

monitoring is conducted once a year and should take place before the project steering committee meeting. The decisions taken by this committee shall be reported in minutes wherein any issues will be described (recorded in progress reports) together will solutions addressing them. Monitoring and review work will use the logical framework matrix and the work plan as reference documents. The review mission conducted by ITTO Staff (representing ITTO in Africa) is to be organized in collaboration with ODEF and MERF.

Progress reports shall be submitted every six months and will conform with the 3rd Edition (2008) of the « ITTO Manual for Project Monitoring, Review and Evaluation » and forwarded to ITTO in February and August of each year.

A project completion report will be submitted by ODEF by the end of the 36 months in the event where the project would be effectively completed by then.

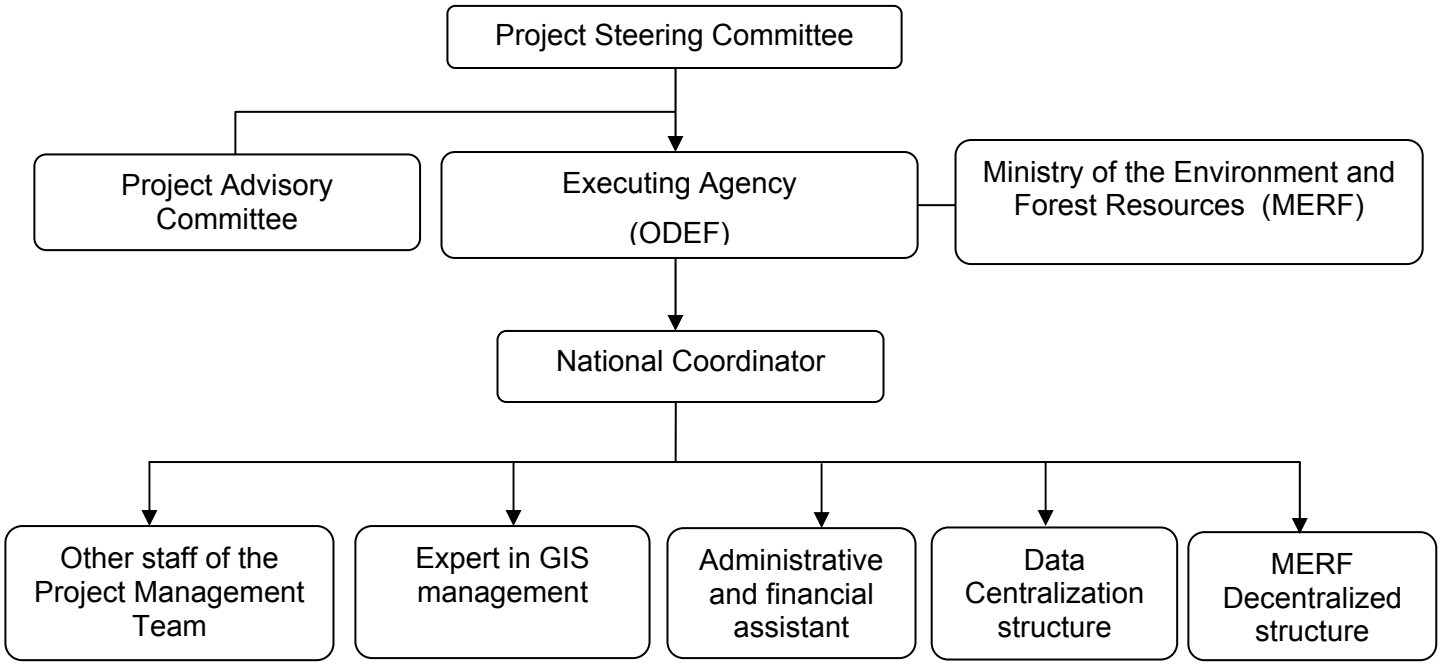

Figure 4 : Project staff chart

4.3 Dissemination and mainstreaming of project lessons

4.3.1 Dissemination of project results

To ensure wide dissemination of the results of this project, awareness-raising and knowledge sharing workshops will be organized. Most of the time, these workshops will bring together the stakeholders of the project and will also provide a venue for the dissemination of project results. Community radio stations of the five regions of Togo and the web pages of the site of MERF will broadcast project outcomes. In addition, the *Journal de l'Environnement* and Forest Sector NGO's dailies will provide the main media for disseminating project results. It is also advisable to use other workshops or conferences organized by the stakeholders during the time of the project to disseminate its results.

4.3.2 Mainstreaming project lessons

The installation of a computer system which will enable compiling, managing, analysing combining, developing and presenting geographically localized information and contribute to the management of forest areas as a

whole from different sources is a great innovation for the forest sector of Togo. MERF is a stakeholder and the prime beneficiary of the project, and after having acquired the ownership of the gains of this innovation, it will be responsible for integrating them into national policies and plans.
Through workshops and conferences that bring together different actors and the mass media, multiple presentations of the results of this project will generate more outstanding and sustained political support to the forestry sector. This political commitment will be reflected in the regular dissemination of information data provided by the GIS and will sufficiently help decision makers involved in the development, operation and management of forest resources in the country.

ANNEX 1: EXECUTING AGENCY PROFILE

1. Expertise

ODEF is a Governmental organization established by Decree N°71-204 of 13 November 1971. Its mission includes the management and development of the Permanent Forest Estate. ODEF's achievements to-date include the establishment of over 9000 ha of plantation for the State. These projects were financed by the Government or alternatively by development organizations. They include the following:

- Project TOG/88/008 : Reforestation and forest management including the establishment of some 700 ha;
- Project PAM/TOG/2818 and TOG/AGR/0010: Forest Development with the establishment of almost 1,500 ha of teak plantation; and
- The AFRI Project financed by the *Caisse Centrale de Coopération Française* (Central French Cooperation Fund) and the Government of Togo through which 3,500 ha of Eucalyptus plantations were established.

During the past three years, ODEF has implemented the following actions in partnership with ITTO:

- PD 168/02 Rev. 1 (M) : "Establishment of a National System of Collection, Input, Processing and Dissemination of Forestry and Timber Statistical Data in Togo" ;
- PD 217/03 Rev. 2 (F) : "Establishing a Cooperative Framework Between ODEF and the Communities Living in the Eto-Lilicope Forest Complex for the Sustainable Participatory Management of this Complex"

2. Infrastructures

ODEF has its Headquarters in Lomé and covers 15 geographical sectors and sub-sectors over the entire Togolese territory. The General Directorate is organized around a Technical Directorate, and Administrative and Financial Directorate and a Commercial Directorate. ODEF's Technical Directorate includes a relatively well-equipped Engineering Department that enables it to implement studies, monitor work under implementation and undertake some associated research projects at field level. Thus, it provides support to other Governmental Forest Departments both with staff and equipment. At field level, its actions cover 15 gazetted forests totalling 120,000 ha approximately. Five nurseries with a capacity of over 2 million seedlings can supply seedlings to reforestation projects and provide training facilities and infrastructure for the training of a large number of nursery operators.

3. Budget execution

ODEF enjoys its own administrative and financial autonomy. Its budget for the past 3 years, not including project-funding contributions, breaks down as follows:

Component	**Year 2007**	**Year 2008**	**Year 2009**
Sub-contracting A+B (n°62&63)	1 067 837	1 126 459	392 861
Duty Travels (61&63)	68 818	66 217	31 030
Acquisitions and Capital Goods (n°2)	152 289	440 047	5 733
Consumables (n°60)	483 427	566 605	304 430
Personnel (n°66)	634 905	683 677	679 484
Total	**2 407 276**	**2 883 005**	**1 413 539**

4. Personnel

In January 2010, ODEF personnel included 192 officers and administrative staff:

- Design and Development Engineer: 05
- Senior Engineer : 15
- Assistant Engineers : 24
- Administrative executives: 38
- Others (Office Staff, Rangers & Patrol Officers, drivers) : 110

ANNEX 2: CURRICULUM VITAE OF KEY PROJECT STAFF SECONDED BY THE EXECUTING AGENCY

CURRICULUM VITAE I

Name	**GBADOE**
Forename	**Edjidomélé**
Date and place of birth	05 April 1958 in Lomé (TOGO)
Sex	Male
Family status	Married with four (04) children
Nationality	Togolese
Profession	Ingénieur des Eaux et Forêts et des Chasses (Forest and Wildlife Engineer)
Address	e-mail: redjidomele@yahoo.fr BP:13 623 Lomé TOGO Tel: (00 228) 905 40 62 et (00 228) 953 61 97
Professional references	1- EGLI Arnold : aeegli@bluewin.ch 2- BARBIER Claude: claude.barbier@crpf.fr 3- AGOGNO Koffi: Tél: 958 37 04

MAIN SPECIALISMS AND GRADUATION

• **Silviculture and Management**	
– Training institution	– from 1983 to 1986 – E.N.S.A. - Foresterie Centre Universitaire de Dschang CAMEROUN
– Degree	– *Ingénieur des Eaux et Forêts et des Chasses* (Forest and Wildlife Engineer)
– Main subjects	– Silviculture, forest management, wildlife and hunting, logging, wood working technologies, soil protection and restoration ; forest inventories
• **Agro-pastoralism**	– from 1979 to 1982
– Training institution	– *Ecole supérieure d'agronomie* (ESA-UB TOGO)
– Degree	– Executive Engineer in Agronomy
– Main subjects	– Specialist crop cultivation, zootechnics, rural sociology, rural economy, botany, soil science, farm operational management.
• **Baccalauréat**	– Major: Natural science (1979)

PROFESSIONAL EXPERIENCE

- **23rd February 2009 to-date** — *Office de Développement et d'Exploitation des Forêts*
  - Position: General Director of ODEF
  - Duties: Coordination and monitoring of administrative, financial and commercial activities

- **1st June 2007 to 22 February 2009**
  - Position: Head of Studies and Planning Division
  - Duties:
    - Scheduling, monitoring and evaluation of ODEF activities through an Annual Operations Plan, Project design and development; supervision of construction work (building and forest roads); preparation of periodical and annual reports.
    - Design and execution of forest inventories

- **September 2004 to 30 April 2007** — Volunteer at the United Nations
  - Position: HCR Abéché – Chad, UNV Environmental expert
  - Duties: Integration of environmental factors in systems to be implemented in programmes to settle Sudanese refugees in eastern Chad

CURRICULUM VITAE II

Name et Forename: ASSI Hèmou

Title: Engineer in Water, Forest and Hunting Resources Management - de 1st grade, 2nd level; n° mle 043459-M

Date and Place of birth: 31/12/1971 in Soumdina (Kozah/Togo)

Family Status: Married with children

OBJECTIVES

- Practice in the areas of planning, implementation and evaluation of programs or projects related to forestry, sustainable forest management, wildlife management, agriculture, livestock and climate change;
- Initiate and formulate development projects in the fields of forestry, wildlife, agriculture and livestock;
- Work for the sustainable management of natural resources, biodiversity conservation and climate change mitigation;
- Manage the processing units of industrial wood (sawmill unit peeling, cutting and wood preservatives, woodworking industry);
- Promote trade in forest products and services, environmental education.

TRAINING

- **2003-2004**: *Université Libre de Bruxelles (ULB), Faculté Universitaire des Sciences AgroNameiques de Gembloux (FUSAGx)* and *Université de Liège (ULg) – Communauté Inter Universitaire Francophone de* ***Belgique*** *(CIUF)/Commission Universitaire au Développement (CUD):*
  Diplôme Inter Universitaire d'Etudes Spécialisées (DIUES) en Gestion des Ressources Animales et Végétales en Milieux Tropicaux (Degree in Inter-University Specialist Studies in Tropical Flora and Fauna Resources Management)

- **1998-2000**: *Centre Régional d'Enseignement Spécialisé en Agriculture, Forêts - Bois (CRESA Forêts-Bois) de Yaoundé (Cameroun) – Agence Universitaire de la Francophonie (AUF)*:
  Diplôme de Master en Valorisation Industrielle du Bois (Master Degree in Timber processing).

- **1991-1997**: *Ecole supérieure d'agronomie (Esa), université du bénin (Togo):*

Diplôme d'Ingénieur Agronome, option: Agro-Economie (Degree in Agronomic Engineering, specialism in Agronomy).

- **1990-1991**: Ecole Nationale Supérieure d'Ingénieurs (ENSI), Université du Bénin (Togo).

- **1987-1990:** High School (Lycée Maman N'Danida de Pya):
  Baccalauréat Diploma, Series C (Maths and Physics)

PROFESSIONAL EXPERIENCE
From Feb. 2009 to date: Technical Director of the *Office de Développement et d'Exploitation des Forêts* (ODEF)
2007-2008 (May 2007 – May 2008): National Consultant with the International Tropical Timber Organization (ITTO) and a member of the ITTO Technical Mission in Togo in charge of assessing the progress of Togo towards the achievement of the Year 2000 Objective as part of sustainable tropical forest management.
2007 (November 2007 – February 2009): Head of the Silviculture and Management Division at the *Office de Développement et d'Exploitation des Forêts* (ODEF)
2004 - 2007: Co-Director representative of the Togo Government in the Projet de Reboisement et d'Aménagement Forestier (PRAF-00/MERF-GTTC) jointly funded by the Globe Timber Trading Company (GTTC) and Togo.

CURRICULUM VITAE III

Name:	**ALI**
Forename:	**Salissou**
Date and place of birth:	31 December 1976 in Kolina, Togo
Nationality:	Togolese
Sex:	Male
Profession:	Field Agrologist Engineer, Specialist in Participatory Forest Management and Development.
Address:	Office de Développement et d'Exploitation des Forêts (ODEF), B. P. 334 – Lomé Togo, Tél. + 228 221 42 17 e-mail: salissou@msn.com

FIELDS OF EXPERTISE

► ***Forest Management***
3. Project Management of a forest and protected area;
4. Forest Mapping and Geographic Information Systems (GIS);
5. Forest Inventories (flora and fauna) and data processing and analysis;
6. Socio-economic Studies of forest inhabitants;
7. Participatory Diagnosis and Systemic Approach;
8. Preparation of Community Forest Development and Management Plans and Forest Management Units.

► ***Tropical Agronomy***
9. Management of farmstead activities and structures;
10. Crop cultivation techniques and parasite control;
11. Value-added development of local resources;
12. Rural community work and agricultural extension services
13. Agro-forestry projects.

TRAINING AND EDUCATION

2007: **Forest Manager – ATIBT *(Forest Stands Dynamics)***
Association Technique Internationale des Bois Tropicaux (Faculté Universitaire des Sciences Agricoles de Gembloux & Ecole Nationale des Eaux et Forêts du Gabon).

2004: **DESS (Post-graduate Diploma) in *Participatory Forest Resource Development and Management*** (15 months); Centre Régional d'Enseignement Spécialisé en Agriculture, Forêt et Bois (CRESA Forêt-Bois, University of Dschang, Cameroon).

2002: **Engineer's Diploma in Tropical Agronomy** (Bac + 5), University of Lomé, Togo.

1995: **Baccalauréat Series "D" (Mathematics and Biology),** Togo.

PROFESSIONAL EXPERIENCE DEVELOPED DURING THE PAST FIVE YEARS

August 2009 to present: Head of Planning Division: *Office de Développement et d'Exploitation des Forêts* (ODEF, Togo)

- Supervision and performance monitoring at subdivision level
- Preparation of progress reports
- Development of a strategy in compliance with national forest policy
- Liaising with other institutions and other Forestry Services
- Design of forestry inventories and taking forest management records
- Forestry research and silvicultural monitoring;
- Initiation and development of project and pre-project proposals;
- Development of scope of works/ToR;
- Coordination of development and monitoring of annual work schedule and budgets

November 2007 to July 2009: Head of Planning Division: *Office de Développement et d'Exploitation des Forêts* (ODEF, Togo)
- Operational planning within ODEF ;
- Initiation, design and development of project ideas, project and pre-project proposals;
- Development of technical submissions to approach potential donors;
- Effective participation in the design and monitoring of Office's budget execution;
- Development of contracts and specifications.

March 2006 to October 2007
Specialist in Participatory Forest Development and Management,
Office de Développement et d'Exploitation des Forêts (ODEF)
ITTO Project PD 217/03 Rev. 2 (F)*: "Establishing a Cooperative Framework Between ODEF and the Communities Living in the Eto-Lilicope Forest Complex for the Sustainable Participatory Management of this Complex".*
- Preparation of information and awareness-raising tours;
- Preparation of training, validation and evaluation workshop;
- Organizing the participatory diagnosis in a collaborative way;
- Preparing the partnership between the Forest Administration and the communities;
- Providing support to the NGO and the organisation of the communities within the project area;

May 2005 to February 2006
Consultant, Head of Inventory Squad: *Horizon Vert (HV-GIE)*,
Projet ITTO PD 28/00 Rev. 2 (F)*, "Integrated Management of Community Forests in the Valley of Mefou and Afamba (Central Province of Cameroon)".***
- Conduct of inventory work in community forests in Koukounou, Ofoumnselek and Odoudouma (Central Province;

- Digital mapping (on GIS) and demarcation of community forests
- Conduct of inventory work (strip clearing and stem counting);
- Data analysis and compilation of inventory reports
- Support to the preparation of community forests management plans.

CURRICULUM VITAE IV

A. PERSONAL AND FAMILY STATUS

Name and forename	: **KOMBATE Arifou**
Date of birth	: 05 January 1977
Qualification	: *Technicien Supérieur des Eaux et Forêts* (Senior Forest Engineer)
Sex	: Male
Nationality	: TOGOLESE

B. ADDRESS

Direction Générale de l'ODEF
Tél: (228) 251 42 17, Fax: (228) 251 42 14
Mob: (228) 929 58 60
E-mail: karifou2@yahoo.fr
BP: 334, LOME - TOGO

C. ACADEMIC BACKGROUND

Periods	Academic institutions	**Graduation**
2002 - 2004	Institut National de Formation Agricole (INFA) de Tové.	DTSA (Agricultural Engineer) Option: Forestry.
1996 - 2001	Lycée Nassablé de Dapaong	Baccalauréat 2e part: Section D (Maths & Nat. Sciences)
1991 - 1996	CEG Nassablé I	BEPC
1984 - 1991	EPP Koutong-Bong	CEPD

D. IN-TRAINING PERIODS

Duration	Types of traineeship	Host Institution
1 week	Training in ITTO Project formulation	ITTO-GABON
2 weeks	Training on SFM and Forest Certification	ASDI-BENIN
3 weeks	Training on SFM and Forest Certification	ASDI-SWEDEN
3 months	Basic military training (FETTA)	CNI-Kara
11 months	Stage d'insertion professionnelle	GA2D-TRAX-TOGO
3 month	Traineeship toward the preparation of a thesis: *Topic: Urban Parks Management Issues in Togo : The case of Lomé City*.	Urban Parks Division
6 weeks	Technical traineeship	Dzogbégan Monastry
4 weeks	Skill-upgrading traineeship	DCV-Mango
4 weeks	Traineeship : Surveying rural communities	ICAT - Kpalimé

E. CAREER HISTORY

Duration	Position	Institution / posting
July 2009 to-date	Manager, Statistics and Planning Division	ODEF-Lomé
2008 - 2009	Technical Division Manager	ODEF-Lomé
2007 - 2008	Assistant Sub-Division Manager	ODEF- Avétonou
2006 - 2007	Assistant Operations Manager	ODEF-Aou-Mono

F. PROFESSIONAL SKILLS

1- Language skills

- French (speaks, reads and writes)
- English (speaks, reads and writes)

2- Computer skills

- Microsoft Word - Internet
- Excel - Power point

3-Professional specialist areas

- Planting, conduct and management of forest stands;
- Conservation area management;
- Management of farmers' associations ;
- Implementation of the various agro-forestry systems

G. RESOURCE PERSONS

Dr KOKOU Kouami, Lecturer and research fellow at Université de Lome; Tel: (228) 902 04 11, Fax: 228 21 85 95 ;
M. GNAMKOULAMBA Atama, lecturer and trainer at INFA in Tové; Tel:(228) 919 68 76; Landline: 228 441 07 75.

ANNEX 3: TERMS OF REFERENCE OF STAFF / PROJECT CONSULTANTS PAID ON ITTO FUNDS

□ ToR for the project coordinator

Profile and experience:

The Project Coordinator must be a « Water And Forests » engineer with notions of space technologies, including Geographic Information System, and capable of managing multiple information sources into a homogeneous whole. It will have extensive experience in sustainable forest management and at least five years of professional experience in ITTO project management. A spirit of collaboration and ease of negotiation are some useful skills in the implementation of the project.

Mandate:

He is in charge of general project implemention and is responsible for:

- Develop a detailed work plan;

- Prepare detailed terms of reference;

- Produce reports on the different stages of the project;

- Prepare tenders and purchase orders and monitor the acquisition of hardware, software and supplies for the project;

- Follow the installation of project equipment and facilities;

- Plan activities and project expenditures;

- Plan and organize training workshops and awareness sessions;

- Take the necessary contacts for the establishment of a centralized management structure of the forestry sector data;

- Facilitate the coordination of the mapping work on project demonstration forests.

- To introduce Forest Sector Stakeholders the GIS and their role

- To raise awareness to the problems linked to the lack of GIS in the sector

- To conduct advocacy towards stakeholders on the importance of using GIS.

Duration of posting: 36 months.

□ Terms of Reference for the computer expert specializing in GIS

Profile and experience:

The expert is an applied computer science engineer specialising in geo-spatial technologies and geographic information system and database. He must have a minimum of five years experience in the areas of geomatics expertise and an extensive experience in implementing and managing GIS. Experience in managing forest sector GIS will be an asset for this position.

Mandate:

- Provide expert support in the selection and purchase of hardware and software;

- Identify data sources;

- Initiate the acquisition of satellite images;

- Train forest officers to the collection and processing of data;

- Establish the database;

- Train the forest sector stakeholders in the development of digital maps;

- Train managers in the management of GIS to implement.

Duration of posting: 12 months

❖ Terms of reference for the basic IT facility support structure:

Profile and experience:

It will be a legally established IT firm operating for over 50 years and whose expertise and resources enable it to operate in all regions of the country. Apart from the time of its mandate with the project it could be occasionally referred to other services. To be the holder of certificates of services will be a major asset for the selection of the structure.

Mandate:

- Monitor the purchase and installation of computer equipment in all regions

- Operate hardware maintenance

- Provide technical support to the various technical training and capacity-building sessions provided in the project.

Duration of assignment: 2 months.

ANNEX 4: RECOMMENDATIONS OF THE 42ND ITTO EXPERT PANEL AND RESULTING CHANGES

A) General Comments by the Expert Panel

The Panel acknowledged the efforts made by the proponent in addressing the comments and recommendations of the Panel at its Thirty-ninth Meeting, resulting in the improvement of most components of the revised project proposal. The Panel noted that there was still a need to address some remaining minor weaknesses noticed in some sections and sub-sections, and it was also noted that the fourth, fifth, seventh and tenth recommendations of the Fortieth Expert Panel meeting were only partially addressed in the revised version of the proposal. Those noticed weaknesses mainly include the following: stakeholder analysis with the description of the level of consensus reached by primary stakeholders still inadequately described; Logical Framework Matrix presenting indicators with non-realistic time horizon for the development objective, indicators not measuring the immediate effects expected to be achieved by the project (but looking like outputs) for the specific objective, and indicators of the Output 2 were too ambitious.

The Panel also noted that there was still no clear explanation, in the implementation approaches and methods, showing the current situation regarding the management of data and information and how the geographical information system (GIS) would contribute to solve the identified key problem through the implementation of the project. The Panel further noted that the justification for the need to purchase one vehicle and five motorcycles was still missing in the revised version, if the proponent wants those items to be budgeted under ITTO contribution. In addition, the Panel noted that the assumptions and risks were still described without adequate mitigation measures, while the sustainability was still questionable due to the lack of information on the source of finance for the follow-up actions after the project completion. Finally, the Panel noted that there was still a need to improve the reporting, review, monitoring and evaluation section in accordance with the standard operating procedures applying to the ITTO project cycle and implementation.

Amendments introduced:

Amendments have been incorporated into the project documents in line with the specific comments. The following table is a summary of changes addressing the specific comments by the Expert Panel:

B) Recommandations spécifiques

N°	EXPERT PANEL RECOMMENDATIONS	CHANGES INTRODUCED
1.	Further improve the logical framework matrix by including SMART indicators for the development objective, specific objective and Output 2 in light of the above overall assessment;	- **One (1) database comprising reliable geo-spatial data on the forest sector is available at national level by the third year of the project** **- By the 3rd year of project life, the decision-making process for forest management is based on reliable scientific data.** **- By the 2nd year of project life, one (1) central structure for collecting and managing centralized geospatial information on forests is operational**

2	Provide clear explanation on the level of consensus reached among primary stakeholders in the stakeholders' analysis;;	**Stakeholders analysis** The implementation of this project is proving to be beneficial for all identified stakeholders as they almost all have similar or more or less interconnected problems and needs. The very basic state of data management in the forest sector affects all these stakeholders, each in its own remit: - ODEF, which manages some of the state forests has great difficulty in its manual developing maps and in processing other data on these forests, and find planning of its field-level activities a challenge. - The private forest owners cannot know exactly their plantation area nor have they maps of their plantations to enable sustainable management. - For landowners, the traditional mode of transmission from one generation to another of land boundaries creates land conflicts with the forestry administration or with their neighbours because of virtual nature of these boundaries (natural boundaries such as trees, termite mounds, trails, villages, etc..) - Logging companies have no control of their operating costs due to poor planning of operations. In addition, they frequently receive logging permits for parcels already under loggin and there are case where different permit-holders can be found on one same parcel or that they operate beyond the limits of their permit. - The decentralized services of the forest administration that are responsible for monitoring the implementation of logging permits are very often powerless in the face of potential boundary conflicts because such permits were issued by their very ministry (MERF). - The Ministry in charge of Mapping and Cadastre is having difficulties in regard to the estimation of forest areas encroached by the communities and the changes introduced to the national forest estate that are actually data meant to assist land-use planning efforts. - Universities and NGOs that use and disseminate data in the forestry sector are faced with issues caused by data unavailability and unreliability. Academics whose research work is broadly focused on species and stand dynamics have difficulty in monitoring the study sites and their activity planning. **As all stakeholders were driven by a burning desire to find a way to work around their various problems mentioned above, several meetings between the forestry administration and other stakeholders were held during the year 2010, resulting in a first training workshop involving a number of stakeholders (see appendix: Workshop Report). All stakeholders have agreed on actions to be taken including:** **- Collect and develop a geospatial database for environment monitoring and land management purposes;** **-Generate and make available information from geo-spatial statistics for monitoring and evaluating environmental parameters;** **-Set up an intelligence system for the prevention and monitoring of both natural and man-made phenomena and disasters (bush fires, floods, marine pollution, drought, etc.).** **- Equip and train forest management stakeholders in GIS at both regional and local levels** **These meetings have opened up new prospects and outlooks among participants on core issues and especially on the challenges of appropriate decision-making in resource management i.e protected areas, forests and the environment as a whole.**
3	Insert in the "implementation approaches and methods"	**Implementation approaches and methods**

	section an overview of the current situation regarding the management of data and information (without a GIS);	In Togo data collection, processing and storage and the establishment of plantation and forest maps are conducted in a rudimentary way, which explains the non-availability on time and the lack of reliable data, making appropriate forest management decisions difficult. **Indeed, the demarcation of plots for afforestation is done at ODEF level using a compass and a measuring tape. Data reporting is done manually using duplicating carbons. Acreage estimates are made using a pantograph or by counting tiles. By contrast, in private growers' areas demarcation work is carried out using surveyor's tapes and data are never processed (hence acreage values are mere estimates). For the daily management of maps drawn by hand, a non-coloured copy is always retained for each map, to be photocopied and coloured whenever the need arises. The processing of these map data is also carried out by hand as it often happens that errors on paper are translated into very large discrepancies in the planning of field activities.** **The private forest owners who are generally small producers cannot obtain the services that would enable them to know acreage values in detail or accurately, nor do they have maps of their plantations that would enable them to engage in appropriate SFM practices.** **For landowners, land inheritance law and procedures are still traditional, relying on natural landmarks such as trees, termite mounds, trails, villages, etc.. that are used to materialize land estate boundaries.** **Once these natural boundaries are displaced or found missing, these landowners or private forest owerners often encroach on neighbouring estates or Government land estates.** This state of affairs is such that the management of geo-spatial information on Togo forests has remained in infancy till now. The acquisition and installation of equipment and the definition and implementation of a centralized management structure will make new data collection and digitization of existing ones operational. This project will be run in direct or indirect collaboration with all GIS stakeholders in general and in particular those having an interest in GIS applications to forestry. By using a participatory approach, stakeholder groups will be involved at various levels after the consultations, advocacy and capacity building efforts provided for in the project.
4	Further improve the section regarding the assumptions, risks and sustainability by providing more specific information on appropriate mitigating measures for potential risks, in relation to assumptions made in the logical framework matrix, and also clearly explain the source of financing for	**Assumptions and risks** The use of different contributions and the implementation of planned activities will in the short term improve management and availability of reliable geo-spatial forest information and in the long run it will contribute to the optimization of forestry potential and the sustainable management of Togo forest estate. Achieving these objectives will be possible if: **- The marked and sustained commitment of the government to improve forest management in Togo is continued.** **Indeed the government has committed in the process of developing its new forest policy and updating its National Forest Action Plan (NFAP) with the technical and financial assistance of FAO, the validation of the action plan is expected before the end of 2011, these two documents take full account of the concept of sustainable forest**

	follow-up actions after project completion;	**management and participation of all stakeholders to contribute to the 30% expansion of the forest cover to be achieved by 2050.** **In addition, the Government of Togo held from 8 to 9 June 2011 the Round Table of Technical and Financial Partners, which mobilized all stakeholders for the presentation of Togo's national investment programme for the environment and natural resources (PNIERN) and its National Action Plan for the Water Sector and Sanitation (PANSEA) in synergy with the PNIASA (National Programme for Agricultural Investment and Food Security). All programs are designed to ensure environmental sustainability.** **- The management of forest resources is transparent** **To achieve transparency, Togo has expressed interest in December 2010 to join the FLEGT process with the European Union to ensure the legality and timber tracking along the forest products marketing chain. In addition, as part of PD 124/01 Rev .2 (M), the country has undertaken the drafting of national PCIs, which paves the way for forest certification.** **- The stakeholders involved continuously use all acquired equipment and skills.** **The interest displayed by stakeholders for the use of GIS in sustainable forest management, coupled with the obligation under the Forest Code for forest managers to rely on a forest management plan will lead to a more intensive use of GIS.** **- Staff trained in collecting and centralizing data do not fully participate in the project.** **The obvious enthusiasm of the forestry administration staff to become more professional in the use of GIS applied to forest management and the benefits of reducing the tediousness and hardship associated with the collection and processing of geospatial data at field level through the use of this tool enhance the chances of having all stakeholders supporting and participating in project activities.** **- Full participation in the project staff trained in collecting and centralizing data** Most of the stakeholders of the project prove to be the primary beneficiaries and considering the interest of a large number of stakeholders for the desired results, there is a guarantee that everyone will work to achieve the project objectives. But memos and decisions will be made in support of the liberalization of the collection of industry information data. These memos and decisions will prevent unwanted assignments of trained agents and help secure their position, allowing them to fully participate in the activities leading to the achievement of the project objectives.

		Sustainability **After completion of this project, all parties will be equipped with a sustainable tool kit. The equipment installed will help continue developing digital maps. With the coupling of satellite data with those collected and disseminated at regular intervals, there will be daily monitoring of any changes occurring in relation to the national coverage map.** **Once installed the GIS will be an effective decision tool for the forest sector of Togo as long as possible. During the project, and especially in its last year of implementation, project outcomes and operations will be taken over by the Government of Togo and all stakeholders.** **At present, the ODEF management has a *Surveying And Engineering Work Service* and a Statistics And Planning Service that are both all but nascent and currently use rudimentary means and methodology. Through its activities, the project will provide the establishment of a centralized data management structure for the forestry sector which will be attached to an ODEF division and working with both services. The collection, processing and dissemination of geo-spatial forestry sector information should return to this division after the project; ODEF will then include all these activities in its annual operational plan and budget to ensure continuity.** **Once the communities are involved and play an active part in forest development, this new structure will supply services such as mapping of private plantations that generate income to contribute to its sustainability. It will maintain a functional link with the land registry and will be supplied with data by trained officers who are now paid by the state and ODEF for their current functions. The management of the project will be, as it were, entrusted to the implementing agency who will ensure the sustainability of project achievements.** **This will help continue developing and updating maps of forest stands and have complete and accurate knowledge of the potential of forests for sustainable management.**
5	Revise the section related to the "reporting, review, monitoring and evaluation" in accordance with the standard operating procedures applying to the ITTO project cycle and implementation ;	**Reporting and review, monitoring and evaluation** **After the first Steering Committee meeting following the effective funding of the project, ODEF, acting through the Project Coordinator, shall submit a project inception report. This report must describe the arrangements required to undertake project implementation.** **The annual operational plan for the first year must already incorporate an internal monitoring system to enable ODEF and the project coordination unit to improve project performance. The internal monitoring is conducted once a year and should take place before the project steering committee meeting. The decisions taken by this committee shall be reported in minutes wherein any issues will be described (recorded in progress reports) together will solutions addressing them. Monitoring and review work will use the logical framework matrix and the work plan as reference documents. The review**

		mission conducted by ITTO Staff (representing ITTO in Africa) is to be organized in collaboration with ODEF and MERF. **Progress reports shall be submitted every six months and will conform with the 3rd Edition (2008) of the « ITTO Manual for Project Monitoring, Review and Evaluation » and forwarded to ITTO in February and August of each year.** **A project completion report will be submitted by ODEF by the end of the 36 months in the event where the project would be effectively completed by then.**
6	Revise the ITTO budget in line with the above overall assessment and specific recommendations and also in the following way	
a)	Delete the budget sub-item 41 (1 4WD vehicle and 5 motorcycles) and related consumable costs (sub-item 51), if not clearly justified,	Implementation approaches and methods To help acquire these data, a program of data collection, **verification** and centralization will be made operational with the participation of those people who have benefited from the capacity building exercise and the first phase of awareness-raising campaign. For this purpose, within each of the five administrative regions, a data collection and centralization programme officer will be appointed. **One officer responsible for the maritime region covering a 610,000-ha area distributed over 7 prefectures** **One officer responsible for the Plateaux Region – the largest forested area covering 1,697,500 ha distributed over 12 prefectures,** **One officer responsible for Central Region covering 1,350,000 ha distributed over 4 prefectures,** **One officer responsible for the Kara Region covering 1,162,500 ha distributed over 7 prefectures,** **One officer responsible for the Savannah Region covering 853,400 ha distributed over 5 prefectures.** The tasks of these **trained** officers will consist in ensuring the regional coordination of the various data collection work on natural forests and forest plantations in **these regions** and forward the data to the centralized structure for the creation of the database. To accomplish their task, each manager will have one (1) terrain motorcycle to: **- Monitor the management of private and state forests from their usually scattered, various locations which are typically difficult to access by vehicles** - collect data from operational staff at field level (ODEF sector managers and MERF prefectural superintendents) in each region; - monitor data collection activities - training / retraining of staff. One (1) complete computer unit will also be made available to him for recording primary data before sending them to the regional centralization structure. After having been analysed by the mapping media, these data will be processed, posted, disseminated and filed. **Taking into consideration the difficulties to access the forest areas (due to poor road/track conditions) and the great**

		number of monitoring and data confirmation missions to be conducted at local level (prefectures, canton/district and village levels) and the outreach and awareness-raising missions targeting field-level stakeholders, acquiring an appropriate liaison vehicle will be necessary. This vehicle will be made available to the project coordination unit and will be used, inter alia, to - implementing advocacy / awareness-raising work and build the capacities of stakeholders in the regions, **- The conduct of field-level missions by IT experts specialists in GIS, forest-mapping experts and their local counterparts.** To conduct project computer equipment installation and maintenance mission within the country, **By project completion date, the vehicle and motorcycles acquired by the project will enable the continuation and extension of awareness-raising and data collection activities beyond the pilot forests targeted by this project.**
b)	Recalculate the ITTO Programme Support Costs (sub-item 83) so as to conform with standard rate of 8% of the total ITTO project costs (on budget items 10 to 82);	Budget sub-item 41 (1 4WD vehicle and 5 motorcycles) has not been deleted in view of the rationale put forward in section 3.2 Implementation approaches and method and sub-section 3.5.2 Sustainability, which explains why the Programme Support Cost (sub-item 83) has remained unchanged.
7	Include an Annex that shows the overall assessment and specific recommendations of the 42nd Expert Panel and respective modifications in tabular form. Modifications should also be highlighted (**bold and underline**) in the text	All amendments and additions addressing the comments and recommendations by the Panel have been typed **in bold and underlined.**