

## The Forests of Burkina Faso



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## **Contents**

	<b>Page</b>
<b>Introduction</b>	<b>2</b>
<b>1. The Forests of Burkina Faso</b>	<b>3</b>
<b>2. Extent of Forests</b>	<b>5</b>
<b>3. Forest Property</b>	<b>7</b>
<b>4. Traditional Roles of Forests in Burkina Faso</b>	<b>8</b>
<b>5. Pressures on Forests</b>	<b>9</b>
<b>6. Policies &amp; Relevant Legislation</b>	<b>10</b>
<b>7. Forest Governance in Burkina Faso</b>	<b>12</b>
<b>8. The market and investment opportunities</b>	<b>13</b>
<b>9. The challenges of sustainable forest management</b>	<b>24</b>
<b>10. Investment Challenges</b>	<b>25</b>
<b>11. Case studies</b>	
Case Study 1 Union of Forest Management Groups of the Center-West	27
Case Study 2 UGPPK, Union of Shea Butter Producers, Burkina Faso	28
Case Study 3 Private Production, M. Joseph Kaboré	31
Case Study 4 Sustainable forest management for the socio-economic security of communities in the Central – East region	34
Case Study 5 Forests for Human Well-being: Testimony of Traditional Healer in Sapone	37
<b>Annex 1 Employment and revenue of actors and taxation regimes in the wood and wood energy industry</b>	<b>39</b>
<b>Annex 2 Principle Lessons</b>	<b>51</b>
<b>Bibliography</b>	<b>51</b>

## Introduction

Locally controlled forests involve one billion people and one quarter of the world's forests, providing \$75 - \$100 billion per year in goods and services and a broad range of other economic, environmental, social, cultural and spiritual benefits. Rights-holder organizations such as the Global Alliance of Community Forestry (GACF), the International Family Forest Alliance (IFFA) and the International Alliance of Indigenous and Tribal Peoples of Tropical Forests (IAITPTF), known collectively as the G3, define locally controlled forestry as follows:

*“The local right for forest owner families and communities to make decisions on commercial forest management and land use, with secure tenure rights, freedom of association and access to markets and technology”. (Elson, 2011)*

Exactly what Investing in Locally Controlled Forestry (ILCF) means in practice has been the subject of six dialogues hosted by The Forest Dialogue (TFD) and co-chaired by investors and G3 members under TFD's ILCF Initiative.

Previous dialogues in Panama, Nepal and Macedonia concluded that the three major themes that should be explored in the subsequent dialogues are: partnerships, markets, and government's role. Further, these dialogues recognized that Locally Controlled Forestry involves three groups of rights holders, namely: indigenous peoples, community forestry groups, and forestland smallholders—who own or manage a significant part of the world's forest resources.

The London dialogue agreed that there should be a set of principles or guidelines for ILCF projects that would be useful to both investors and rights holders. Such a set of guidelines could eventually be developed into a code of conduct. The guidelines would have two principal functions:

- ❖ To provide an operational basis for ILCF projects that would aid both investors and land-owners in pursuing their interests and / or defending their rights throughout the process
- ❖ Enable project developers to gain the support of investors and local leaders and their communities by allowing both to present to their constituencies the set of principles / guidelines to which the other side has agreed.

In December 2010 a field dialogue was held in Kenya to build on the outcomes of the London dialogue. Through a series of 4 field trips in Kenya during a 2 day period, followed by two days of discussions, the attendees investigated the 'value propositions' for locally controlled forestry. They also discussed the relevance and utility of two products of the London Dialogue, namely the Principles (code of conduct) of ILCF, and the Steps in Exploring and implementing a Deal. A subsequent writers' workshop was held in London in April, 2011 to develop such principles and steps.

The seventh ILCF dialogue, to be held on September 12 to 16 in Ouagadougou, Burkina Faso will look at ILCF cases in the country with the aim to:

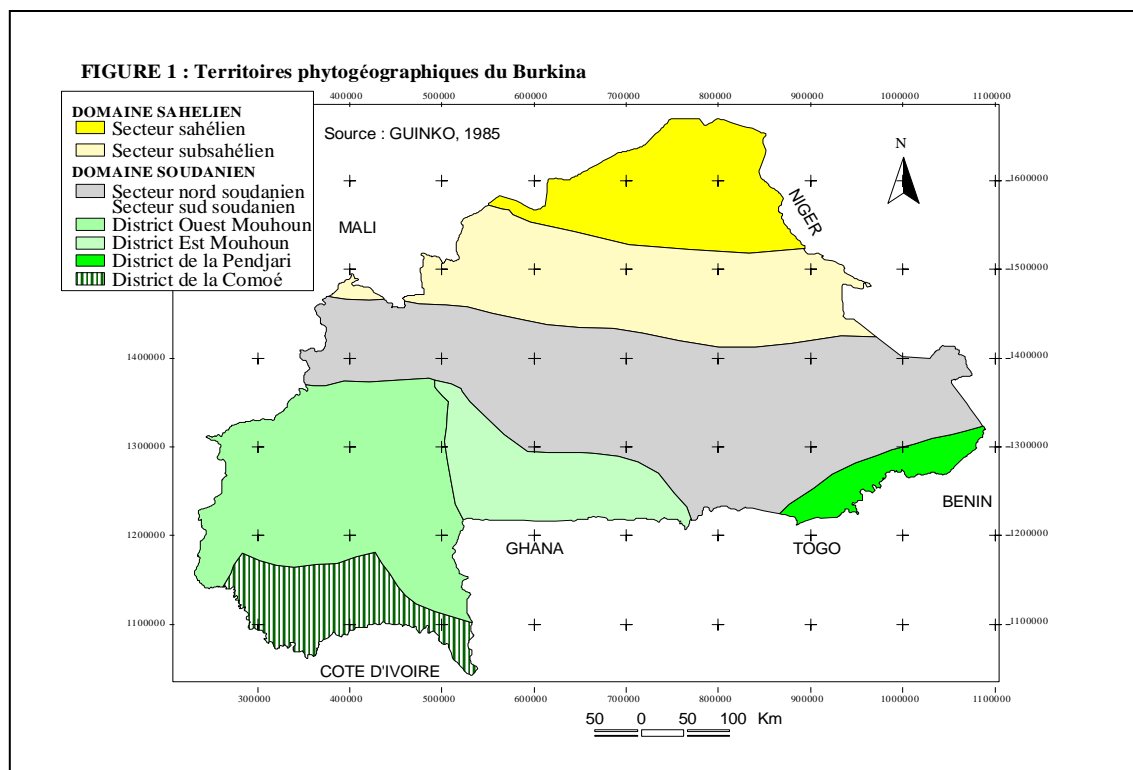
- Refine principles and guidelines for Investment in locally controlled forestry
- Define steps in an “investment process model” that are critical for successful “deals” in the investment in LCF

- Identifying concrete actions for new partnerships and financing mechanisms in ILCF

This paper offers basic information regarding forests, forests policy and forests products for community forestry in Burkina Faso and analyzes local investment cases. It was prepared as a background information for participants to gain basic understanding of ILCF in Burkina Faso in order to have more indepth discussions during the dialogue.

## 12. The Forests of Burkina Faso

The agro-ecological zones of Burkina Faso reflect the climatic divisions of the country. Forest areas in Burkina Faso are made up of land stocked with trees and/ or shrubs including agro-forestry parks. These forests are distributed across the phytogeographic zones with the vegetation cover becoming denser from the North to the South (see Figure 1 below).



**Vegetation in the Sahelian Region :** The vegetation in this region is dominated by various types of steppe (grassy, shrubby, wooded) where the monotony is broken here and there by undergrowth of increasing density from the North to the South, and gallery forests. The features and floral compositions of the vegetation permit the differentiation of two sectors:

- The strictly Sahélien sector north of the 14th parallel, characterized by grassy steppes gives way towards the south to a shrubby undergrowth (« brousses tigrées ») more or less dense. On the floristic plan, one notes the presence of typical Saharan and Sahélien species, for example *Acacia ehrenbergiana*, *A.*

*raddiana*, *Grewia tenax*, *Maerua crassifolia*, *Andropogon gayanus* var., *Tridentatus*, *Aristida stipoides*, *Hyphaene thebaica* (palmier doum) & *Cenchrus* sp., etc. ;

- The Sub-sahelian sector, situated between the 13th and 14th parallels, is characterized by shrubby steppes developing towards the south into wooded steppes. It is an interface zone for many ubiquitous Sahelian and Sudanese species like *Acacia laeta*, *Bauhinia rufescens*, *Commiphora africana*, *Dalbergia melanoxylon*, *Pterocarpus lucens*, *Combretum glutinosum*, *C. micranthum*, *C. nigricans* var. *elliotii*, *Acacia macrostachya*, *Acacia senegal*, *Euphorbia balsamifera*.

Vegetation of the Sudanese Region: The Sudanese Region is comprised of the savannah extension zone. The high, dense grass cover (>80cm) facilitates the annual passage of brush fires. The distribution of the gregarious species *Isoperlinia doka* permits the distinction between two sectors :

- The Northern Sudanese Sector, situated between the 13th and 12th parallels, corresponds with the most intensively cultivated zone in the country due to the strong pressure of population. The vegetation creates the look of an agricultural landscape dominated by protected species like *Vitellaria paradoxa* (karité), *Parkia biglobosa* (nééré), *Tamarindus indica* (tamarinier), *Adansonia digitata* (baobab), etc. One also finds, near areas of habitation, « sacred forests » protected by customary practices that testify to the existence of quasi-climactic vegetation made up of closed canopy forests.
- The South Sudanese Sector, situated between the 5th and 11th parallels, benefits from the least xeric climates in the country and the least disturbed forest formations as a result of the low population density. The vegetation, in its entirety, is comprised of woody savannahs and clear forests intersected by gallery forests. The floral composition of the forest galleries that are particularly numerous on account of the density of hydrographic networks, permits the distinction between four (4) districts situated here and there on the North-South axis of the Mouhoun river :
  - The Western Black Volta district marked by the presence of large gallery forests comprised of dense semi-deciduous forests 30 to 40 meters in height; one finds there a number of Guinean species like *Antiaris africana*, *Chlorophora excelsa*, *Dialium guineense*, etc., due to the permanent flow of watercourses.
  - The Eastern Black Volta district provides a habitat for the following riparian Guinean species : *Cola laurifolia*, *Elaeis guineensis*, *Manilkara multinervis* and *Pterocarpus santalinoides*. However, the typical and dominant Sudanese species are : *Acacia polyacantha* subsp. *campylacantha*, *A. sieberiana*, *Anogeissus leiocarpus*, *Daniella oliveri*, *Diospyros mespiliformis*, *Khaya senegalensis*, etc.
  - The Pendjari District which is characterized by the original presence of *Borassus aethiopum* in natural populations within the gallery forests of the Pendjari river and its tributaries, often associated with *Anogeissus leiocarpus*, *Daniella oliveri* and *Khaya senegalensis*.
  - The Comoé District which is the most wooded region in the country because of its sub-Sudanese climate, its relatively light human settlement and the quasi-permanent waterways. The gallery forests are comprised of dense semi-deciduous forests. The porous soils are populated by closed canopy forest 15 to 20 meters in height, comprised

principally of *Isobерlinia doka* and *Isobерlinia dalzeielli*; one also finds there frequently *Anogeissus leiocarpus*, *Burkea africana*, *Vitellaria paradoxa* subsp. *parkii*, *Lophira lanceolata*, *Monotes kerstingii*, *Parkia biglobosa*, etc.

The South Sudanese Sector, has for the last two decades been the immigration zone par excellence, comprised of ranchers and farmers from the Northern part of the country in search of better living conditions (better pasturage and substantial , anarchical clearance of land for farming which reduces the area of tree cover year after year, and subsequently the available forests.

Reforestation operations were followed by the great drought of the 1970's which transformed the parts of the country that were formerly wooded into graveyards of dead forests. The government then engaged in significant action towards the creation of large scale plantations- industrial plantations around the large urban centers with a view to supplying them with firewood.

After 1979, the Minister in charge of forests initiated participatory village community plantations called "village forests" or "village reforestations" which were very popular among the people. These community plantations quickly encouraged family and individual reforestation to satisfy the needs for subsistence and income generation.

The most planted species are generally exotics, such as, *Eucalyptus camaldulensis*, *Azadirachta indica*, *Senna siamea* (formerly *Cassia siamea*), *Tectona grandis*.

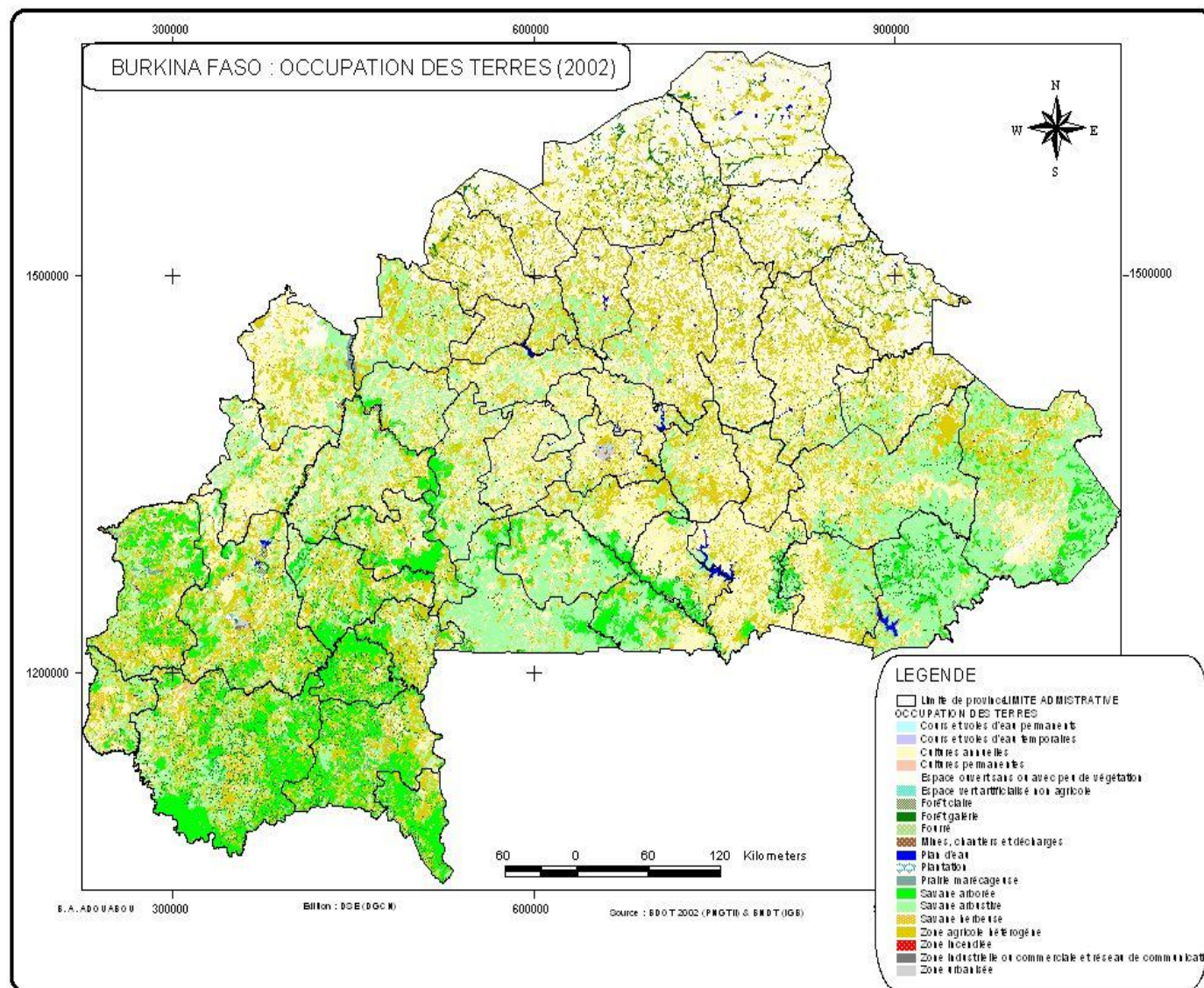
### 13. Extent of Forests

In Burkina Faso, the totality of forests (closed canopyforest, gallery forest, shrubby savannah, wooded savannah, steppes) covers 13,305,238 hectares, or 48.75% of the national territory (BDOT 2002). To these forests must be added the agricultural lands with a significant stock of native species and the agroforestry territories which occupied, respectively, in 2002, 12.59% and 8.45% of the national territory. In addition, the whole of occupied land under "seasonal cultivation" covers 8,016,867 hectares, or 29.37% of the national territory, in 2002. This area increased on average by 104,925 hectares, or 2.65% per year, from 1992 to 2002.

To confront this situation, extensive reforestation programs have been initiated. They focus primarily on « village forest » programs, « 8,000 villages, 8,000 forests », « Front de terre », « one department, one forest » and just recently the operation « 65/15 ». To this day, the array of projects in the country directed at reforestation have encompassed 114,000 hectares (FAO, 2000 and PREDAS, 2007).

On the spatial distribution map of forested areas the Central and Northern parts of the country are characterized by a low level of vegetation cover ; the most forested zones are found in the West, in the Central-West and the East of the country ( see Map #2 below).





## 14. Forest Property

In Burkina Faso, the forest domain is comprised of public forests and private forests (as defined by article 9 of the new draft Forest Code). Article 11 stipulates that «forests are lands covered with vegetation formations consisting of trees or shrubs and grasses, excluding those resulting from agricultural activities. » Subject to the forest program are lands intended for forests, areas for restoration, areas for reforestation, the agroforestry parks and trees outside forests (article 11 of the new Forest Code). Trees outside forests include trees that are found in developed lands, including human settlements and infrastructure, and on bare lands including sand dunes and rocky outcrops (article 12 of the Forest Code)

### 3.1. Public Forests

Under Decree 97-054/PRES/PM/MEF supporting the application of the *Réforme Agraire et Foncière* (RAF) public forests are those belonging to a public entity. Public forests can be classified or protected (article 282 of the decree 97-054/PRES/PM/MEF). They are distributed between the holdings of the State and the holdings of the decentralized local communities. It should be noted that the process of effective transfer of the forests to the Decentralized Local Communities is a work in progress.

- The State Forest domain : according to Article 16 of the Forest Code the state forest domain is made up of :
  - Forests classified in the name of the State that are in effect as of the start date of the Forest Code and have not been the object of declassification;
  - Forests classified in the name of the State in the implementation of the measures of the Forest Code and its implementation texts.
- The forest domain in the decentralized local collectives: according to Article 20 of the Forest Code, the forest domain of the decentralized local collectives is comprised of the entirety of the forests situated within the national territory aside from those that belong to private persons and those that are the object of a classification under the name of the State.

### 3.2 Private Forests

Under Decree 97-054/PRES/PM/MEF in support of the implementation of the RAF, private forests are managed forest areas for which there is a property title of entitlement in the name of a private person or entity. These measures apply just as much to large producers as small producers. According to Article 53 of the Law #014/96/ADP from May 23, 1996 supporting RAF in Burkina Faso, the use and development of unmanaged rural lands with the purpose of meeting the needs for lodging and nourishment of the occupant and his family is not subordinate to the possession of an administrative title. According to FAO, 2010 (Evaluation of world forest resources, Burkina Faso National Report), the rights and responsibilities of forest management are given to individuals or households through leases or long term management agreements. Line 2 of Article 32 of the Forest Code stipulates that: "Private forests above a given area fixed by regulation shall be subject to a forest management plan developed by the owner and subject to the approval of the forest administration.

Forest management is based on the principle of the integration of protection, development, and the valorization of the forest holdings. It guarantees the preservation of the natural environment to the benefit of future generations, ensuring that the



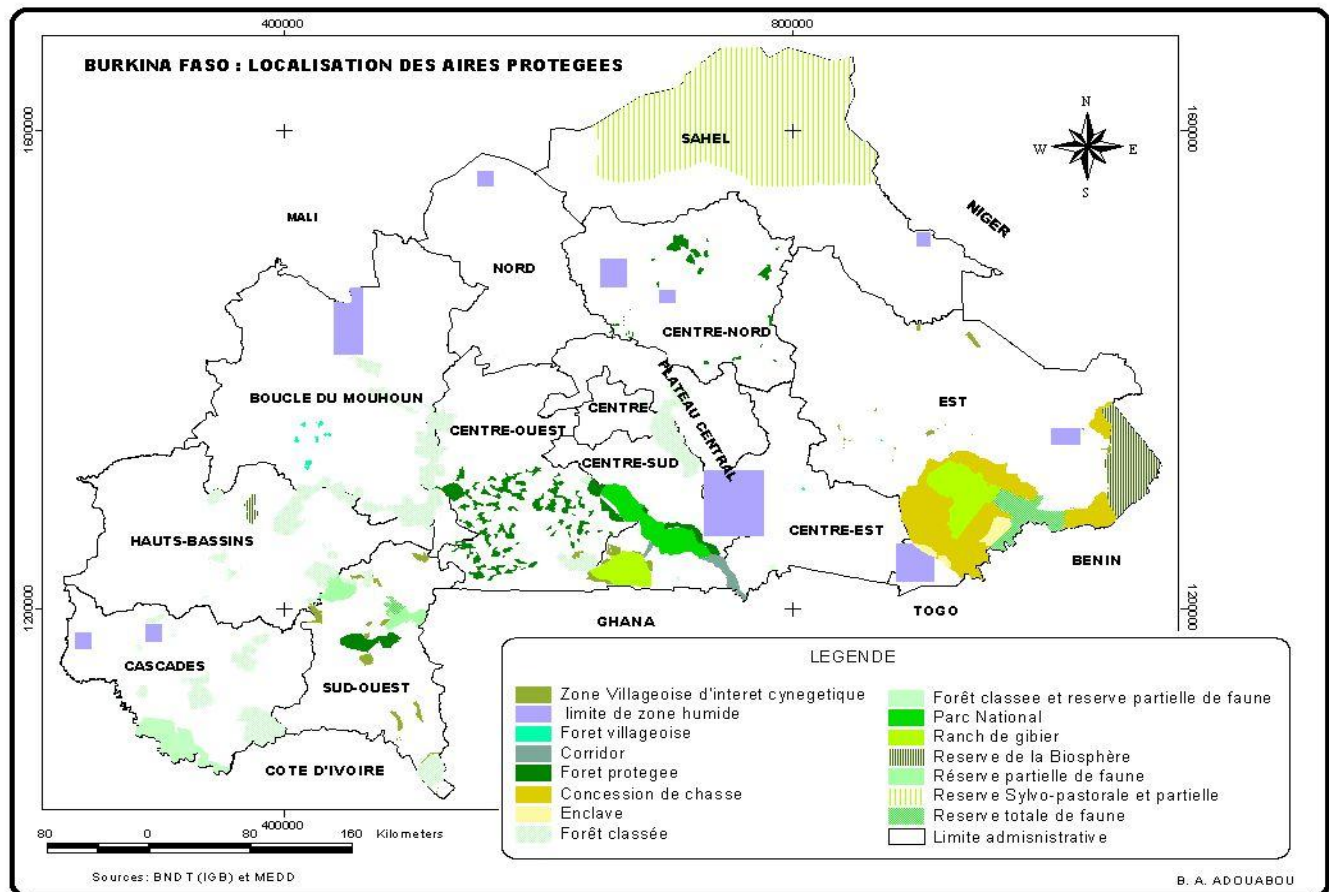
socioeconomic and cultural needs of future generations are met.

Public forests are managed under the control of the State or by the collectivité territoriale décentralisée (i.e. elected local government), with respect for current regulations and with a participatory and consultative approach (Article 34 of the Forest Code). The forest domain of the State is managed by the State Forest Services. Forest Services can, by contract, entrust the development of a part of the state forest domain to a private person or entity. (Article 38 and 39 of the Forest Code). The management of the collectivité territoriale décentralisée is ensured by way of management structures based on partnerships. (Article 40 of the Forest Code).

## **15. Traditional Roles of Forests in Burkina Faso**

In Burkina Faso, forests play an important role in the social, cultural and economic life of the people. The products that contribute to food and nutritional security in Burkina Faso are Non-Timber Forest Products (NTFPs), bush meat and resources from fishing. On the socio-economic level, PFNL's make up over 43.4% of the food and nutritional balance of Burkinabè households, play a role in the health improvement of 75-90% of inhabitants, and procures 23% of revenues and employment of rural households. According to FAO (1987), monetary revenues generated only by the development of PFNL's, more or less estimated up to now to be around twenty billion per year, represent at least 10% of the PIB of the country. Wild game provides a significant source of animal proteins to the population. According to FAO (1987), the range of animal species consumed by the population is vast. According to that same source, each Burkenese consumes at least 1kg of bush meat per year. The consumption of fish is around 2.2kg/person/year and within fishing communities that consumption is on the order of 5 kg/person/year. Moreover, wood energy constitutes the main source of energy, used for the cooking of food and other energy needs; it represents 84% of national energy use, (compared to 14% and 2% for hydrocarbons and electricity, respectively) and satisfies 97% of household energy needs. Trunks, branches and leaves of certain species are used to make art objects and work tools (agricultural plow materials, baskets, hats, musical instruments...).

Finally, forests help to sustain essential ecological processes (hydrological cycle, air purification, organic material cycle, etc.) and the conservation of biological diversity (flora and fauna) through a network of protected areas made up of national parks, total and partial game reserves, game ranches, cynegetic zones, classified forests, "protected" forests, local reserves, village hunting zones (ZOVIC) and village forests (see Figure 3). The living biomass of these forests contains the equivalent of 1,330 million tons of carbon.



## 16. Pressures on Forests

In Burkina Faso, forest cover has undergone a decline, characterized by a reduction of forested lands, degradation in the quality of forest cover and, as a result, a decline in biological diversity. Anthropogenic pressures making up, among others, the principal factors of degradation of these ecosystems are:

- Anarchic use of wood resources. In spite of the promotional campaigns for energy substitution, wood remains the country's primary source of energy, creating a growing pressure on timber resources.
- The development of uncontrolled clearings, the speculative cultivation, and population migrations. A map of land occupation by satellite imagery from 1992 and 2002 has allowed the quantification of the deforestation phenomenon in Burkina Faso (See table 1). The reduction of pasture lands in protected zones leads ranchers to search for pastures within the classified forest domains.
- The practice of brush fires, especially late ones, has a negative effect on the development of timber and herbaceous vegetation. In spite of the efforts of the Forest Service and their partners, this practice remains largely widespread.
- The use of techniques which destroy plant genetic resources, such as inappropriate cultivation methods and the spreading of pesticides has residual effects on the normal pollination cycle of certain species.

The condition of natural areas within the country is therefore characterized by a downward trend in wooded lands. On the qualitative level natural forests exhibit a more and more marked presence of desert species within the flora and the decline in the area distribution limits of certain species.

The principal factors of change consist of the expansion of agricultural lands in all regions of the country. Table 1 below shows the evolution of forest and agricultural lands from 1992 to 2002. The forest cover underwent an average annual decline of 110,500 hectares, or 4.04% on average per year, from 1992 to 2002.

Land composition	Sup92 (ha)	Sup02 (ha)	% national territory in 2002	Sup02 - Sup92 (ha)	Growth/year	
					(ha)	(%)
Agricultural land with important natural spaces	3268654	3437511	12.59	168857	16886	0.52
Agroforestry land	2038779	2305603	8.45	266824	26682	1.31
Rain culture	7403296	8016867	29.37	613571	61357	0.83
Clear forest	53359	50249	0.18	-3110	-311	-0.58
Gallery forest	851830	834265	3.06	-17565	-1757	-0.21
Grass savannah	222903	220032	0.81	-2871	-287	-0.13
Brushy savannah	6902437	6189685	22.68	-712752	-71275	-1.03
Woody savannah	2553094	2327677	8.53	-225417	-22542	-0.88
Grassy steppe	1296444	1270518	4.65	-25926	-2593	-0.20
Brushy steppe	2319319	2213572	8.11	-105747	-10575	-0.46
Woody steppe	210902	199240	0.73	-11662	-1166	-0.55

**Source : Database of land composition from 1992 and 2002 / PNGT2, 2006**

This process of the degradation of the vegetation cover is combined with a decline in the quality of soils under the effects of climatic variations, strong landholder pressures exerted in the large cultural zones, extensive cultivation practices and the inappropriate use of chemical fertilizers.

The threats to wildlife are characterized by the illegal occupation of classified areas and the correlated reduction of wildlife habitat, the persistence of poaching and the outbreak of conflicts between man and wildlife.

## 17. Policies & Relevant Legislation

Since 1980 Burkina has made great deal of progress in terms of forest policy and legislation. Considerable efforts were made in relation to environmental protection in 1981, and to the participatory approach to forest management in 1986. The Environmental Action Plan was produced in 1992, integrating the National Plan for Anti-Desertification (PNLCD) and the National Plan of Community Land-Use Management (PNGT), in order to design a policy strictly associating development with environment (PANE). An updated National Anti-Desertification Plan was adopted in 2000, whose objectives included improving national capacity, updating legislation and regulation, data management, environmental monitoring and evaluation, environmental education and communication.

In 2003, the National Rural Development Strategy (SDR), following the National Strategy for the Fight against Poverty (CSLP), was adopted, a policy document guiding public action and program development in rural areas, and cover the agriculture (PISA), livestock (PAPISE) and environment (PDA) sub-sectors

In 2006-2007, the Government began the process of preparing a sector program for production activities in rural areas, and at the same time developed a National Agricultural Investment Program within the framework of NEPAD (New Partnership for Africa's Development). This series of action plans, programs and strategies has resulted in a numerous of overlapping interventions and priorities that has led to a sort of weakness in the leadership role of the State. This in turn has contributed to sub-optimal outcomes and unsustainable natural resource management.

In order to address the situation, the three Ministries (Environment, Agriculture and Livestock) signed a framework document in May 2010, which constitutes the basis for preparation of the *National Rural Development Strategy* (MEDD, MARHR and MRA), the key objective of which is to increase coherence and effectiveness in the process of formulating the 'Rural Development Strategy' (SDR, 2003) programs and the National Program for Agricultural Investment (PNIA), which is itself the result of the entire PDDA/ECOWAP process. Therefore, the PNRS will be considered as the unique framework for planning and implementing rural development public activities and the key reference document for guiding all the activities of state and on state actors.

Overall, Burkina Faso has a legislative and regulatory framework that is solid and coherent. The latter is confirmed by the judicial system, and such plans and programs as the current national strategies. In effect, beyond the broad strategies (like the Accelerated Growth Strategy for Development (SCADD) and the National Rural Development Strategy), the forest sector has a complete legal framework for a system of sectoral planning and strategies like: the National Forest Policy (1995), the National Policy for Land Management (2007), the National Policy for Classified Forest Development, the National Policy on Environmental Matters (PNE) adopted in 2007, the National Program for Forest and Fauna Resource Management (PRONAGREF), the Ten-Year Action Plan (PDA) 2006-2015 of the MEED, the National Action Plan for the Fight Against Desertification (PAN-LCD), the National Action Program for the Adaptation to Climate Change, the Action Plan for Integrated Water Resource Management (PAGIRE), the Action Plan on BioDiversity, the Environmental Plan for Sustainable Development (PEDD), the National Development Program for Natural Formations, the National Action Plan for the Environment (PANE), and the National Program for the Rural Sector (PNSR).

In addition: (i) Law #014/96/ADP of May 23, 1996 concerning agrarian and landholding reorganization (RAF) and Decree 97-054/PRES/PM/MEF of February 06, 1997 brought conditions and modalities of legal implementation over the agrarian and landholding reorganization in Burkina Faso defining among other things the major principles of land use and, in particular, the management structures for property holdings and the adoption procedures for forest development plans and guidelines for forest management; (ii) the Forest Code only recognizes the classified forests as State patrimony, leaving plenty of scope for local communities in the development of wooded formations; (iii) the Environmental Code (Law #005/97/ADP of 30/01/1997), reference text on matters of environmental management, sets forth the rules relating to the fundamental principles of environmental preservation, the tools and measures of environmental management and

the sanctions incurred in cases of infraction of the provisions; (iv) the General Code for collectivités territoriales determines the guidelines for decentralization, skills and resources, controls, and administration of collectivités territoriales.

Law #034-2009/AN, establishing a rural landholding system, sets forth the private and state-owned system applicable to rural lands as well as the principles of tenure security for all actors in rural holdings. The law is aimed, among other things, at: (i) assuring fair access to rural lands for all rural actors, public and private persons and entities; (ii) promoting investment, increase productivity in the agro-sylvi-pastoral sector and favors the reduction of poverty in rural areas; (iii) favouring the rational and sustainable management of natural resources.

## 18. Forest Governance in Burkina Faso

Forest governance can be defined as the aggregate of rules, policies, institutions and practices aimed at ensuring the implementation of the principles of transparency, accountability and participation within the sector. As such, it concerns the way in which the institutions acquire and exercise their authority in the management of forest resources; with transparently developed policies; a bureaucracy that operates according to a professional ethic; an executive that is aware of their actions and a strong civil society that participates in the decisions that relate to this sector.

In addition, local conventions, customary laws and internal management rules contribute to forest governance at the local level. For example, among rural communities, sites are declared sacred (sacred forest, sacred streams) and certain species of trees or animals are totemic.

In Burkina Faso the categories of actors with responsibilities for forest governance are state structures, collectivités territoriales, the private sector, rural communities and partner organisations. Table 2, opposite, shows the role of each category of actors.

**Table 2: Actor roles in forest governance**

Actor Categories			Roles
State and similar services	Forest Service		<ul style="list-style-type: none"> <li>Policy and technical guidance</li> <li>Adaption of regulatory and legislative measures for the sustainable management of forest and wildlife resources</li> <li>Support-council to the actors</li> <li>Oversight and monitoring</li> <li>Conflict arbitration</li> <li>Support actor development/strengthening</li> </ul>
	Partner technical services	Research structure	<ul style="list-style-type: none"> <li>Better awareness of forest and wildlife resources through scientific research</li> <li>Disseminate research results</li> </ul>
		Other technical partners	<ul style="list-style-type: none"> <li>Technical support for actors within their field of expertise</li> </ul>

	General Administration Services (High-commissioner, Prefectures)	<ul style="list-style-type: none"> <li>▪ Recognition of socio-professional organizations</li> <li>▪ Adoption of development and management plans for protected forests and wildlife protection areas</li> <li>▪ Settlement of conflicts related to the use of forest and wildlife resources. For certain disputes, the Judicial Administration could be enlisted</li> </ul>
	Organizations in charge of financial and budget administration	<ul style="list-style-type: none"> <li>▪ Mobilization of external financing</li> <li>▪ Elaboration, oversight and control of management procedures for funds allocated to the management of forest and wildlife resources by the State and cooperating partners</li> </ul>
	Decentralized local collectives	<ul style="list-style-type: none"> <li>▪ Implementation of management actions for forest and wildlife resources through the code for decentralized local collectives</li> <li>▪ Forest and wildlife management contracts to individual managers or people organized into groups, partnership development</li> <li>▪ Recording of complementary regulatory acts in matters of forest domain and wildlife management under its care</li> </ul>
Private sector		<ul style="list-style-type: none"> <li>▪ Financial and material support for local populations for the sustainable management of forest and wildlife resources</li> <li>▪ Distribution and promotion of forest and wildlife products</li> </ul>
Civil Society / NGO's (apolitical 'Not for Profit' organizations)		<ul style="list-style-type: none"> <li>• Advocacy with the State on specific subjects linked to sustainable management of forest and wildlife resources in the country</li> </ul>

## 19. The market and investment opportunities

Forest products having a potential market are made up of wood products, NTFPs and animal products.

### 8.1 Wood products

#### 8.1.1 Forest seedlings

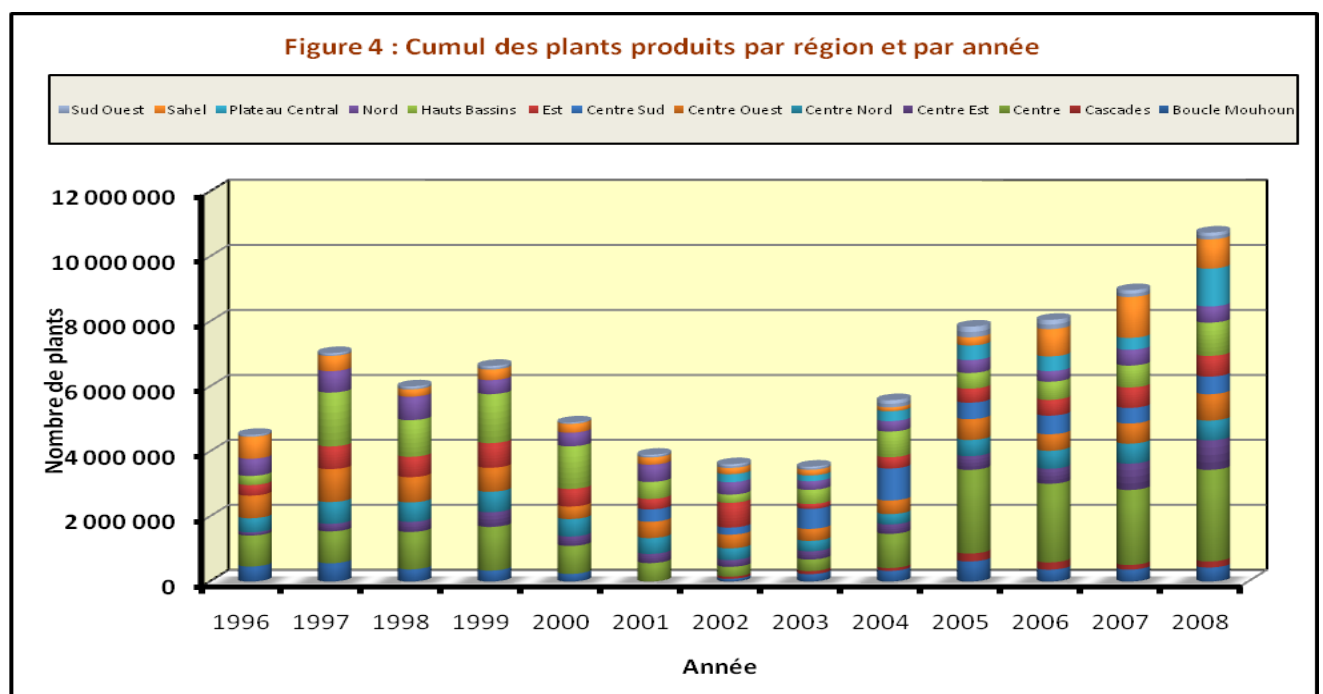
The cultivation of tree seedlings is done by public and private nurserymen (in the informal sector). It must be underlined that private nurserymen do not have status and lack organization. They are not specifically taxed for the activities that they manage.



Seedlings cultivated by the latter are sold to the general population, to NGO's or to state projects with the purpose of reforestation. Lately, there is a notable interest by the population with the private production of tree seedlings. Thus, the number of trained private nurserymen was over 9,314 in 1999 and 17,339 in 2008 (DiFor, 2009). Figure 1 below gives the total production of seedlings by region of the country in the period from 1996 to 2008.



Shea nuts from Leo region



According to the statistics, private nurserymen contribute more than 70% of the total annual tree seedling production. Depending on their origin, the species produced are either local or exotic. With regards to utility, the species are intended for food production (flowers, fruits, seeds, leaves, gum, etc.), fodder, wood (firewood, round wood, sawn timber), medicinal products, the establishments of live hedges, windbreaks etc. (MECV 2007)

### 8.1.2 Forest Plantings

Forest plantations are established from seedlings coming from public and private nurseries. There is a distinction between block planting, line plantings (alongside major roads, windbreaks, hedges, etc.) and ornamental plantings. The total area of forest plantations is estimated at 76,000 hectares (FAO 2007 cited by PDA/ECV, 2009) and their average production is estimated at 210,600 m<sup>3</sup>/yr assuming 4 rotations at 6 to 7 year intervals (FAO, 2000: provisional report on the prospective study of the forest sector in Africa: Case of Burkina Faso). The most commonly planted exotic species are *Eucalyptus camaldulensis*, *Azadirachta indica*, *Senna siamea* (formerly *Cassia siamea*), *Tectona grandis*. Plantations may be undertaken by communities or individual families (MECV, 2004). Survival rates are below 50%, due to the lack of maintenance after planting, damage by loose livestock, bush fires, droughts...

### 8.1.3 Firewood and wood charcoal

Stakeholders in the commercial exploitation of wood products are defined in Decree #98-306/PRESS/PM/MEE/MCIA covering the regulation of the harvesting and commercialization of forest products in Burkina Faso. According to article 4, commercial users are split into 4 categories: forest workers, transporters, wholesalers, and retailers.

Forest users are organized into Forest Management Groups (GGF) and into Forest Management Group Unions (UGGF) (ref Case Study 1). In 2003 the UGGF's from different regions of the country have put in place a National Federation of Forest Management Group Unions (FENUUGGF). In 2009 there were 473 Forest Management Groups (GGF) and 22 Forest Management Group Unions (UGGF). The forest development funds, instituted by Order # 01-048/MEF/MATD/MEE of November 08, 2001 support the implementation of sustainable management activities in the managed forest zones.

The volume of standing timber is estimated at 35 m<sup>3</sup> per hectare, representing a total availability of 238,000,000 m<sup>3</sup>, and an estimated wood biomass of 87.7 tons per hectare, representing a total of 596,000,000 tons (FAO 2007 cited by PDA/ECV, 2009). Since 2006, the production of wood charcoal has been incorporated in the overall system for sustainable forest management, drawing upon appropriate technologies. In economic terms this activity is either an alternative solution to make use of large diameter wood or wood coming from forests distant from the centers of consumption, or to make use of wood from land clearances, dam sites or the construction of roads, etc.

Large urban centers constitute the major consumption zones for firewood and wood charcoal. In effect, according to OUEDRAOGO B. (2006), based on an annual growth rate for the population of Ouagadougou of 6.2% during the last decade, the city's demand for energy for cooking was evaluated as follows for the year 2000:

- Household demand: 138,379.8 tons of wood energy, or 41% of gross demand;
- Artisanal demand (brewers, restaurants, jewelers, potters, coffee vendors and kiosks): 202,882.2 tons of wood energy, or 59% of the gross demand. For example, the average daily consumption of wood for cooking sorgho beer "dolo" is 458.17 kilograms of firewood. This means that every preparation takes the dolo brewers two days of cooking. The number of batches per week varies between one (1) and three (3).

The same study indicated that the city of Ouagadougou consumed 85% of the total volume of sustainably harvestable wood in the supply zone which is comprised of 14 provinces and includes some important large cities in the country like Koudougou, Tenkodogo, Zorgho, Koupéla, Pô, Boulsa, Ziniaré, Yako, Réo, Kaya, Léo and Manga. These cities are all the more important because they also consume a lot of wood energy. For example, some of these cities are very significant producers of red sorgho beer “dolo”: as in the case in Réo and Manga.

The average consumption of firewood per capita at the national level indicates a downward trend from 1980 to 1999, moving from 1.46kg/ per capita/per day to 0.91kg/ per capita/ per day. The general trend of individual wood charcoal consumption was also in decline during the same period, being 0.25 kg/per capita/per day in 1980 and 0.13 kg/per capita/per day in 1999. This situation is explained by the increase in the use of butane gas and use of improved stoves by the people of four cities. At the village level, the consumption of firewood is 0.94kg/per capita/per day and for wood charcoal 0.4 kg/per capita/per day (MECV, 2010). Due to the growing population (2.4% per year), national consumption of wood energy continues to increase over the years.

#### 8.1.4 Round Wood

This category includes poles and posts. It includes wood intended for shed construction (posts, beams), roof houses and fencing for various purposes (crop protection, pasture, habitation, etc.). Round wood is also used for supports when pouring concrete in modern high-rise construction. Urban demand for round wood is met from natural forests (both managed and unmanaged).

The evolution of the demand for roundwood is a function of demographic growth and the population's access to supply (through purchase from merchants or by cutting directly from the forests). According to the study carried out by Nombéré Mamadou in 1993 (University of Ouagadougou), the roundwood supply capacity for the year 2000 from natural forests was estimated to be around 23,500,000 m<sup>3</sup>, measured against an estimated demand of only 358,880 m<sup>3</sup> (Nombéré, 1993). This analysis makes it clear that in spite of the decline of forests, the supply of round wood does not pose any problems in terms of forest availability (MECV, 2004).

#### 8.1.5 Sawn Timber

Burkina Faso is not a large producer of sawn timber due to the limited availability of potential timber species, both in terms of quantity and quality, which might support the development of large industrial operations. The species with the most potential are *Khaya senegalensis* (caïlcédrat), *Azelia africana* (lingué), *Pterocarpus erinaceus*, *Diospyros mespiliformis*, *Daniellia oliveri*, *Isobertinia doka*, *Anogeissus leiocarpus*, *Milicia excelsa* (Iroko) with a usable diameter of at least 50cm. Table # 3 below displays the evolution of timber log production and sawn timber from 1994 to 2003.

**Table 3 : Evolution of carpentry-grade wood production by the two sawmills (m3)**

Product types	1994	1995	1996	1997	1998	1999	2003
Sawlogs	5 356	5 499	6 140	8 347	4 605	5 020	3 994
Sawn timber	1 299	1 340	1 193	1 714	1 257	1 306	1 830

Source : Kaboré Cyrille, 2000, completed using the 2003 reports from two sawmills

It is noteworthy that quantities show a slight decline from 1994 to 2003, being 5,356 m3 and 3,994 m3 respectively (Source : Kaboré C. 200, cited by SP/CONAGESE, 2002). In 1997, production declined from 8,347 m3 to only 3,994 m3 in 2003.

The production of sawn timber by these two sawmills does not meet the needs of the population, which creates a need to import sawn timber from neighboring producer countries. The quantities from 2003 to 2007 are (Research Action Group on Forest Resource Governance, 2009)

- 2003 : 22,962 tonnes;
- 2004 : 44,755 tonnes;
- 2005 : 71,357 tonnes;
- 2006 : 96,915 tonnes;
- 2007 : 79,986 tonnes.

On average, Burkina Faso imports around 27,790 m3 of sawn timber per year to respond to the demand for this category of forest product, in contrast to its exports of around 1,100 m3. With regards to the exportation of sawn timber, it is important to point out that this includes imported wood that is then re-exported after the wood has been worked.

In the informal sector, individuals are engaged in harvesting of large diameter trees for the fabrication of mortars, stepladders, dugout canoes, artwork (masks, statues). This type of activity creates employment and generates substantial revenue for the actors.

## 19.2. Non-Timber Forest Products (NTFP)

In general, these resources are available in quantity, often with an unequal distribution over time and over space. Almost all NTFPs come from forests, fallow land (land left to rest for a period within a cultivation cycle) and agro-forestry parks. For certain species, only a small portion comes from farms. As an example, 71.8% of harvested néré fruit comes from forests (classified and/or protected including fallow land) compared to 28.2% from farms (APFNL, 2010).

This creates difficulties for certain Small and Mid-sized Forest Enterprises (PMEF) in securing a regular supply of raw materials, in sufficient quantity and at a stable price. Around 40% of the SMFEs (TREE AID, 2008) experience difficulties with supply, essentially because of the seasonality of 'NTFPs and the difficulty of accessing financing. This makes it impossible to build up significant stocks.

Lately, since the creation of semi-industrial transformation units, there is a visible improvement in the supply of raw materials and a good product flow. This situation has improved the production capacity of different producers in the NTFP value chain.

The table below summarizes, for several NTFP's, information concerning the supply and sales within the country.

**Table 4 : PMEF production capacities and sales generated by the work of several PFNL.**

Products	Production capacity / PMEF (per year)		Sales/ PMEF (FCFA)	
	Min	Max	Min	Max
<b>Product gatherers (subsistence level)</b>				
Various NTFP's	-	-	-	50 000
<b>Product gatherers (subsistence level)</b>				
Processed Borassus sap (Bangui)	35 000 liters	60 000 liters	2 100 000	4 500 000
Néré seeds	700 kg	700 kg	210 000	210 000
Shea nuts	600 kg	2000 kg	40 500	200 000
Tamarind fruits	200 kg	500 kg	24 000	84 000
<b>Artisanal processing</b>				
Soap and other Shea Butter cosmetic products	3 243 units	233 514 units	600 000	4 320 000
Tamarind, bissap and baobab juice	7 040 liters	15 000 liters	1 408 000	3 000 000
Soumbala (processed from néré seed)	75 kg	1680 kg	150 000	3 360 000
Mead & purified wax	3 520 liters	11 520 liters	528 000	1 267 200
Pharmacopeia products (bottled, powdered, etc...)			-	1 000 000
Shea Butter	550 kg	600 kg	660 000	720 000
Baobab biscuits	60 kg	400 kg	90 000	810 000
<b>Semi-industrial processors</b>				
Pharmacopeia products (bottled, powdered, etc...)	100 000 boxes	100 000 boxes	-	40 000 000
Shea Butter	20 000 kg	300 000 kg	3 000 000	45 000 000
Baobab, tamarind, saba fruit juice	10 000 liters	48 000 liters	3 000 000	14 400 000
Soap and other Shea Butter cosmetic products	12 000 units	26 000 units	3 600 000	7 800 000
<b>Wholesale merchants</b>				
Néré seeds	3 600 bags	6 000 bags	122 million	204 000 000
Shea nuts	11 500 kg	70 000 kg	2.4 million	14 700 000
Processed Borassus sap (Bangui)	10 000 liters	20 000 liters	1 million	2 000 000
Tamarind fruit	1500 kg	5000 kg	130 000	687 500
Baobab leaves	180 kg	250 kg	61 250	87 500
Dried neem leaves	150 kg	150 kg	75 000	75 000
Néré powder	135 kg	135 kg	22 500	22 500

<b>Export merchants</b>		
Boabab fruit, tamarind fruit, Shea nuts	250 tons	112 500 000
Shea nuts	150 tons	45 000 000
Filtered honey, soap and pommade	150 000 liters	16 500 000
Baobab fruit and tamarind	200 tons	34 000 000
Tamarind fruit	100 tons	14 000 000

Source : Summary prepared using the study report on SMFEs in Burkina Faso (TREE AID; 2008)

The average turnover of the largest producers is around 1.5 million FCFA/ year. Better performance in terms of turnover is realized most often by groups and partnerships. The most lucrative products, for the majority of producers, are *Parkia biglobosa* (Néré) seeds, *Vitellaria paradoxa* (Shea) nuts, medicinal plants, and to a lesser extent honey.

There is national market potential for NTFPs in each production zone and cities are demanding more and more NTFPs, especially Ouagadougou and Bobo-Dioulasso. In these two centers one finds most products and the wholesalers established there are able to build up stockpiles. At the international level, NTFP's are exported to diverse horizons: bordering countries and other countries in the sub-region (Senegal, Nigeria), Western Europe, North America and Asia. At the moment Shea contributes substantially more than other NTFPs to foreign currency earnings, although certain products like gum arabic gum is not to be outdone by the regularity of transactions.

Tables 6 and 7 below display the export volumes and the imports of some PFNL's.

**Table 5 : Evolution of export volumes (kg) of several PFNL**

<b>Years Products</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
<i>Vitellaria paradoxa</i> seeds (shea), even crushed	17 980 280	34 975 077	26 685 547	11 522 000	3 000 000		
Shea seeds	-	-	-	12 912 202	19 330 230		
Other oils, fats...shea oil and fragments	44 000	225 684	96 421	428 119	194 604		
Natural honey	-	5 090	60	-	100		
Other waxes: beeswax and waxes from other insects	6 505	-	-	-	-		
Tamarind	518 183	98 140	30 660	311 590	155 000		
Arabic gum	20 000	-	20 618	17 650	80 282		
<i>Adansonia digitata</i> , <i>Parkia biglobosa</i> , <i>Detarium microcarpum</i> , <i>Balanites aegyptiaca</i> , <i>Sclerocarya birrea</i>	-	-	1 523 410	10 614 334	9 920 000	8 161 029	21 365 191

Source : ONAC trade point and INSD (2007)



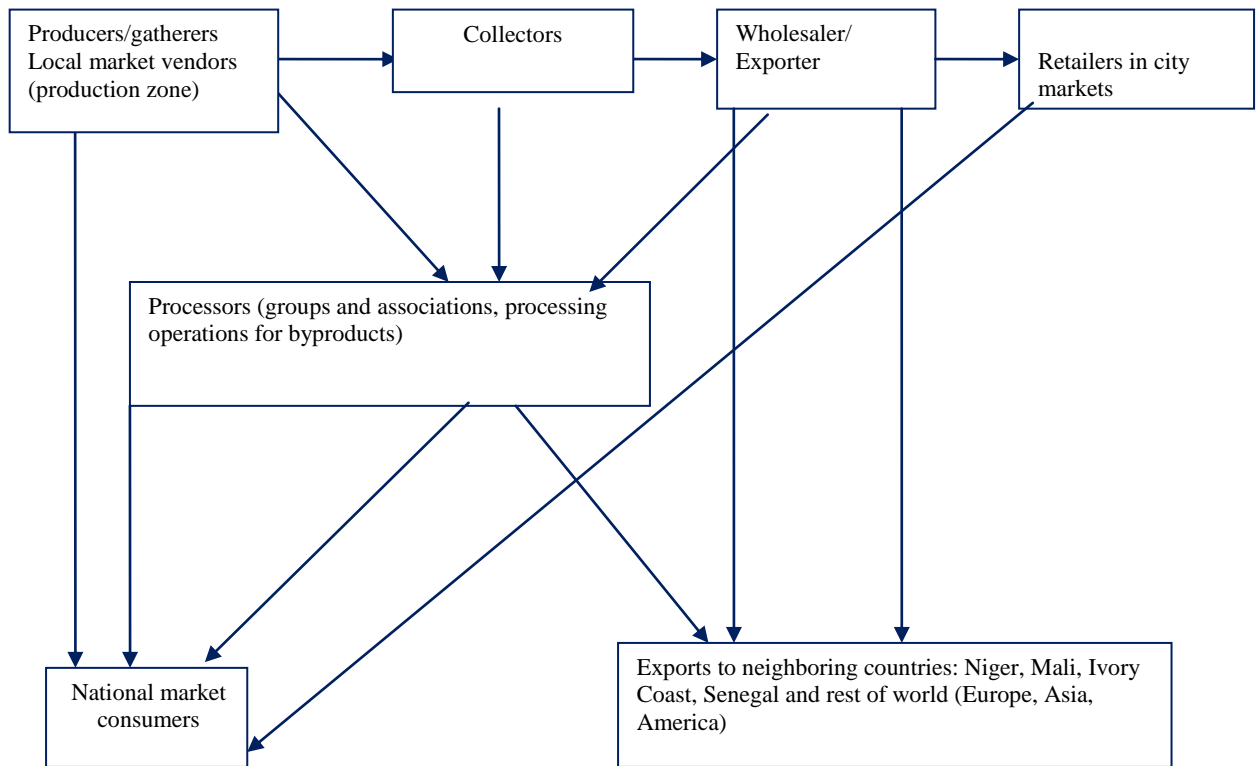
The analysis of the data from the table shows an uneven pattern of NTFP exports. These fluctuations in exports are not necessarily related to production, but more to the difficulty of monitoring the quantities of exported products. This constraint could be explained by the fact that there are insufficiencies within the structuring of the majority of industries and commerce networks of NTFP's, but also due to the many borders. This data shows the interest in better industry organization and the establishment of an efficient system to monitor commercial production.

**Tableau 6: Evolution of export volumes (kg) of several PFNL**

Products	Years					
	2001	2002	2003	2004	2005	TOTAL
Natural honey	1 130	2 430	2 481	4 270	2 447	<b>12 758</b>
Nuts, with shell or dried	-	103	-	-	-	<b>103</b>
Nuts, without shell or dried	9 940	5 468	-	90	10	<b>15 508</b>
Tamarind	1 335	34 533	20 870	1 805	3 150	<b>61 693</b>
Shea nuts, including crushed	14 050	135 428	3 929 806	-	326 370	<b>4 405 654</b>
Shea nuts	-	-	-	14 000	-	<b>14 000</b>
Gum arabic	3 133	-	4 600	50	4 399	<b>12 182</b>
Other oils, fats...shea oil and its derivatives	48 000	92 685	16 700	-	3 600	<b>160 985</b>
Other oils, fats...shea oil and fragments	414 134	278 900	595 963	22 000	-	<b>1 310 997</b>

Source: INSD (2007)

NTFP commerce is free of all influence by public administration. The organization of the network for development and commercialization is left to collectors, buyers, and resellers in the informal sector. The buying and selling prices are negotiated between the actors. Figure 1 gives a schematic representation of the distribution network of the products as a function of different participants.



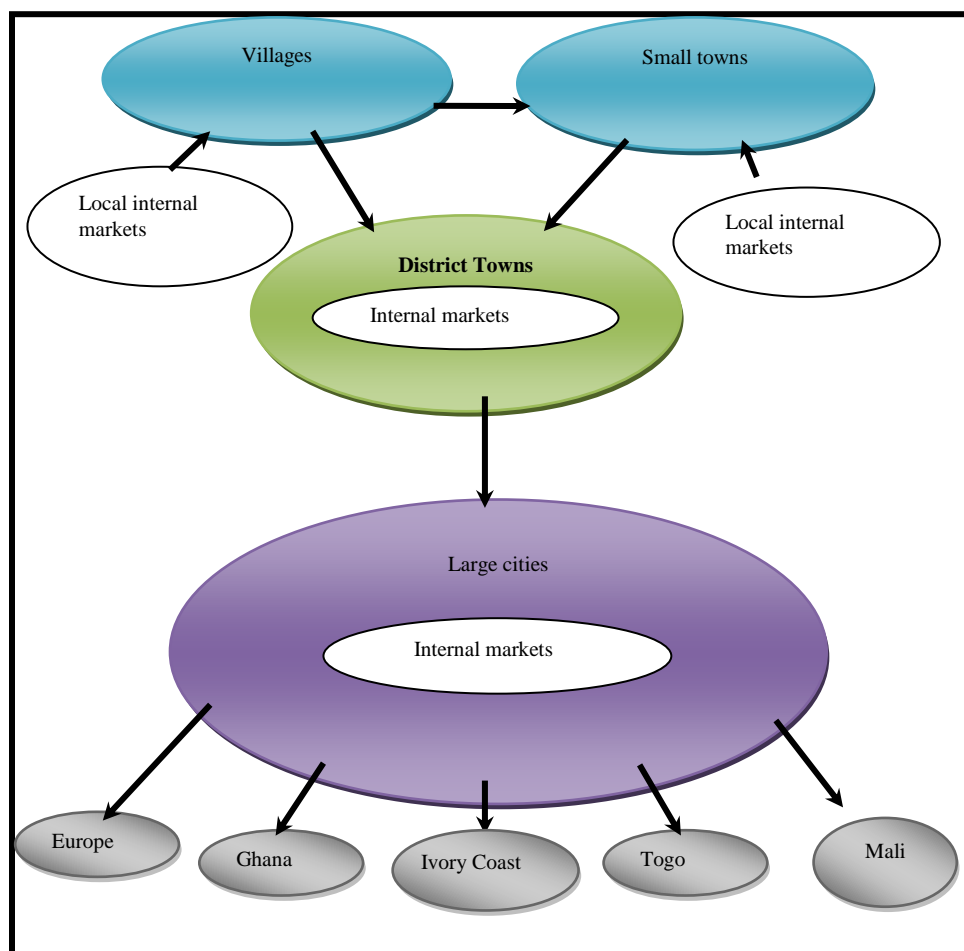
**Figure 5: Distribution flow chart of PFNLs according to different participants**

Source: ARSA/PFNL. 2008

Exchanges take place in:

- Village markets in the production zones, close to the harvesting zone (on farm) as well as at road side (production sites). These markets are of interest to individual consumers, commercial collectors and certain processors;
- Secondary centers, that constitute the resupply locations for wholesalers/ exporters;
- Large cities like Ouagadougou and Bobo-Dioulasso which are the supply stations for large exporters and processors.

Figure 2 shows the general network of collection and supply of unrefined PFNL's.



**Figure 6: Flow chart of collection and of raw PFNL's**

Source: APFNL, 2010

In general, large and medium cities are supplied with NTFP's by internal markets and those in surrounding villages and small towns. The products reach the different markets by producers/collectors, wholesalers, semi-wholesalers and retailers. Certain products like liane (saba) fruits, néré and shea products are also exported to bordering countries (Ghana, Ivory Coast, Mali, Togo, etc.) and to Europe.

### 8.3 Wildlife Resources

The existence of protected areas for wildlife conservation and the implementation of an appropriate policy have favored the development of the relatively abundant and diverse wildlife of Burkina Faso. There are in total 70 wildlife protection areas, comprising 2 national parks measuring 309,500 hectares, 14 wildlife reserves of a total area of 2,545,500 hectares, 53 classified forests totaling 880,000 hectares and 1 urban park measuring 244 hectares.

Wildlife in Burkina Faso comprises 128 mammals, 477 bird species and more than 60 species of reptiles and amphibians (REEB 2002). There are several emblematic species like elephants (*Loxodonta africana*), lions (*Panthera leo*), buffaloes (*Syncerus caffer*

savanensis) and roan antelopes (*Hippotragus equinus*), which are well represented in the country. It should be mentioned that the densities of certain species like elephants and warthogs are among the highest in the sub-region. Table 8, below, sets out the country's wildlife diversity.

The use of wildlife is primarily in the form of sport hunting. The other forms of resource development are sightseeing, subsistence hunting, the commercialization of wildlife products and byproducts, farmed game, commercial capture and hunting for scientific purposes.

The hotel encampments of different hunting concessions are indicated in Table 9, below.

**Table 8: List of hunting camps in Burkina Faso**

Name of camp	Location	Lodging capacity
Campement du buffle rouge	Pama Sud/Kompienga	20
Campement du Lion	Ouagarou/Tapoa	40
Campement du buffle noir	Kondio/Tapoa	32
Campement Yériyanga	Pama/Kompienga	48
Campement Pagou Tandougou	Arli/Tapoa	14
Campement Yentangou	Namoungou/Gourma	40
Campement « Caïcédra »	Boromo/Balé	12
Campement les Palmiers	Diapaga/Tapoa	30
Campement Singou	Gourma/Gourma	28
Gourmou safari	Koakrana/Tapoa	24
Konkombouri	Madjoari/Kompienga	18
Kompienga	Kompienga	12
Sissili	Sissili	28
Tapoa Djerma	Tapoa	-
Sâ-Sourou	Sourou	22
Zigbéri	Oudalan	24
Nazinga	Nahouri	40
Sunnogo safari/Sorumzougou	Sanmatenga	22
Nuugu safari	Sanmatenga	16
Safari 2000	Zoundwéogo	20
La Mou	Tuy	30
Wéotenga	Ganzourgou	10

Source : Burkina Faso SNAT study, assessment- diagnostic-orientation, volume 3, June2007

Burkina Faso offers considerable potential for the reduction of global greenhouse gas emissions, both through control of forest degradation/deforestation and the restoration of forest landscapes. The landscapes that frequently have high population densities offer special opportunities for the development of management systems that combine low carbon emissions and strong climatic resilience. In a situation where the rural populations depend strongly on natural resources for agriculture, animal husbandry, fuel and fodder, agro-forestry and agro-silvi-pastoral systems together with local programs for bushfire and forest management can improve local livelihoods whilst increasing the potential for sequestration. Carbon sequestration has seen a significant increase

between 1999 and 2007 due to reforestation campaigns that the country carried out to combat desertification.

## **20. The challenges of sustainable forest management**

The options to reduce deforestation and sustain harvesting based on biological potential, maintaining carbon stocks and contributing to a green economy identified by the Forest Investment Plan (MEDD, 2011) are the following:

**Protection of forest reserves:** This alternative would allow for reliable protection, sustainable regeneration and improved use of forest products in accordance with forest management plans that have to become systematically implemented in all woodlands of the country over the next few years. Specific actions include: (i) bush-fire management, by establishing and regularly maintaining fire breaks network; (ii) regular control; (iii) respect of regulatory texts; (iv) practice of fire precaution; (v) organization of the pastoral sector; (vi) restoration of degraded areas; (vii) the establishment of regeneration areas for fauna, with the objective of sustainable use for the benefit of local populations.

**Reforestation/rehabilitation of forest reserves:** This option consists of the implementation of silvo-cultural actions and management of natural regeneration. Specific actions include village and family woodlots for sustainable land management, agro-forestry and fruit trees. Agro-forestry species would be used for restoration of soil fertility. Fruit trees would include local and exotic species. These activities would mainly be undertaken within forest reserves, namely through fire management. The benefits would include: (i) the protection of thousands of hectares of natural areas; (ii) biodiversity conservation; (iii) the support to rural populations living in and near forests; (iv) carbon sinks for the absorption of GHG.

**Decentralized management of forests, down to the level of village areas.** This option will include, among others, the following activities: (i) establishing and using small woodlots to benefit communities and municipalities; (ii) maintaining soil fertility restoration; (iii) improving livestock management; (iv) implementing social and educational infrastructure; (v) building the capacity of local populations in order to assure their full participation in the management of the forests and the broader rural areas and to reverse soil degradation and hence stop deforestation.

**Strengthening private forest management through small-holder activities,** such as agroforestry, fruit tree plantations, biodiversity conservation and improved livestock management. Constraints to smallholder investments in agroforestry need to be analyzed in order to design appropriate response mechanism, such as micro-credit or risk insurance schemes.

**Protection of existing agricultural land trees (Parklands), creation of agro-forestry parks and promotion of soil fertility techniques** that contribute to protect them against erosion. Parklands and agroforestry trees would not only have the potential to sequester and store additional carbon in above ground biomass, but even more so increase the soil organic carbon significantly.

## 21. Investment Challenges

These Investment options will provide the favorable framework which Burkina Faso needs to develop over the long term a comprehensive national strategy for REDD+. Without this, it will be difficult not only to broaden measures to reduce emissions of greenhouse gases, but also to demonstrate the full capacity of dry zone forests to contribute to REDD+ in situations of weak forest cover.

The implementation of a transformational process is of evident need and will demand a fundamental change in the institutional framework as well as a socio-economic change in the management of forests. With that in mind, preconditions are indispensable:

- At the State level, in order to create the requisite environment it is necessary to:
  - Establish a platform for permanent dialogue between the actors participating in wildlife and forest resource management;
  - Have a vocational approach to territory development;
  - Be equipped with a reference structure in order to capitalize on biodiversity research;
  - Establish a coherent policy between different ministerial departments and staff personnel of sufficient quantity and quality;
  - Oversee compliance with specifications;
  - Review the allocation of revenues stemming from wildlife and forest production to take decentralization into account;
  - Carry out the transfer of responsibilities to collectivités territoriales in forest matters in order to permit them to participate in conservation efforts;
  - Impose self-evaluation mechanisms for promoted forest approaches;
  - Attend without fail to the regular implementation of environmental impact studies on all methods as well as following-up on the implementation of attenuation measures;
  - Take the necessary steps for the rapid ratification by Burkina Faso of the “Nagoya Protocol on access to genetic resources and the just and equitable division of benefits stemming from their use”;
  - Involve local communities more in the management of wildlife resources by increasing their access to wildlife related benefits;
  - Compensate for damages caused by certain wildlife species.
- At the level of Collectivités territoriales :
  - Integrate the environmental dimension into planning tools at the community and regional level;
  - Ensure their role as key actors in the sustainable management of wildlife and forest resources.
- To increase the contribution of civil society:
  - Reinforce the network of civil society to better increase its visibility and credibility but also to better exert the principal of indebtedness in the management of biological diversity;
  - Establish/ reinforce the culture of capitalization, learning, diffusion of information and knowledge in order to guarantee the transparency and sustainability of biological resource management;
  - Impose mechanisms of self-evaluation for promoted forestry approaches.



In addition, to remedy the many different interventions and priorities that become less and less clear and create inefficient and unsustainable methods of natural resource development (notably forest and wildlife), the three ministers in charge of the Environment, Agriculture and Animal Husbandry signed in May of 2010, a framing memorandum intended to guide the development of the National Rural Sector Program (PNSR). It constitutes from now on the only framework for programming and implementation of public action in matters of rural development and the reference document for guiding actions in this domain for all state and non-state actors.

Through this one act, these different options create important possibilities for reduction/sequestration of greenhouse gases and will also have important, and closely related, environmental and social effects with regards to soil fertility management, erosion control, catch basins and biological diversity. Also, the related economic benefits consist of job creation, increased revenues for local populations, and the stimulation of local and regional development.

## 22. Case studies

The following case studies seek to illustrate some existing challenges and opportunities in transforming the role of the State, developing a role for elected local government and civil society and transferring a measure of control over forests to local people who depend upon them for their livelihoods. The first case study describes a form of co-management of State forest resources, where local firewood cutters have been engaged, organized and granted usufruct rights under contract to operate a system of sustainable exploitation for urban firewood supply. The Union of Shea butter producers in second case study have benefitted from investment to build their organizational and technical capacity. Their influence and options for capturing a greater return in the shea value chain have grown accordingly. The third case study is an example of private investment rather than social enterprise, but with an element of social responsibility. This case illustrates a context in which private capital can be mobilized in-country, but highlights some of the inherent constraints and dilemmas in this route to investment. The Sablogo case parallels the first case study, but with a less directive approach and an clear strategy of engagement at the level of collectivité territoriales. The final case study could be read as an example of private investment in social enterprise, but rooted in the local culture and indigenous knowledge, initiated at grass roots level and largely independent of external support.

### Case Study 1

#### Union of Forest Management Groups of the Center-West

Since the 1980s there have been policies to promote sustainable forest management, including policies for participatory forest management aiming at including rural actors in the exploitation and sales of forests products and in conservation of forest resources (Zougouri, 2008). There are three forms of management for classified (protected) forests:

- management by the Forest Service in cooperation with the population;
- concessions to local authorities;
- and concessions to private actors;



Forest management by UGGF corresponds to the first of these forms of management. It is based on a principle of voluntary participation by the population with technical supervision from the Forest Service (Sawadogo, 2006). In 1985 a system dividing forests into Forest Management Units (Chantier d'Amenagement Forestière, CAF) was established. This division was led by the FAO with UNDP Financing in a project called "Aménagement et exploitation des forêts pour le ravitaillement de Ouagadougou en bois de feu" (Forest management and exploitation for the supply of fuelwood to Ouagadougou) (Bellefontaine et al., 1997). Each CAF has a management plan which should outline a sustainable exploitation of the forest resources.

Day to day forest management is delegated to villages, organised in management groups, called GGFs (Groupements de Gestion Forestière). The GGFs responsible for the management of a CAF are grouped in unions (so called UGGF). The UGGF signs a management contract with MEDD for the CAF which gives them usufruct rights over the forest for the duration of the management plan. With the revenues from forest production, the UGGFs employ technical staff responsible for the implementation of the management plan.

Additional information that could be useful for this case study; (see Employment and Revenues of the Forest and Energy Industry)

## **Case Study 2**

### **UGPPK, Union of Shea Butter Producers, Burkina Faso**

UGPPK is a group of 3,000 women who gather Shea nuts to produce Shea butter which is used locally for cooking and exported for use as an ingredient in the food and cosmetic industries.



### **Women of UGPPK in shea butter processing session**

Shea butter is made from Shea nuts, the fruit of the Shea tree which is only found in Africa. It is a resource of great nutritional and economic importance across 16 countries of sub-Saharan Africa, particularly Benin, Côte d'Ivoire, Ghana, Guinea and Mali as well as Burkina Faso.

Shea nuts play an important economic role in the region where they are the main source of income for women, the main participants in the industry. Traditional Shea butter processing is done by village women who gather, boil and sun-dry the nuts before they are pounded and ground to a paste. The paste is mixed with water to separate the fat, which is then manually churned into creamy butter. Shea butter is used in Africa as a cooking fat and as a skin and hair treatment. In Europe it is mainly used by the food industry in chocolate, margarine, and confectionery products because of its low cost and effective emulsifying properties. It is increasingly being used in soaps, moisturizers, and other cosmetic products because of its high quality and exceptional characteristics and the growing demand in the cosmetics industry for natural products which don't harm the environment.

The poor and inconsistent quality of Shea butter production in producing countries is an obstacle to its development as an export commodity. Exports are therefore mainly in the form of Shea nuts which multinationals purchase at a low price from intermediaries and process into Shea butter in the importing country. As a result the primary producers lose out on the additional income from processing.

The Union of Women Producers of Shea Products of Sissili and Ziro (UGPPK S/Z) was established in January 2001. It was set up to improve the position of women involved in Shea butter production, most of whom are illiterate, and reduce poverty in the villages. It started as a union of 18 district producer groups, known as cadres. It has now grown to 55 groups from 38 villages; each group made of around nine smaller groups of producers, and represents more than 3,000 women producers. It operates in the Sissili and Ziro provinces, near the border with Ghana and is commonly known as the Léo Union after the town where its headquarters are located.

Some members are nut harvesters who gather, sort, wash and dry the nuts. Others are butter producers who harvest about a third of the nuts they need and buy the rest from harvesters. The nuts are collected from the bush or from trees in the cotton fields owned by the women's husbands. The harvesters are mainly located in remote areas where cotton doesn't grow and there are few opportunities to earn cash. After making Shea butter for their own use they sell the rest of the nuts locally for a very low price. Rather than selling nuts at a low price locally the union has set up a 'warehousing' system in which gatherers and butter producers can sell their nuts to the union for storage until the butter production cycle begins, when they can be bought back at cost on production of a receipt. Whether harvesters or butter producers, the women have equal status and influence in the union.

UGPPK's strategy to increase the incomes of its members has several strands

- Capacity building – increase the quality and quantity of Shea butter produced by members
- Organize the effective marketing of the Shea butter produced by the union
- Access alternative higher-value international markets such as Fairtrade and organic.

The Shea butter produced by women at village level is of the quality used domestically for cooking and making soap. The union operates processing units in five of the seven

districts where it has members, where women can produce good quality butter and eliminate the hard physical labor. The processing machinery is paid for by a government rural development project and the union is responsible for constructing the buildings to house them. UGPPK employs an agricultural extension worker in five of the districts whose role includes training a member from each group to monitor quality and provide training to other members.

UGPPK is one of the three women's organizations in Burkina Faso which are the leading producers and international marketers of Shea butter. UGPPK has a high profile in the industry, with a presence at national and international trade fairs, and is a member of the industry body known as the 'filière', made up of producers, government ministries, NGOs, and traders.

Abou Dradin, UGPPK manager, explains the wider social role the union plays and its contribution to changing the cultural status of women: "Fairtrade standards are a way to introduce transparency and good governance into the co-operatives, and this should be extended to civil society and the whole country. In this area, UGPPK is a role model in Burkina Faso."

Traditionally, women of rural Burkina Faso are expected to stay at home. But because Shea butter production generates income for the household, men are more willing to give their wives some freedom. The women of UGPPK use the union as a meeting place where they can enjoy social interaction and discuss their day-to-day problems. Abou Dradin says: "During the union's General Assembly you will see women, even illiterate women, standing up and saying 'I want to know what you do in the board', and that is progress in our society."

UGPPK gained organic certification in December 2007. To produce a product to organic and export quality standards, the butter is transported by cart to the union's processing plant in Léo where it is purified, filtered and stored in hygienic metal drums. Soap is also made here for sale on the local market.

Thirty-two of the 55 district groups were Fairtrade certified in July 2006. Through Fairtrade, UGPPK has the opportunity reduce the number of intermediaries and trade directly with buyers. For Fairtrade sales, the union receives a guaranteed minimum price of €2640/tonne and pays members a price agreed by members at the General Assembly which is higher than for conventional sales. On top of this the union receives the Fairtrade premium of €185/tonne to invest in community projects agreed by members.

In 2007 Fairtrade sales accounted for 8 tonnes of shea butter. This was just 11.6% of the total production of 69 tonnes but was able to double the incomes of medium-size producers. Fairtrade and organic sales for 2008 are estimated to have grown to 30 tonnes, 30% of the 95 tonnes produced. With the extra income embers can now afford to pay school fees and buy medicines without relying on their husbands. Women often have to walk for long distances in their daily lives and most have now purchased bikes. One woman half-joked that if Fairtrade sales continue to grow 'we will all have our own motorbike!'

With the UK launch of Fairtrade cosmetics in spring 2009, shea butter from UGPPK will be available as an ingredient in Fairtrade products such as body butter, body scrub, lip balm, and shaving oil.

### **Case Study 3**

#### **Private Production, M. Joseph Kaboré**

One of the difficulties in the production of arboriculture is tied to the long wait that spreads over a number of years before the first harvest. In Burkina Faso, the State remained for a very long time the only large-scale investor in the forest sector. The reforms that came into effect in the 90's drove the country to the adoption of a market economy system and as a corollary, the disengagement of the State from the sectors of production. That created investment opportunities either by taking over existing operations or by creating new ones. Mr. Joseph KABORE made the decision to create his agro-forestry operation.

After a successful career in administration within his country and occupying roles of high responsibility, Mr. KABORE decided to invest in the agro-forestry production sector. The idea of this operation was motivated by the need to invest in the rural sector, admittedly to make a profit, but also to bring his contribution of food self-sufficiency and the reduction of poverty. To this end, he applied a program that lead to the existence today of his forest operation.

- **Site Identification :**

The future success of this enterprise depends strongly on its location within the national territory. To this end, steps were taken to identify the planting site for the project. The criteria that were determined for site planting enabled the conditions for the success of the cultivation project. To achieve the latter, the ideal site should have :

- Good rainfall to facilitate plant production,
- Good availability of lands to ensure access to a significant area,
- Easy access so as to not have problems with regards to the displacement of people and product shipping.
- Not too far from OUAGADOUGOU, the capital.

The area responding to all these criteria is that situated in the zone which includes the provinces of SISSILI and ZIRO. In the end, the village of NEBOU in ZIRO was retained as the site for cultivation. This village is situated 125km to the south west of the capital, OUAGADOUGOU on national route #5 and 25km from the city of SAPOUY, the biggest city in the province of ZIRO.

- **Property negotiations**

In Burkina Faso, it is said that land belongs to the State but traditional law continues to have influence in matters related to landowning particularly in rural areas. Therefore it is with the rural owners (village chiefs and heads of families possessing the



land) in the village of NEBOU and not the state with whom negotiations were held to obtain the property.

The negotiation was of a win-win nature. The developer first presented his vision to the landowners of what the proposal was for the site, payment for work, women and young people of the village gaining access to an income. The developer committed to purchasing the negotiated area, to develop it and engage the local population in its cultivation. These conditions were suitable to the landholders who ceded one hundred ten (110) hectares of land to M. KABORE and received compensation in cash. The negotiation unfolded through discussions under a tree and was punctuated by a statement of the encounter signed by all parties.

- **Site Registration**

Activities on the property of Mr. KABORE began in 1997. But it should be known that the transactions and agreements for the release of the land with the traditional landowners do not have any value according to the law and does not endow through that act any rights to the buyer. The developer, to reduce the risk of expropriation of the acquired lands, sought to obtain a legal title of cultivation. It should also be underlined that this title also gives the advantage of negotiating credit with financial institutions. To obtain this title, all developers must form a relationship with the technical services in charge of the environment. This way the State imposes a study beforehand or a notice of environmental impact as it relates to the scope of projects. This study, which is very costly in terms of time and money, is in general dreaded by new land developers that must finance the entire budget. The contents of the study are imposed by the State with the aim of having a deeper understanding of the impact that the envisioned activity will have on the environment and the compensatory measures to be applied.

M. KABORE was able to satisfy all requirements and today possesses a legal property title for 110 hectares, which is a complementary source of investment security in the present and future of the property.

- **Site Development**

With the aim of facilitating site cultivation, the developer began by clearing the site. He then proceeded to divide it by hectare, which yielded the added benefit of opening the circulation roads within the property and also mastering the production yields by hectare. The property also has two drilling rigs (which also help certain village inhabitants gain access water), a warehouse and a terrace that serves as a corn processing site. Electricity is supplied by a generator.

- **Site Cultivation**

With regards to arboriculture, three operations are under way. First, there are the cashew trees which are by far the most planted trees and occupy around 60% of the site (about 66 hectares). In addition, there are mango and citrus trees which are of less importance in terms of occupied space. A part of M. KABORE's property is intended for agricultural production. The agricultural projects are, among others, corn and black-eyed peas.

The property is cultivated thanks to five permanent workers and a number of temporary hands that are recruited in the village of NEBOU in a way that all parties should benefit. On top of the salaried employees who have a monthly wage, the temporary laborers earn at least 3,000,000F per campaign

The property has a tractor and an array of accessory equipment.  
The total investment including the acquisition of land, site development and equipment is currently evaluated to be at least 67,000,000 FCFA.

- **Current Difficulties**

Current difficulties are essentially financial. Financing a production campaign on the site costs between 11 and 12 million F, which is not easy to obtain from the bankers who estimate that there is elevated risk in the agro-forestry sector. To implement arboricultural projects of intensification and diversification is very difficult.

- **Prospects**

Prospects for the property of M. KABORE are presented by short and medium term.

- Short term

At first aim to finish the development of a water reservoir that is currently taking place on the property. This project was entirely financed by M. KABORE. This reservoir will make water available for almost the entire year.

The availability of water for production is envisioned by M. KABORE to:

- Increase production of cashew nuts
- Diversify production by introducing citrus fruit such as the TANGELO.
- Off season production, focused mainly on corn production with the aim to satisfy food requirements for dairy cows as well as new processing industries.
- Medium term :

In the medium term, M. KABORE plans to develop a processing factory for cashew nuts. The installation of this kind of processing unit will be another benefit for the local population as a creator of new jobs.

- **The need for partnerships**

The need for partnerships on the property of M. KABORE is situated around three projects which are :

- Increased production of cashew nuts,
- Introduction of citrus production.
- The development of a processing plant for cashew nuts.

## Case Study 4

### Sustainable forest management for the socio-economic security of communities in the Central – East region

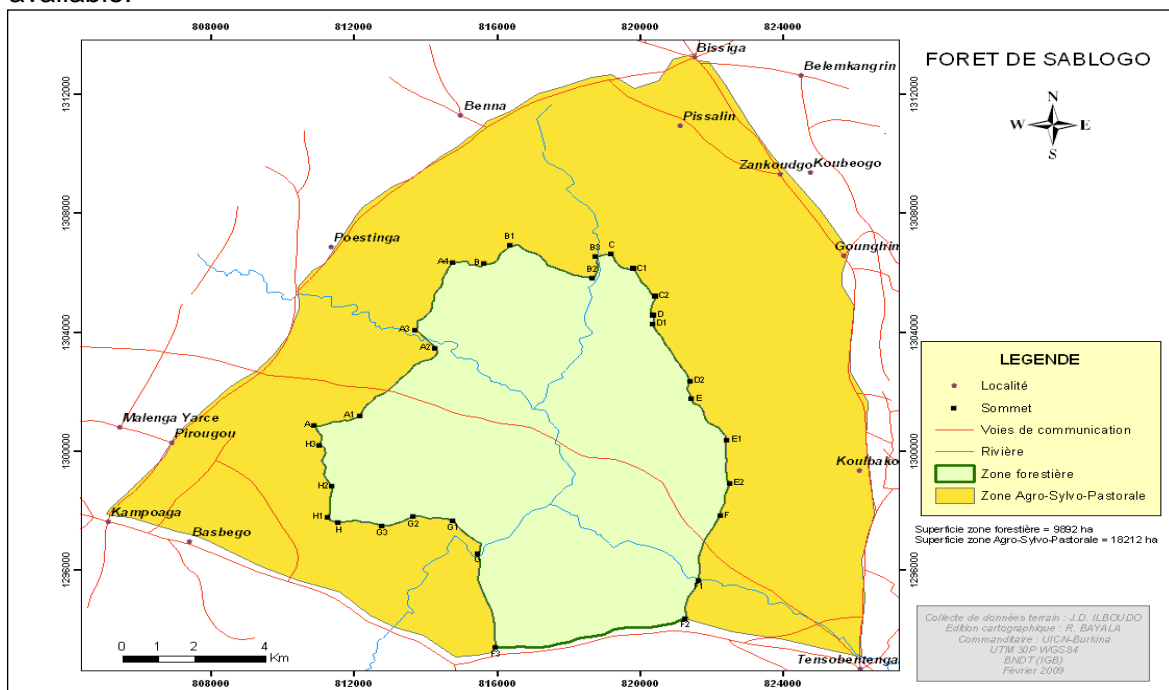
In 2006 the municipalities of Bissiga, Lalgaye and Tenkodogo in the Central-East region of Burkina Faso, called for support from the International Union for the Conservation of Nature (IUCN) for the Sablogo forest. IUCN, through its Livelihoods and Landscape Strategy, invested in these three municipalities, bringing solutions to the principal challenges facing the forest. These challenges were to increase the productivity of forest landscapes in the region while reducing extreme poverty in the communities.

Sablogo forest, the principal supplier of firewood for Tenkodogo, Bissiga and Lalgaye, all of which have grown in an uncontrolled way, was over-exploited.

The actors then adopted concerted approaches to development and participatory management, taking inspiration from lessons learned, including from notable forest development sites in the Central-western region of the country and from experiences of earlier interventions in the region. This began with a preliminary stage of coordination with local authorities, community members, the mayors of municipalities and the decentralized technical service. It was then followed by a second stage of interactive visits and awareness raising about the value of the forest.

These encounters permitted the establishment of dialogue and a sustained social mobilization and along with the definition of a joint vision :

« To make the natural forests of Sablogo green again. To use space in a planned and organized way with the aim of making the tools for sustainable local development available. »



By supporting local governance processes it was possible to negotiate shared management of the forest, which is bordered by the three communities. The first milestone was the collectively agreed concession of a portion of the forest massif each of the three municipalities to establish a 10,000 ha forest production zone and a 17,000 ha agro-pastoral production zone. These were created by tracing the perimeter and tagging the different vocational zones. Using research results on the biological, sociocultural and economic potential of the land and the accompanying support of the IUCN, the three municipal councils developed a plan for development and management (PAG) for 2025, taking into account the array of opportunities for valorizing and conserving forest resources.



In the case of wood energy, based on rotational green forest use with a usage rate around 50% (by volume) and a tree diameter between 10 and 25 cm, the PAG predictions indicate an annual production of 2,000 to 7000 steres depending on the potential of each parcel. This is the equivalent of 63,172 for 15 years of rotation. This production corresponds to potential annual revenues of 6,000 to 24,000 Euros, or a total of 211,871 Euros with 63.6% going to forest users (local population), 18.2% to support forest development, 4.5% for municipal development initiatives, and 13.7% to taxes. Additionally, there are the revenues from the cultivation of non-timber forest products and the other goods and services supplied by the forest to local communities, and the creation of employment.

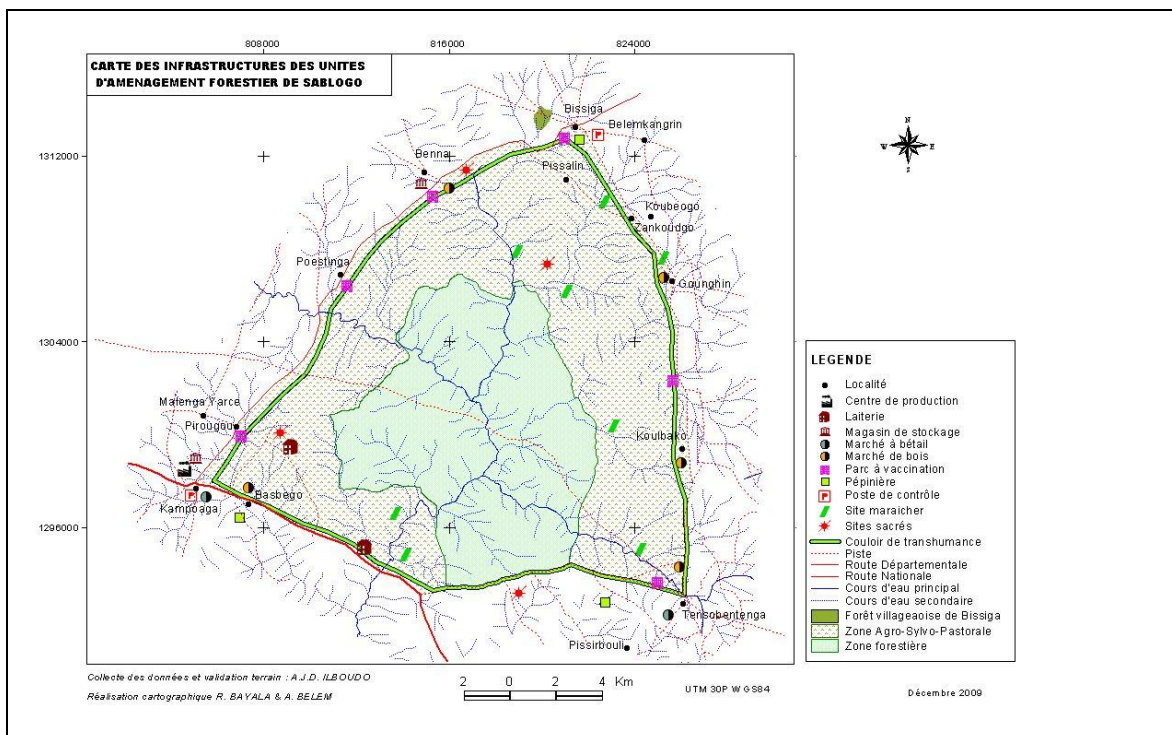
In order to facilitate the collective management of forest generated resources to the benefit of communities, the PAG supported the development of local conventions and an administrative, financial, and accounting procedural manual adopted by the stakeholders. These different tools permitted the administrative authorities to start the registration process for the forest and the transfer of certain necessary skills to the municipalities for their implementation.

The main added value of this process was the changing of the way of thinking as much at the municipal level as among community members. a clear vision for development based on the valorisation of natural resources at the level of the three municipalities emerged from the process, which enabled the organization and utilization of space at the regional level and the organization of the agricultural and forest (wood energy, non-timber forest products) industries at the village and municipal level, focusing on the national and lower regional market. Key stakeholders include three (3) municipal councils, twenty four (24) forest management groups and the nineteen (19) PFNL

development interest groups, who were established during this process, take their first steps in rural entrepreneurship.

As of now, being aware of the lack of information and technical capacity of municipal councils and producers, the IUCN and its commissions have proceeded to acredit 21 mayors, 42 municipal counselors and 21 chairpersons of environmental and local development commissions in the region of the Central-East. They have been given an orientation and legal information guide about the different legal texts that confer the responsibility of natural resource management to the local collectives with the intent of better equipping them to fully exercise their responsibilities on forest governance.

### Spatial layout of the Sablogo landscape



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### **Case Study 5: Forests for human well-being : Testimony on the entrepreneurial experience of Mr. Jean Paul Nikiema, (Traditional Healer in Sapone)**

I farm, I raise animals and I am also a traditional therapist because I care for the population.

Medicine is tied to the brush. All the plants that surround us here are a source of medicine, and it is out of ignorance that we call them “trees” as they are medicine. Their roots, leaves, fruits, flowers, etc. Everything in these trees is used to make medicine.

Before there were many trees in this zone, but for the last 30 years the opposite is true. Once when I travelled to the Kaya region, I observed a great absence of forest such that I could see a vehicle at a distance of 8km. When I came back here, I said to myself that if the problem exists there, it could also arrive here. I had a vision of constructing a private forest because I noticed the progressive decline of the plants. So I invited the old men and the old women to ask them for permission, given that I was young. From those elders I acquired this forest with the aim to protect what I had delineated.

But to make sure that nobody entered randomly was also a challenge and I again asked the elders for support to sensitize the population against uncontrolled cutting. Nowadays, the plants we uprooted and threw away abundantly are no longer easily found. So I went to Kombissiri on a project, which helped attain certain plants that had been collected near Sapouy or Ghana, etc. I planted many plants here, and I don't miss the opportunity to ask for plants or seeds when I travel, with the aim of planting them here.

So currently I have many plants and I use them to treat people. My forest was evaluated at 100 hectares.

With regards to the profits of the forest, women will testify, it's a great treasure even with regards to food.

There is a plant called “koumbr sak”; it was abundant and it was used to treat people, but today we no longer have it. Another called “kitenga” is also rare nowadays, but we have succeeded in replanting it. “Lenga” whose fruits are edible, the leaves and roots medicinal, had disappeared but we have been able to reintroduce it through replanting. When a person has stools comparable to snot (dysentary), we take the root of the “lenga” which we peel and crush in a drink concoction, and the illness disappears.

We are driven by the willingness to share but bound also by the obligation to preserve certain aspects. There is a tree that flowers in one day (the fig) and you never see its blossoms but only its fruit; but we capture its nocturnal blossom, take its flower and then introduce it into a sterile female, she bears a child, perhaps twins because the fig never produces one sole fruit. There are many other cases, but one must come with a condition and experience the healing to believe it. There are people who came from America with an illness of the rib, they themselves were doctors; they tried in vain to treat it where they were from and then came here. Then I took a root with which I treated him, and he was cured. Afterwards they wanted to take the seed of the tree back to the USA but I told them that it wouldn't work every time they have a problem and that they should come here or let me know so that I can send them medicine. I exchanged with the white men and I know that their tablets that we buy are made from plants. Because

of a lack of knowledge of plants on one hand, and a lack of technique and adapted technologies on the other hand, we suffer needlessly while the tree... is life.

Plants reproduce in different ways; by seed, cuttings, etc., and I know and utilize these different techniques. Medicine is a treasure of the plant, but not the only treasure: we consume the fruit, the leaves, etc. Shea butter is very good; nere seeds are used to make sumbala which is a valuable substitute for maggi cubes. They are sold directly here. Last time, I harvested a small quantity which my wives sold and they made more than 100,000F. With that money, they can buy damask cloth for their pleasure. Nowadays, when the neighbors need medicine, they come ask us and we harvest for them. The benefits are immeasurable.

If everyone agreed to reconstitute and protect the forest as we have done here, Burkina Faso would be well developed. We invite people from all around to get close to the forests, to listen to them. If we follow their recommendations, that will be beneficial to us.

Ignorance is the source of our suffering; I observed and I saw. I extracted the benefits and I know it is true.

## Annex 1

### Employment and revenue of actors and taxation regimes in the wood and wood energy industry

#### 1. Actors in the wood-energy industry

The term “actors” refers to all physical and moral persons involved in the development activities, cultivation, and commercialization of firewood and wood charcoal. There are five distinct categories of actors comprising the State, producers, merchants, wood splitters, and consumers.

#### 2. Price structures for firewood and wood charcoal

In the developed zones, where harvesting of firewood and wood charcoal is better followed and better controlled, incentive measures are taken at the level of the price of wood, to guarantee the sustainability of the wood resource on one hand and to improve the living conditions of the people affected by the management of these zones on the other. This structure of wood pricing varies according to the region and falls within the framework of current texts on the liberalization of commerce in Burkina Faso.

In the developed zones, the variation of taxes for development funds, funds for rotation and remuneration of woodcutters influences the price of wood steres. To give an example, the price of wood steres is 2,300 FCFA in the Boucle du Mouhoun region, 2,200 FCFA in the Central West, 1,750 FCFA in the West and 1,550 FCFA in the Central North. This situation is due to the price liberation and the organization of the harvesting of firewood and wood charcoal by the GGF.

*Table 1: Price structure for firewood and wood charcoal (FCFA)*

Type of tax	Amounts	Characteristics	Destination
Cutting permit or forest tax	300 FCFA/wood stere	National fixed amount	Public Treasury
	250 FCFA/quintal of firewood	National fixed amount	Public Treasury
Development fund	200 to 600 FCFA	Variable amount according to zone	Local Development Fund
Approval	4,000 FCFA/year/wholesaler-transporter	Variable amount according to municipality	Municipal Budget
	2,000 FCFA/year for retail merchant	Variable amount according to municipality	Municipal Budget
Warehousing permit	2,000 FCFA/year/wholesaler-transporter	National fixed amount	Public Treasury
	2,000 FCFA/ year for retail merchant	National fixed amount	Public Treasury
Circulation permit	300 FCFA/voyage	National fixed amount	Public Treasury
Rotational fund or Village Investment Fund	50 to 200 FCFA/wood stere	Applicable in developed zones	Rotational Fund, clerk
Woodcutter earnings	900 to 1,700 FCFA/wood stere according to region	Applicable in developed zones	woodcutter



Sources: MEM, 2000 and Kaboré Cyrille, 2002 cited by MECV (2004)

### **3. Employment and Income**

Revenue from the harvesting of wood and wood charcoal is brought to light through the price structure of wood and wood charcoal.

#### **3.1. Employment and revenue at the producer level (woodcutters)**

The development and harvesting of forests generates income for the rural population of the places implicated in the management of forest resources. The revenues that are in question here concern those derived exclusively from developed forests for the provisioning of the cities of Ougadougou, Koudougou, Reo, and Bobo-Dioulasso. The portion of the revenues that returns to organized producers within the GGF's is divided between forest development funds and village investment funds. To those two funds is added the part that returns to the woodcutter (forest worker).

- a) the Forest Management Fund (FAF): as its name suggests, the forest management fund (instituted by Order # 01-048/MEF/MATD/MEE of November 2001) is intended for the implementation of activities in the developed forest zones for wood cultivation, with the aim of ensuring the continued existence of wood resources. This fund is under the responsibility of the Union of Forest Management Groups in matters related to cases of managed forests. The specifications tied to the management contracts fix the practical methods of organization and supply of these funds. The FAF is managed by the GGF in the developed forest zones. The amount of the FAF varies between 200 FCFA and 600 FCFA per wood stere depending on the administrative region and is fixed jointly by the minister in charge of the forest sector, the minister in charge of commerce and the UGGF.
- b) The rotation fund or village intervention fund (FIV): the rotation fund or village investment fund (FIV) is an initiative of the GGF that aims to establish financial resources, managed by them, to contribute to socio-economic investments in their village. The amount of the FIV varies between 50 FCFA and 200 FCFA per wood stere according to the administrative region and is also fixed jointly by the minister in charge of the forest sector, the minister in charge of commerce and the UGGF.
- c) Revenues of the forest workers (woodcutters): the part that returns to the woodcutter or wood supplier is a private fund that he uses to cover his own needs or those of his family. The portion for the woodcutter is the highest in the structure of wood pricing. It varies between 900 FCFA and 1,700 FCFA per wood stere according to the administrative region and is fixed jointly between the minister in charge of the forest sector, the minister in charge of commerce and the UGGF. The income of a forest worker varies between 25,000 FCFA and 125,000 FCFA per campaign Kabore Cyrille, 2002).

A real economic impact study on the rural households in the influence zones of the forest management sites of the region of Ougadougou, carried out in 1998 (Thiam A T., 1988), gave the following results:

- Increase in the level of monetary income: 47,723 FCFA a head per year for the partner households in participatory forest management, compared to 26,014 FCFA per person per year for the non-partner households;
- Increase at the individual level- production (cereals, vegetable oils, products for farming, etc.): individual monetary compensation- subsistence production is

evaluated by the average rural market price, at 24,058 FCFA/person/year for the partner households compared to 17,765 FCFA/ person/year for non-partner households in the participatory development of forests;

- Increase in the portion of income resulting from forest management: 14,400 FCFA per person per year;
- Increase in the level capital and savings: the partner households in forest development are relatively more endowed with modern lighting equipment (oil lamps, battery powered flashlights), food appliances (gas stoves) and agricultural capital (draft animals, ploughs, seeders, inputs, etc.).

The members of GGF in the regions of Ougadougou and of Bobo Dioulasso, asked during an inquiry carried out in 2000 for the purpose of a study, confirmed the contribution of forest revenues to the improvement of individual or family living conditions of forest workers and the investment in agriculture and animal husbandry. The opinions of these people are recorded in table 2 below.

Tableau 2: Assessment of forest revenue contributions by the GGF members in the regions of Ouagadougou and Bobo Dioulasso.

Additional benefits of participatory forest development	Beneficiaries	
	GGF Members	Households
Increased incomes for GGF members	92%	96%
Grants for the resolution of prior conflicts	42%	38%
Educational grants for children	79%	54%
Family health improvement Grant	79%	74%
Other positive effects	58%	28%
Improvement of technical skills for producers	58%	44%
Improvement of producer's equipment	58%	48%
Improvement of household equipment	21%	47%
Decrease of flight or seasonal migration	38%	29%
Positive effects on agricultural production	92%	-
Positive effects on animal husbandry	83%	-
No advantage	4%	-

Source: Kaboré. C., 2000

On the same note, and also according to the results of the same inquiry, the specific contribution of the Village Investment Fund, also called group rotational fund for local development over different properties, is significant, as witnessed by the percentages of the responses below:

- Improvement of school infrastructure : 67%
- Improvement of sanitary infrastructure : 71%
- Improvement of road infrastructure : 21%
- Commercial development of the village : 00%
- Social development of the village : 88%
- Cultural development of the village : 58%

According to the FAO (2000) cited by MECV (2004), the financial effects resulting from the participatory management of developed forests during the period of 1986-1999 are estimated at 9.100 billion FCFA spread out as follows:

Table 3: Financial effects of developed forests from 1986 to 1999 (FCFA)

Destination of revenues	Revenue amount according to destination	Annual average over 13 years
Public Treasury (forest tax):	1.250.000.000	89.285.000
Forest workers (woodcutters):	4.600.000.000	328.571.428
Village Investment Fund:	750.000.000	53.571.428
Forest Development Fund:	2.500.000.000	178.571.428

Source: FAO (2000) cited by MECV (2004)

Jobs created within the managed forest framework for the regions of the Central West (Koudougou), the West (Bobo-Dioulasso) and the South West (Diebougou) are estimated at around 270 GGFs with a total of 11,107 members (Kaboré, 2002). There are more than 277 groups of beekeepers listed, comprising 4,848 female members.

### 3.2. Jobs and revenues at the level of the wholesaler-transporter

The harvesting of firewood and wood charcoal provides permanent and/or temporary gainful employment as well as substantial revenues to different actors, notably the wholesalers-transporters organized to provision the large urban centers.

The association of wood merchants, « Tiis la Viim » in Ouagadougou and the Provincial Union of Retailer Transporters and Firewood and Charcoal Workers (UPTDEBC) in Bob-Dioulasso indicates that on just one wood truck, at least 10 people can be dependant for their subsistence, comprising the wholesaler- transporter himself, the driver of the vehicle, the two or three apprentices, as well as their respective families. To illustrate the point, the table presents the profit margins of the wholesaler-transporters of firewood for the city of Ouagadougou by function of the means of transport used.

Table 4 : Monthly profits from firewood merchants in Ouagadougou

Method of transportation	Number voyages/month	Qty. of wood/month (m3)	Wholesaler-Transporter		
			Expenses/month (FCFA)	Resale/month (FCFA)	Profits/month (FCFA)
Carter, 2.25 m3 or 1.50 steres	4	9	30.000	60 000	30 000
Covered vehicle, 10.5 m3 or 7 steres	10	105	265 000	360 000	95 000
Truck, 24 m3 or 16 steres	10	240	800 000	1 100 000	300 000
Truck, 27 m3 or 18 steres	10	270	834 000	1 200 000	366 000
Truck, 33 m3 or 22 steres	10	330	902 000	1 400 000	498 000
Bicycle	Pm	Pm	Pm	Pm	Pm

Source: MECV (2004)

### 3.3 Jobs and revenue at the level of the retail merchants

The firewood retailers (declared between January of 2004 and June of 2004) are made up of about 1,582 people in Ouagadougou and 628 in Bobo-Dioulasso. These avowed wood retailers bring to the public treasury annually, the sum of 4,420,000 FCFA, representing the tax deposits. The calculation is made on the annual tax amount which is 2,000 FCFA per person (2000 FCFA x 2,210 people). Table 5 presents the profits that a retail firewood merchant can make in a month in Ouagadougou.

Table 5 : Monthly profits of firewood retailers in Ouagadougou

Method of transportation	Number voyages/month	Quantity of wood/month (m3)	Retailers		
			Frais de débitage /mois (FCFA)	Vente/ mois (FCFA)	Bénéfices/ mois (FCFA)
Cart, 2.25 m3 or 1.50 steres	4	9	Pm	Pm	Pm
Covered vehicle, 10.5 m3 or 7 steres	10	105	25 000	390 000	5 000
Truck, 24 m3 or 16 steres	10	240	250 000	1 470 000	120 000
Truck, 27 m3 or 18 steres	10	270	300 000	1 650 000	150 000
Truck, 33 m3 or 22 steres	10	330	400 000	1 985 000	185 000
Bicycle	Pm	Pm	Pm	Pm	Pm

Source: MECV (2004)

### 3.4 Jobs and revenues at the level of the residential wood splitters

The wood splitters in the residential areas make up an important and inescapable link in certain respects in the wood-energy industry. In the large urban centers, many circulate from door to door searching for wood to split. This is a real money-making activity. Depending on the quantity of wood, it takes two or four people, or even more, to split all the wood. Table 5 indicates the monthly income of the residential woodsplitter (or group of splitters) according to the quantity of wood split. This income goes from 25,000 FCFA for 7 steres of wood to 400,000 FCFA for 22 steres of wood.

### 3.5 Jobs and revenues at the level of truckers

In terms of employment, each wholesaler-transporter employs one (1) trucker. There are as many truckers of wood as wood trucks, or 1,117 avowed persons between January of 2004 and June of 2004 in Ouagadougou and in Bobo-Dioulasso.

A wood trucker in Ouagadougou is paid 5,000 FCFA per voyage, or a salary wage of 50,000 FCFA per month for 10 voyages over the course of the month. He also receives from the vehicle owner, just like every apprentice, the sum of 665 FCFA per voyage to cover food costs, which comes to 6,650 FCFA per month. The monthly income of the trucker is 56,650 FCFA. In reality, the earnings of the trucker are above the official sum communicated by the people in charge of "Tiis La Viim" in Ouagadougou. In practice, the

trucker has an unknown actual income that is represented by the value of wood (wood he collected without paying tax), intended for his own family use. It is rare for a wood trucker to buy wood for his family.

The Provincial Union of Retailer-Transporters and Firewood Workers (2004), indicates that a trucker receives on average 3,000 FCFA per voyage, or a monthly salary of 30,000 FCFA for 10 voyages over the course of the month. On top of that, food expenses are added which are systematically taken care of by the wholesaler transporter.

### 3.6. Jobs and revenues at the level of the driver apprentices

With regards to employment, each wholesaler transporter employs two (2) to three (3) driver apprentices per truck and per voyage to Ouagadougou (Tiis La Viim), 2004). It is the same for the wholesaler transporters in Bobo-Dioulasso (UPTDEBC, 2004). There are estimated to be between 2,234 and 3,351 driver apprentices jobs created in those two cities by the wholesaler transporters during the period of January 2004 and June 2004.

According to the association “Tiis la Viim”, a driver apprentice in Ouagadougou gets the sum of 2,000 FCFA per voyage, or 20,000 FCFA per month for 10 voyages per month. He also receives, just like the trucker, the sum of 665 FCFA to cover food expenses, which gives him a monthly wage of 26,650 FCFA.

In Bobo-Dioulasso, the driver apprentice receives in compensation the sum of 1,500 FCFA per voyage, or a monthly salary of 15,000 FCFA without taking into account the food expenses that are the responsibility of the wholesaler-transporter.

## The Forest Tax System

### A) Tax categories and forest royalties

Taxes and royalties are obligatory levies. Persons who pay them extract in return a benefit, a material compensation. Forest taxes and royalties are derived from this category of obligatory levies, as it is understood that in this special case the compensation benefits the taxpayer, it is firewood, wood charcoal or the non-timber forest products taken from a forest that belong either to the State or the Local Collective. If the forest belongs to a private person (physical or moral person), the sum to pay will simply be the price of the extracted forest product and not a tax or royalty.

Forest taxes and royalties paid by actors in the wood-energy and non-timber forest product industry are governed by a number of legislative and regulatory texts.

#### a) Law # 003-2011/year of 05 April 2011 regarding Forest Code in Burkina Faso

The forest code is the basic text that regulates the forest taxes and royalties currently being applied in Burkina Faso.

Article 58 establishes the basis for taxation in these terms: “All forest use of a commercial nature is subject to the payment of taxes and royalties.”

Article 61 indicates the purpose of taxation: “With the intent to control and follow forest extraction, a cutting permit is necessary for all felling of trees within a forest, except those located within an actual agricultural business of a permanent nature.

Article 62 states that “the issuing of cutting permits is subordinate to payment of a tax whose rate, base and method of collection are fixed by the finance law.

To that end, the current finance law cites two laws that are in effect:

-Order # 326/MF/MET of 09/4/1982 sets out the price list for products originating from natural forests and forest plantations;

-Order # 1068/MF/MET of 01/7/1980, concerning the rate of royalties for commercial use of forests (firewood, lumber, carpentry-grade lumber and wood charcoal).

- b) Order # 306/PRES/PM/MEE/MEF/MCIA of 15 July 1998 sets forth regulations for use and commercialization of timber forest products in Burkina Faso.

This order, taken from the application of the forest code, environmental code and that of the RAF, establishes the conditions of use and commercialization of timber forest products in Burkina Faso.

According to the terms of Article 58: All forest users of a commercial or industrial nature must pay taxes and royalties.

Forest taxes and royalties are therefore due from commercial users of timber forest products (woodcutters, wholesaler-transporters and retailers) for the titles they are issued. These titles are comprised of:

- Forest user: permission to cut and approval
- Merchant-Wholesaler: approval and permission to warehouse (in the developed zones) or approval, permission to cut and permission to circulate (in the non-developed zones);
- Retailer: approval and permission to warehouse.

- c) Joint Order n# 01/048/MEF/MATD/MEE of 8 November 2001 establishes the institution of a Forest Development Fund.

Forest development funds have been regulated by the joint order n#01-048/MEF/MATD/MEE of 8 November 2001.

The first article of the order stipulates, in fine, “A Forest Development Fund (F.A.F.) is instituted in all participatory Development Projects of the State and the Local Collectives in Burkina Faso as well as for all commercial use of timber forest products in the non-developed zones.”

The Forest Development Fund is intended to promote the sustainable management of forest resources (article 2).

The resources of the Forest Development Fund are generated by levies on the purchasing price of the producers of forest products derived from developed and non-developed forests.

These levies constitute one element of the purchasing price structure of the producers and are fixed through the support-council of the Forest Service and by means of the common accord between the Forest Management Village Groups Union (UGGF) and the merchants/transporters of forest products (article 6).

The deduction rate on the purchasing price of the producer by unit measure of forest products is determined in the specifications. That fixed rate should take into account the charges (forest taxes) and the profits of the producers, and the urgent need to ensure the productive capacity of income generating forests (article 7).

In practice, the tariff varies between 250 FCFA and 600 FCFA according to the region and the types of firewood.

In summary and with reference to the texts cited below, taxes and royalties that are applicable to the use and commercialization of firewood, wood charcoal, carpentry-grade wood, lumber, and non-timber forest products are the following:

#### Firewood

- Approval tax; the amount is, in principle, fixed by the State, but in the absence of text on the matter, the amount of this tax is determined by the Forest Service;
- Cutting tax (tax on the cutting permit or forest development tax); the amount is fixed by the State;
- Warehousing tax (tax on the permit to warehouse); the amount is fixed by the State;
- Circulation tax (tax on the circulation permit); the amount is fixed by the State;
- Forest development fund (FAF); the amount is negotiated between the Forest Service, the UGGF's and the commercial wholesaler associations.

To these taxes we must add the village investment fund (rotational fund) which is a contribution of the group members to sustain their fund; the use of that fund is left to the full discretion of each GGF.

The forest taxes generally implemented in the national territory are the following:

- Approval tax = amount variable according to region;
- Cutting tax = 300 FCFA per wood stere;
- Circulation tax = 300 FCFA per voyage
- Warehousing tax = 2000 FCFA per year;
- Forest Development Fund (FAF) = 600 FCFA per stere
- Village investment fund (rotational fund) = 200 FCFA per stere (tariff applied in the study zone).

#### Wood charcoal

The tax on the cultivation of wood charcoal instituted by the State is 250 FCFA per metric quintal (100kg).

The local collectives (municipalities) sometimes add a variable local tax between 100 and 50 FCFA.

Aside from these taxes on use, there are other taxes that apply to the commercialization of wood, with the exception of the cutting tax.

### Carpentry-grade wood and lumber

Order # 326/MF/MET of 9/04/1982 sets forth the price-scale for products derived from natural forests and forest plantations and establishes the taxes on firewood and wood charcoal and also the price on carpentry-grade wood and lumber; these prices are in fact taxes on these products, to which must be added the circulation permit of 300 F/day. The tariffs are fixed by tree base.

Carpentry-Grade wood (which is of interest under the framework of the present study):

- African Mahogany : (*Khaya senegalensis*) = 3,000 FCFA for the sawmills and 1,500 FCFA for the artisans ;
- Asian palmyra palm (*Borassus flabellifer*) male and female = 2,000 FCFA ;
- Kapok (*Bombax costatum*) = 2,000 FCFA
- Tamarind (*Tamarindus indica*) = 2,000 FCFA ;
- Shea (*Vitellaria paradoxa*) = 2,000 FCFA ;
- Gum tree (*Acacia senegal*) = 2,000 FCFA ;
- Silk-cotton (*Ceiba pentandra*) = 500 FCFA.

All of these species are protected except for the silk-cotton tree.

Lumber: round and unrefined wood (which is of interest under the framework of the present study):

- Posts, heavy poles and forks, piles of 12 to 20 cm diameter at wide end = 500 FCFA;
- Poles and forks of 6 to 12 cm at wide end = 200 FCFA;
- Poles and forks of a minimum diameter of 6cm = 50 FCFA;
- Bamboo = 150 FCFA

### Non-timber forest products

The commercial use of non-timber forest products (PFNL's) is not yet subject to effective taxation by the State. But certain municipalities have begun to levy taxes on certain products (the municipality of To for example).

### B- The management of forest taxes

Forest taxes are collected by the Forest Service and turned over to the manager, (named forest agent), by order of the finance minister and sworn at the level of each provincial administrative center. From there the revenues are dispatched by the managers to the Public Treasury by way of the decentralized services of the Head Office of the Public Treasury and Public Accounting. The development funds are turned over to the UGGF's in the developed zones and in the non-developed zones where they are collected, they are held at the Provincial Management of the Environment (DP). Revenues from approvals are also turned over to the DP.

#### 1.6.3 Other taxes and taxes paid by developers and merchants of forest products

According to the terms of the tax code of Burkina Faso, forest developers and wood merchants (wholesaler-transporters and retailers) are principally subject to the following taxes: the tax on industrial, commercial and agricultural profits (IBICA), trading license,



employer and apprentice tax (TPA) and the added value tax (TVA). But that is the principal, because the Tax Code also foresees exemptions to some of the above-mentioned taxes to the benefit of certain actors in the wood-energy industry. So what is the actual fiscal regime of each of these actors? It is equally important not to forget the other secondary taxes.

### 1. Tax regime for forest workers

Almost all forest workers (or producers) that currently work in the forests of Burkina Faso are simple woodcutters or coalmen whose activities are considered to be subsistence level agricultural activities like farmers and for this reason their revenue is exempted from taxes on their profits. It is a defacto exemption because no measure in the Tax Code relates to it.

They are also not indebted to the TVA according to the measures in article 331 that exempt the TVA from the harvesting and sale of firewood and charcoal.

Besides that, article 329 of the Tax Code states that “farmers and breeders that live from subsistence activities” are exempted from licensing taxes. Lastly, article 122 exempts “agricultural enterprises” from the TPA payment.

In addition, forest workers can benefit from all of these tax favors without referring to the tax code when they are members of a group or cooperative. Articles 27 and 90 of the law #014/99/year of 15 April 1999 sets forth the regulation of cooperative partnerships and groups in Burkina Faso stipulating : « Given the specificity of the cooperative societies (or groups), public authorities can accord them all tax or other privileges from which any other economic organizations can benefit. » In effect, the benefit of exemption from all taxes is effectively accorded to forest groups and worker collectives.

As a matter of fact the woodcutters and the coalmen are not subject to any tax by the State or local collectives. But it is important to point out that when it relates to mechanized forest operations of a certain scope they would be subject to the tax on profits and licensing. The exceptions are the sawmills of Banfora in the Cascades region- a type of enterprise that is, for the moment, very rare in Burkina Faso.

### 2. Tax regime for wholesaler-transporters and retailers

Wholesaler-transporters and retailers of firewood and wood charcoal are merchants and by that title subject to different commercial taxes: notably IBICA, licensing, TVA and failing that the CSI. However, the production and the sale of firewood and wood charcoal being exempted from TVA regardless of the status of the vendor, they are not liable for that tax. But what is their situation with regard to taxes on profits, licensing, TPA or CSI? The answer to that question depends on their sales, which is to say, the revenues they generate or are supposed to generate each year.

In applying the whole of the rules, the tax system for wholesaler-transporters and retailers whose activities consist of the “delivery of goods” (purchase-resale of wood or charcoal), are subject to the following tax regime:

- When they generate yearly sales equal to or above 30 million francs, they must pay taxes on the industrial and commercial profits (IBIC), licensing and the employer and apprenticeship tax (TPA);
- When their annual sales do not reach 30 million, they are only subject to CSI.

**Direct taxes instituted by the State and by professional organizations:**

- Licensing tax;
- Cutting tax on firewood (cutting permit);
- Warehousing tax (warehousing permit);
- Forest development fund (FAF);
- Cutting tax on lumber (applicable at different levels for different species of lumber)
- Cutting tax for carpentry-grade wood (applicable at different levels for different species of carpentry-grade wood);

Remarks : the village investment fund (or rotational fund), which is a form of partnership subscription, is deducted directly from the price of the wood stere. This fund cannot be qualified as a tax.

**Direct or indirect taxes levied by municipalities**

Direct taxes on forest products:

- Tax on charcoal;
- Tax on firewood;

Indirect taxes:

- Vehicle parking tax (transporting persons or products for whatever reason);
- Tax on vehicles transporting raw materials (loading or transit);
- Tax on carts transporting forest products (loading or transit);

It can be surmised that the harvesting and commercialization of timber and non-timber forest products are actually the object of multiple taxes, coming from the State or from professional organizations (where their decisions are more or less framed by state regulations) but also more and more by the local collectives, notably by municipalities, where decisions vary from one municipality to the next and from one forest region to the next.

Direct taxes instituted by the State and by professional organizations:

- Approval tax: wholesale vehicle (4,500 to 11,000 FCFA), retailer (4,500 to 8,500 FCFA), cart approval (1,500 to 6,500 FCFA);
- Circulation tax (circulation permit): 300 FCFA, but per day in certain locals and per trip in others;
- Forest Development Fund (FAF): firewood (300 to 600 FCFA), charcoal (0 to 200 FCFA); there are also FAF's for other products like honey;
- Village investment fund (rotational fund): 200 FCFA/ stere of firewood; but there are FIV's at variable rates for other products;
- Cutting tax for lumber (applicable at different levels for different species of lumber): for each species, the tariff is variable by region.

- Cutting tax for carpentry-grade wood: (applicable at different levels for different species of carpentry-grade wood): for each species, the tariff is variable by region.

Direct or indirect taxes instituted by municipalities.

*Direct taxes on forest products:*

- Tax on firewood: 1000 FCFA (only one municipality has instituted this tax);
- Tax on charcoal (100 to 150 FCFA);

*Indirect taxes:*

- Vehicle parking tax (transporting people or products of any kind);
- Tax on vehicles transporting raw materials (loading or transit);
- Tax on carts transporting forest products (loading or transit)

## **Annex 2**

### **Principle Lessons to Take Away**

#### **Regarding the organization plan for rural areas**

The population of the country is more than 80% rural. It derives its subsistence from natural resources (land, water, forest). The illiteracy rate is over 70%.

However, it must be pointed out that there is a traditional, well-structured society that confers :

- 1) A dynamism in its modern organizational structures of the rural areas,
- 2) An awareness of the limited natural resources of the country and the need to manage them well.

#### **Regarding the plan for legislation and regulation**

The State had a predominance over the land, forests, and briefly over natural resources. The land belonged to the State until 1991. This predominance was superimposed over traditional social organizations. However, with decentralization, legislative and regulatory texts were rewritten to accord more responsibility to communities and local collectives and to open doors to the private sector. Furthermore, the recent implementation of laws and regulations (Law No34/2009 and Law N014/96/ADP) on real estate and forests (new forest code adopted by the national assembly) now create opportunities for the private sector and local collectives.

#### **Regarding the financial plan**

The lack of dynamism of traditional local banks (stripping operations for western banks) that do not have much faith in the rural world, influence the initiatives of the private sector and halt the dynamism of the organizations of the rural world.

With the development of the Popular Fund 20 years ago, there is a bigger mobilization of local savings and community and private initiatives find in these funds the possibility of financing.

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