

2. INTRODUCTION

Forest resource in Ghana is an important national asset. Timber resource is one of the main foreign exchange earner, and from the environmental perspective, forests play vital roles as windbreaks and for conserving watershed and biological diversity. However, due to the high emphasis on timber exploitation and human-induced deforestation such as illegal logging, wildfire and land encroachment for cultivation, forest resource in Ghana is diminishing. According to FAO statistics, forest cover has been declining at 1.7% per year, or by approximately 120,000ha per year between 1990 and 2000.

Forests in the Transitional Zone have a unique ecological importance in Ghana. The Transitional Zone serves as a buffer between the two significantly different ecological zones, namely the dry, Northern Savanna Woodland Zone and the rich and humid High Forest Zone. Especially in Brong Ahafo Region where soil is rich and agricultural production is high, the forest is playing a vital role in creating a preferable microclimate. The forest also protects agricultural products from *Harmattan*¹.

In view of the importance of managing the forest resources in Ghana, and in the Transitional Zone in particular, the Government of Japan (GOJ), through the Japan International Cooperation Agency (JICA), has supported the Government of Ghana (GOG) from 1997 to 1999 by dispatching a team to conduct the "Study on the Reserve Forest Management in the Transition Zone in Ghana." A master plan for forest management was developed through this Study, which was composed of measures to promote forest rehabilitation, fire control, and active participation of local people. Subsequently, a Japanese expert was sent to Ghana in April 2001, to assist the Brong Ahafo Regional Office of the Forest Services Division (FSD) to implement the plan.

As the term of the expert was reaching its end, GOG requested GOJ for a continuous support. In response to the request, JICA dispatched the Fact Finding Study Team in March 2003, followed by the Preparatory Study Team in September 2003. The teams assessed the situation of the forests in Brong Ahafo Region, identified the needs, and prioritized specific areas in which technical assistance can be provided. This Technical Cooperation Project has been designed based on the findings of these 2 missions and the past collaborative efforts by GOG and GOJ in Brong Ahafo Region to enhance the on-going efforts by GOG.

¹ *Harmattan* is the dry desert wind that blows from the Sahara towards the south between December and February.

3. BACKGROUND OF THE PROJECT

3.1 Country Profile

Ghana is a West-African nation facing the Gulf of Guinea to the South, and bordered by Cote d'Ivoire to the West, Burkina Faso to the North, and Togo to the East. The total surface area is 23,850,000ha (or 238,500km²) with the population of 19.7million.

The basic socio-economic statistics of Ghana is presented in Table 1. Agriculture sector makes a high contribution to the nation's economy, representing approximately 36% of the total GDP. Except in the two regions with large urban centers (Great Accra and Ashanti), more than 60% of the population is rural based. According to 2000 statistics, 49.1% of the economically active population is engaged in agriculture, hunting and forestry. Ghana has made a progress in reducing the poverty incidence from 52% to 40% between 1991/92 and 1998/99. However, there is a significant regional disparity, with poverty incidence ranging from 88% in the Upper East Region to 5% in Great Accra Region.

Table 1 Country profile of Ghana

Demography	Ghana	Sub-Saharan Africa
Population (Million ; 2001) ¹	19.7	673.9
Total Fertility Rate (Lifetime birth/woman; 2000) ²	4.4	5.7
Population Growth (Annual %; 2001) ¹	2.1	2.3
Economic Indicators		
GDP at current price (USD; 2001) ¹	5.3 billion	315.7billion
GDP growth rate (Annual %; 2001) ¹	4.0	2.9
GDP structure (% of GDP; 2001) ¹		
- Agriculture	35.9	16.1
- Industry	25.2	28.3
- Services	38.9	55.6
GDP/capita (USD; 2001) ¹	269	468
Social Indicators		
Poverty Incidence (%; 1999) ³	40.0	
Infant Mortality Rate (Per 1,000 live births) ²	58	108
Percent of population in rural area ⁴	56.2%	
Improved water source (% of population with access; 2000) ¹	64.0	58.1
Adult Illiteracy Rate (% of males 15+; 2001) ¹	35.7	37.7

Source: 1: World Bank, *Ghana Data Profile* (Internet). Per capita GDP is calculated from the data. 2: UNICEF, *UNICEF Statistics* (Internet). 3: *Ghana Poverty Reduction Strategy*, 2003. The overall poverty is based on the 'upper poverty line' defined by the Ghana Living Standards Survey, which derives nutrition-based lines of poverty, equivalent to 900,000 cedis per adult per year. 4: Ghana Statistical Service, 2002. *Population and Housing Census*.

3.2 Ecological characteristics and land use

Ghana is divided into two main ecological zones: the High Forest Zone and the Savanna Woodlands Zone. Approximately 1/3 of the total land area, located in the Southwest of the country, falls under the High Forest Zone. The remaining 2/3 is the Savanna Woodlands Zone, situated in the Northern and Southeastern parts of the country. The boarder area between the Northern Savanna Woodlands and the High Forest Zone is called the Transitional Zone.

There are 266 forest reserves, out of which 204 are in the High Forest Zone (including the Transitional Zone), and 62 in the Savanna Zone. In addition, there are 15 areas categorized as national parks or wildlife and nature reserves. Together, these reserves occupy approximately 16% of the total land area.

3.3 State of the forest

Forests in Ghana are decreasing rapidly. According to the FAO statistics, forest cover is 27.8% in 2000, and annual forest declining rate between 1990 and 2000 is 1.7%, or 119,988ha/year. Even in reserved area, which is classified as timber production area or permanent protection area, the forests are not all in good conditions. Out of the 1,634,000ha reserved area in the High Forest Zone, close to 1/3 is in a degraded state that needs rehabilitation or reforestation (Table 2). There are studies estimating that only about 16% of the forest reserves are currently in a good state, rest being in various stages of degradation².

Table 2 Classifications of forest reserves in the High Forest Zone

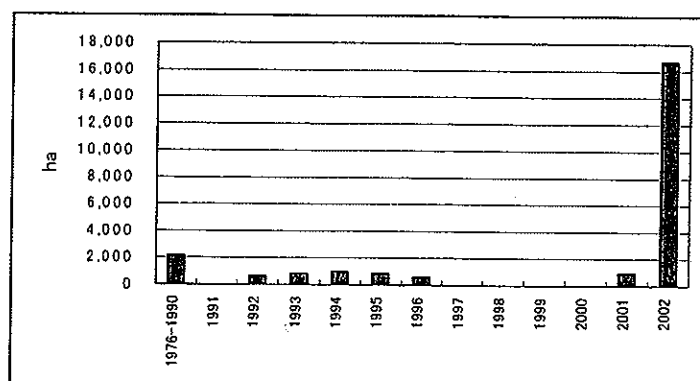
Classification	Area (ha)	Area (%)
Timber Production Area	762,400	47
Permanent Protection Area	352,500	21
Convalescence Area	122,000	8
Conversion Area	397,000	24
Total Reserve Area	1,634,100	100

Source: Ghana Forest Service. *National Forest Management Plan 1998 – 2002*. Table 3

While the data before 1975 are not available, total area of plantation established under government plantation programs between 1976 and 1999 was 2,174ha (FSD internal data). Records further indicate that no government-led plantation was conducted during late 1990s when the national policy placed strong emphasis on private sector involvement in plantation activities.

The situation changed in 2000 when the current Government came into power, as plantation was given high priority, and as its policy did not restrict plantation activities to private sector. The National Plantation Development Program was initiated in 2001, which has led to a substantial increase in the annual level of plantation (Figure 1. Also refer next section). Under the Program, most of the plantations have been established adopting the Modified Taungya System (MTS).

Figure 1 Annual plantation establishment (ha)



Source: Data provided by FSD, 2003

3.4 Trade and Industry

According to the analysis by *Ghana Wood Industry and Log Export Ban Study*, forest sector accounted for approximately 2% of the nominal GDP, or 470billion cedis in 1999. Logging activities alone contributed 20%, followed by primary and secondary processing activities (sawn wood, veneer and plywood manufacturing) contributing 50%, and tertiary operations sharing the remaining 30%. In terms of trade,

² Forest Plantation Development Center, 2003. *Overview of the National Forest Plantation Development Program*.

forest sector contributed approximately US\$179million, or 8% of the nation's total foreign exchange earnings in 1999³. As log export has been banned since 1995, the main export items are sawn wood (54.1%) and wood panels (45.9%). In terms of domestic market, fuelwood and charcoal are important products, catering for 75% of the country's fuel needs.

The total harvest in 1999 was estimated to be approximately 3.72million cubic meter⁴. Out of this figure, legal harvest was approximately 1.1million m³, while 0.9million m³ was harvested illegally. In addition, approximately 1.7million m³ round wood equivalent of chainsaw lumber was harvested. The above figures indicate that the total level of harvest was close to 4 times the legally permitted level. According to the study, off-forest reserve contributes 71% of the harvest, while forest reserve contributes to the remaining 21%:

3.5 Government Policies and Strategies on Forest Development

The overall policy direction of the forest sector is described in the *Forest and Wildlife Policy of 1994*. The Policy aims at conservation and sustainable development of the nation's forest and wildlife resources for the maintenance of environmental quality and perpetual flow of optimum benefits to all segments of society. Involvement of rural people in forestry and wildlife conservation is one of the main objectives (Refer Annex 9.3). Two documents had been developed to assist the implementation of the 1994 Policy, namely, the *Forest Development Master Plan 1996-2020*, and the *National Forest Management Plan 1998-2002*. The guiding principles set in the 1994 Policy, and the plans described in the above two documents, are also reflected in the *Natural Resources Management Program (NRMP)*, which is the sector-wide program implemented with support from the World Bank and other development partners.

In terms of forestry legislation, *Forest Ordinance of 1927* provided the legal basis for establishing the forest reserves. A number of laws have been passed since then, which have strengthened the role of the government and its regulatory functions. Since the Forest and Wildlife Policy of 1994 came into effect, new laws (and amendments of the existing laws) have been passed reflecting the philosophies of the Policy (Refer Annex 9). While this is a positive movement, there remain legal obstacles and inconsistencies in the existing laws, particularly in aspects of ownership, management, and benefit sharing⁵.

Plantation Strategy and the National Plantation Development Program

The Plantation Strategy for Forestry and the Forestry Commission has been drafted in 2002, and is currently under consideration by the Ministry of Lands and Forestry (MLF)⁶. The primary objective of the proposed Strategy is poverty reduction and environmental sustainability. It is built on the premise that farming households and community members must receive real benefits from forest reserve rehabilitation and management. Meanwhile, the GOG is implementing the *National Plantation Development Program* since 2002, with an annual target of establishing 20,000ha new plantations. Reported achievements of the Program in 2002 were establishment of 17,650ha new plantations, providing 76,630 job opportunities and generating 67 billion cedis in forms of agricultural products through the Modified Taungya System

³ According to FAO statistics, total exports earning was US\$139million in 2001, while total imports of forest products amounted US\$18.6million FAO statistics (<http://www.fao.org/forestry/fo/country>).

⁴ Forestry Commission, 2001. *Ghana Wood Industry and Log Export Ban Study*.

⁵ FORUM, 2002. *Developing the Legal Framework for Collaborative Forest Management in the Republic of Ghana*.

⁶ Plantation Strategy Development Horizontal Working Group, Forestry Commission, 2002. *Plantation Strategy for the Forestry Sector and the Forestry Commission (Draft vers. of Nov. 2002)*. A separate strategy for private sector is being drafted with support from the World Bank, which would eventually be consolidated into a single strategy (FSDP II, pers comm.).

(MTS)⁷. While most of the plantation in 2002 was done by adopting MTS, it is anticipated that commercial plantation led by private sector would increase in the future, bringing the annual target up to 80,000ha⁸.

Collaborative Forest Management

The concept of Collaborative Forest Management (CFM) is supported by the Forest and Wildlife Policy of 1994. More recently, the *Collaborative Forest Management Policies and Strategies for the Ghana Forestry Commission* has been drafted in March 2001. These documents indicate the government's recognition on the importance of involving local communities in forest reserve management. However, roles of local communities remain somewhat passive at present, mostly in forms of hired labor for boundary cleaning, establishment of firebreaks, etc. In order to empower local communities as the stakeholder of forest management, pilot initiatives on CFM has been conducted in selected districts by FSD, through which Community Forest Committees (CFC) are established. Similar committees are formed under the German-funded FORUM Project in Volta Region (Community Forest Management Committee: CFMC) and by the Wildlife Division (Protected Area Management Advisory Board).

Benefit Sharing Framework

Under the current practice, revenues from natural forest resources are shared in the ratio shown in Table 3. The figures indicate that Stool Chiefs (the caretaker of the land on behalf of the land owning communities) receive only 9% of the revenue. Further, forest fringe communities do not receive any *direct* benefits, and only receive benefits through the funds allocated to District Assemblies, which is used for the development of the given district.

Table 3 Benefit sharing from the natural forest resources (%)

Stakeholders	Percentage of Revenue Allocated	
	Forest Reserves	Off-Forest Reserve
Forestry Commission	60	40
Administrator of Stool Lands	4	6
District Assemblies	19.8	29.7
Stool Chief (Alienation Holder)	9	13.5
Traditional Council	7.2	10.8
TOTAL	100.0	100.0

Source: Agyeman, V.K. et.al. *Draft Report on Equitable Cost and Benefit Sharing in Plantation Development: Public Private and Local Community Partnerships in Ghana* P. 19, Table 2.

As for plantation, the benefit-sharing framework is currently being reviewed by the Attorney General's Office. The framework proposes the benefit sharing formula for both large-scale commercial plantation and for small-scale plantation under the MTS. For the MTS, the sharing ratio is up to 40% for the Forestry Commission, 40% to the farmers, 15% to the traditional authorities and the chiefs, and 5% to the forest fringe communities. While the framework is still being reviewed, MTS has been implemented in the field under the assumption that the proposed benefit sharing would come in to effect.

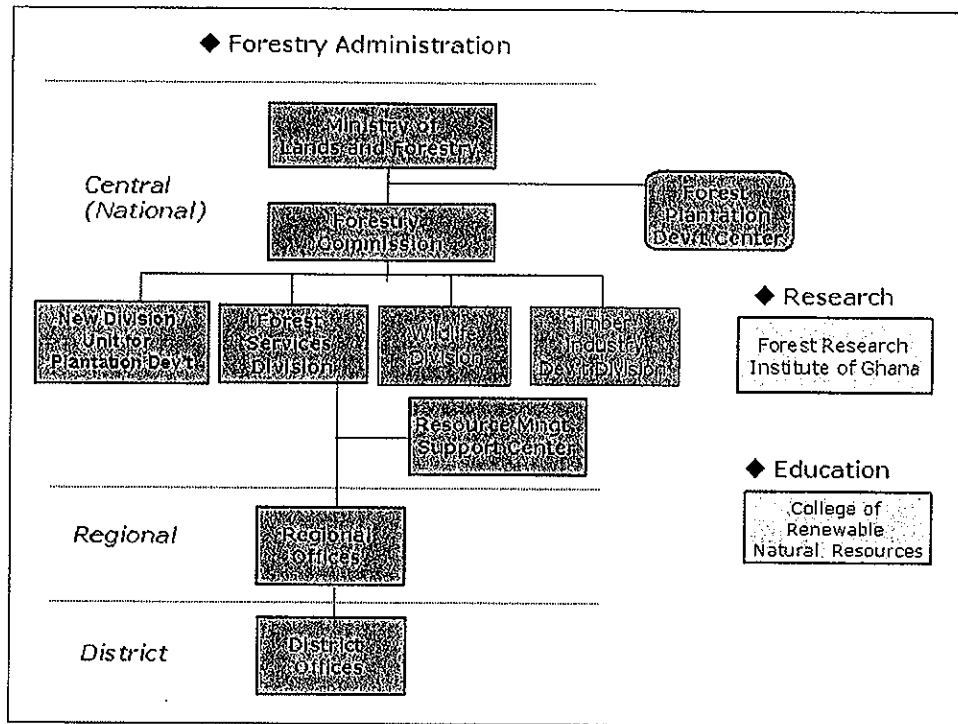
⁷ RMSC&FPDC. *National Forest Plantation Development Project – Plantation sites, total area under plantation and jobs created.*

⁸ FPDC. *Overview of the National Forest Plantation Development Program.*

3.6 Institutional Framework of the Forest Sector

The institutional framework of the forest sector is summarized in Figure 2. The organizational diagrams of the main organizations and institutions can be referred to in Annex 7.

Figure 2 Organizations related to Forest Sector in Ghana



Note: Regional and district level structures of the divisions except FSD are not described in this figure (For the proposed structure of the new division / unit for plantation development, refer Annex 7).

The forestry administration in Ghana is headed by the Ministry of Lands and Forestry (MLF), under which the Forestry Commission (FC) is established as the implementing body. FC is responsible for the regulation of the utilization of forest and wildlife resources, the conservation and management of those resources, and the coordination of policies related to them. The FC has 3 operational divisions, namely the Timber Industry Development Division, Wildlife Division, and the Forest Services Division (FSD). It was decided in April 2003 that another new division or unit would be established to exclusively deal with plantation development.

FSD is the division under the FC responsible for forest resource management. Its main functions are to: protect, manage and develop the forest reserves; monitor the conditions of the nation's forest resources; advice on the forest policy; and to regulate the harvesting of forest resources. FSD has its Regional Offices in each of the regions in Ghana, which supervise the District Offices. In many cases, one District Office of FSD covers more than one administrative district. For example in Brong Ahafo Region, 6 District Offices of FSD cover 13 administrative districts (Table 4).

Table 4 Forestry Districts in Brong Ahafo Region

	Names of forestry districts	Names of administrative districts	
1	Sunyani	Sunyani	Techiman
		Wenchi	
2	Dormaa-Ahenkro	Dormaa	Jaman
		Berekum	
3	Goaso	Asutifi	Asunafo
4	Bechem	Tano	
5	Kintampo	Kintampo	Nkoranza
6	Atebubu	Atebubu	Sene

NOTE: As some of the forest reserves cross boarders of administrative districts, technically the FSD District Offices handle a part of some additional districts.

FSD has its technical wing, namely the Resource Management Support Center (RMSC), stationed in Kumasi, Ashanti Region. RMSC's main role is to develop effective and affordable forest management system that complies with the nation's forest policy, and to facilitate and monitor their implementation. The Center has 5 technical units: Environment and Conservation, Forest Information Systems, Collaborative Forest Management, Production, and Plantations.

Aside from the organizations structured under the FC as mentioned above, there is the Forest Plantation Development Center (FPDC), which reports directly to the MLF. FPDC was established in December 1999 as the implementing body for the High Forest Resources Management Component of the NRMP. Its main function has been to facilitate the development of private and public sector forest plantation in Ghana. Coordination of the National Plantation Development Program has also been an important responsibility of FPDC. It is likely that FPDC will be absorbed into the new division or unit that will deal with plantation development in the near future (refer below).

The new division or unit under the FC is expected to become the institution responsible for the forest reserve plantations presently being handled by regional and district offices of FSD⁹. According to the latest plan, two branches will be established under this new institution, namely Plantation Program Development, and Planting Operations. The former will be responsible for providing advices to private sector investors, and for developing training programs. The latter will be responsible for the management of plantations in the forest reserves. The new institution will not be equipped with a substantial labor force, but rather it will act as an 'honest broker' between the private sector and the communities, by matching the needs and the services required. It will also be responsible for involving local communities in developing plantation management plans, and in building communities' capacity to manage the plantations.

The main research institution in the forest sector is the Forest Research Institute of Ghana (FORIG), under the Council for Scientific and Industrial Research. FORIG has its main center in Kumasi, and 5 sub-stations covering the different vegetation zones of the country. Its mission is to conduct user-focused research that generates scientific knowledge and appropriate technologies, which enhance the sustainable development, conservation and efficient utilization of Ghana's forest resources, and to disseminate the information for the benefits of the people of Ghana. Its main research focuses are natural forest

⁹ Plantation Strategy Development Horizontal Working Group, Forestry Commission, Nov. 2002. *Proposal for the establishment of a Plantation Development Division for the Forestry Commission.*

management, plantation development, wood processing and utilization, and non-timber forest products.

College of Renewable Natural Resources (CRNR) in Sunyani is the center of forestry training and education. CRNR, the former School of Forestry, was upgraded into a tertiary institution in 1999 to cater for the human resources needs of the natural resource sector. It offers a diploma program for middle level personnel in fields of forestry, wildlife, and fisheries. Most of the technical officers of the public sector, such as the Range Supervisors of FSD, receive training at the College.

3.7 Brong Ahafo Region

Regional Profile

Brong Ahafo Region is bordered by the Northern Region to its North, Volta Region to its East, and Western, Ashanti, and Eastern Regions to its South (Refer Annex 10). It shares the international boundary with Cote d'Ivoire to its West. The region covers 3,955,700ha (17% of the national land cover), and is the second largest region after Northern Region. The annual average temperature is 29.9°C. The annual average rainfall is at 1,651mm in the southern part of the Region, and 1,270-1,643mm in the northern part. There are 2 distinct vegetation zones: the semi-deciduous forest in the south and southwestern part of the Region; and the guinea savanna woodland in the northern and eastern parts of the Region¹⁰.

Population of the Region is 1,815,408 which accounts for 9.6% of the national population. The population growth rate is 2.5%, attributed both to natural growth and migration from the north. Approximately 62.6% of the population resides in rural areas. Agriculture sector employs 70% of the regional population and contributes to a substantial proportion of the regional GDP. There is 2,373,400ha arable land, representing approximately 60% of the total area. It is estimated that 974,600ha, or approximately 41% of the arable land, is under cultivation (Table 5)¹¹.

Table 5 Basic statistics of Brong Ahafo Region

Items	Unit	Brong Ahafo	Whole Country
Demography			
Population (2000) ¹	1,000 persons	1,815	18,912
Growth Rate ¹	%	2.5	2.7
% of Rural Population (2000) ¹	%	62.6	56.2
Social Indicators			
Poverty Incidence ²	%	36	40
Geography			
Surface Area	ha	3,955,700	23,900,000
Proportion of Forest Reserve ³	%	7	11
Proportion of Arable Land ⁴	%	60	
Proportion of Land under Cultivation ⁴	%	25	

Source: 1: Ghana Statistical Service, 2002. *Population and Housing Census*. 2: *Ghana Poverty Reduction Strategy*, 2003. 3: For the whole country: Ghana Forest Service. *National Forest Management Plan 1998-2002*, Table 6.

For Brong Ahafo Region, calculated from the data provided by FSD Brong Ahafo Regional Office. 4: Brong Ahafo Regional Office of Food and Agriculture.

Note: The demographic data for this table is different from that of Table 1, as regional data was only available from the Population and Housing Census of 2000.

There are 21 forest reserves in Brong Ahafo Region, covering an area of 291,200ha (Table 6). Seven out

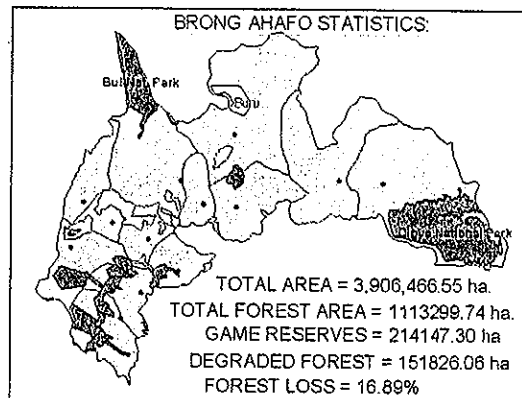
¹⁰ Based on the information provided by FSD Brong Ahafo Region, 2003.

¹¹ Brong Ahafo Region Department of Food and Agriculture, 2001.

of the 21 reserves are for timber production, while the remaining 14 are for protection. Study by RMSC indicates that 158,600ha, or 54% of the forest reserve area is degraded.

Table 6 Forest reserves in Brong Ahafo Region

Forestry District	Number of the Reserve	Total Area (ha)	Remarks
Goaso	8	83,100	• 6 Production • 2 Protection
Sunyani	7	95,900	• 1 Production • 6 Protection
Bechem	2	15,700	• 2 Protection
Kintampo	2	45,300	• 2 Protection
Dormaa-Ahenkro	2	51,200	• 2 Protection
TOTAL	21	291,200	• 7 Production • 14 Protection



Source: FSD Brong Ahafo Regional Office. The map is from Resource Management Support Center, 2002. *Forest Inventory Resource Workshop 2002.*

Local government

The local government system in Ghana consists of Regional Coordinating Councils (RCC) and metropolitan/municipal/district assemblies¹². The main role of the RCC is to monitor, coordinate and evaluate the performances of the districts, to monitor the public expenditures within the region, and to review and coordinate the public services in the region¹³. The District Assemblies (DAs) are the main local government that has the responsibility for the overall development of the district. In Brong Ahafo Region, there are 13 DAs (refer Table 7).

Line ministries have their operational branches at the regional and district levels. These branches, referred to as decentralized departments, receive instructions from their parent ministries, and likewise report back to them. Their budgets are also provided directly from the ministries, and hence RCC and DA do not have authority over their activities. However, the decentralized departments liaise with the RCC and DA to ensure that sectoral development plans and the overall district development plans are harmonized.

In Brong Ahafo Region, the RCC places high policy priority on wildfire prevention and plantation development. The RCC has been playing an important coordinating role for wildfire prevention. They have also been successful in securing resources from the central government for reforestation along the Tano River, which originated as the RCC's initiative. At the district level, Sunyani DA identifies promotion of reforestation and commercial tree planting as one of the objectives under the *Agriculture and Rural Development Program* stipulated in their Medium Term Development Plan. Sunyani DA has also been active in wildfire prevention, and it plays the coordinating role at the district level, similar to what is done by RCC at the regional level.

¹² Types of the Assemblies are determined by the size of the population. Metropolitan is over 250,000, municipal is over 95,000, and district is 75,000 and over.

¹³ For the organizational structure of the RCC, refer Annex 3.

3.8 Prior and On-going Assistance

The overall framework of the development efforts in the forest sector is provided by the *Natural Resources Management Program (NRMP)*. NRMP was designed to support the implementation of the 1994 Forest and Wildlife Policy, Forestry Development Master Plan (FDMP: 1996), the Forest Protection Strategy, and the National Environmental Action Plan. NRMP's objective is to protect, rehabilitate and sustainably manage national land, forest and wildlife resources and to sustainably increase the income of rural communities who own the resources. It has components on High Forest Resources Management, Savanna Resources Management, Wildlife Resources Management, Environmental Management Coordination, and Biodiversity Conservation in the High Forest Zone. NRMP also has activities on policy and institutional reform, and Program Coordination and Financial Management.

NRMP is a 10-year program designed in 3 phases. The purpose of the first Phase (1999–2003) is to establish an effective policy and institutional framework for natural resource management and to test participatory resource management systems. It is supported by a number of donors including World Bank, GEF, DfID, European Union, and Royal Netherlands Embassy, with the overall budget level of US\$ 25.7million. Since the NRMP begun, a number of important legislations have been approved by the Cabinet (Annex 9). The challenge now lies on the implementation of these laws, and in bringing tangible impact down to regional and district levels. Internal coordination among relevant government departments, as well as the coordination between government and the donors, is also an area that can be improved.

Aside from NRMP and its project components, there are some important projects in the forest sector, such as the Forest Sector Development Project Phase II (FSDPII) supported by DfID, and the Forest Protection and Resource Use Management Project (FORUM) in Volta Region supported by Germany (GTZ/DED/KfW). FSDP is a public sector reform project, which was instrumental in the restructuring of the former Forest Department into FSD. Currently in its second phase, FSDPII is assisting the FC to efficiently fulfill its roles and functions. FORUM Project begun in 1993, and is currently in its second implementation phase (2000-2005). It has components on: Rehabilitation of Forest Reserves; Collaborative Forest Management; Private Small-Scale Plantation (Woodlots); Buffer Zone Development; and Capacity Building of FSD and MOFA Staff. Through its intensive efforts and close collaboration with the local communities, traditional authorities, FORUM Project has gained a wealth of experience that can be shared with projects in the related fields.

Table 7 summarizes the main projects related to forest sector, supported by donor agencies in Brong Ahafo Region. JICA has been one of the major donors assisting forest sector in Brong Ahafo Region since 1997. Aside from the donor projects, there are a number of international and national NGOs active in Brong Ahafo Region, including Tree Farmers Association of Ghana (Tree FAG), Network of Environmental NGOs (NENGO), CARE International, and Africa 2000.

Table 7 Main donor-funded projects in Brong Ahafo Region

Name of the Project	Duration	Main Donor	Budget	Target Area within Brong Ahafo Region
<i>Forestry Projects</i>				
Study on the Reserve Forest Management in the Transition Zone in Ghana	2 years 1997-1999 (2001-2003)*	JICA	N/A	• Tain I, Tain II, Yaya, Nsemere, and Sawsaw FRs
Community Forest Management Project	6 years 2003-2009	AfDB	UA 9.12million (ADF Loan 7million)	• Yaya FR (The budget is for 6 FRs including those in other regions)
Wildfire Management in the Transition Zone	6 years 2001-2007	Netherlands	Euro 12million	Areas surrounding • Mpameso FR, Doormaa District • Bosumkese FR, Tano District
Pilot on Collaborative Forest Management**	N/A	FSDPII	N/A	• Sunyani (current) • Kintampo, Goaso, Dormaa – Ahenkro (new)
<i>Agriculture Projects</i>				
Sedentary Farming Systems Project	10 years 1996-2005	Germany (GTZ/ded)	Euro 560,000 / year	Initially 3 districts (Asunafo, Sunyani, Atebubu). Expanded to all 13 districts since 2001.

* Followed up by dispatching a JICA expert.

** Pilot initiative on CFM is not a name of a project, but an initiative supported by FSDPII.

4. PROJECT JUSTIFICATION AND PROBLEMS TO BE ADDRESSED

4.1 Project Justification

There are a number of reasons why a technical cooperation project is considered for the Brong Ahafo Region by JICA: (1) Environmental significance of the Transitional Zone; (2) Impact of forest degradation; (3) National and regional priorities; (4) Priority of the Japanese ODA, and (5) Comparative advantage of JICA.

Environmental significance of the Transitional Zone

Forests in the Transitional Zone are important as the buffer zone between the High Forest Zone and the Northern Savanna Zone. Furthermore, forests play a vital role in creating a suitable microclimate with adequate rainfall for agriculture, which provides livelihoods opportunities for 70% of the population in Brong Ahafo Region. Forests also protect agricultural produces from *Harmattan*. In view of the critical roles of the forests in the Transitional Zone, it is important to ensure that sustainable forest management is practiced and that the forest cover is maintained.

Impact of forest degradation

Results of the participatory planning workshop held in March 2003 indicated a wide range of impact attributed to forest degradation in Brong Ahafo Region. There are impacts felt by the people at the local level, such as loss of windbreak, loss of shade, drying up of streams, loss of soil nutrients due to erosion, and decrease in wildlife. In addition, there are impacts that have broader implications, such as loss of biologically important species, frequent occurrence of natural disasters, and loss of economic timber species.

National and regional priorities

With the adoption of GPRS, GOG has placed poverty reduction as its overriding policy objective. GPRS identifies 5 thematic areas, namely (1) ensuring macroeconomic stability; (2) increasing production and gainful employment; (3) human development and provision of basic services; (4) special programs for the vulnerable and excluded; and (5) good governance. Forest sector could make an important contribution to the national goal of poverty reduction, by enhancing people's participation in resource management, by ensuring equitable resource allocation and benefit sharing, and by promoting livelihoods activities through sustainable use of forest resources. As for regional policy, it is worth noting that wildfire prevention and plantation development are among the high priority issues identified by the Brong Ahafo RCC.

Priority area of assistance by Japanese ODA

In view of the GOG's policy priority on poverty reduction, as well as the overall direction of the GOJ's development assistance to Ghana, JICA places the highest priority on assistance that benefits the poor segments of the society. Following are the 3 priority areas are currently identified by JICA Ghana Office: (1) rural development, (2) development of potential industry, and (3) institutional capacity building for good governance. The Project will address to the challenges of supporting forest resource restoration that would provide vital basis for industrial development, empowering rural population in the fringe communities, and institutionalizing participatory approach among the FSD personnel at the same time. Participatory forest resource management has been emphasized as an important approach to be promoted to this end.

Comparative Advantage for JICA

JICA has been one of the main donors actively supporting the forest sector in Ghana, and in Brong Ahafo Region in particular. Through past collaborative efforts, JICA has established its presence in the Region, and have built a close working relationship with the FSD offices at the regional and district levels, as well as with local communities and NGOs. Its support can be characterized as an ‘on-the-ground’ support, starting with a 2-year intensive study of the 5 Forest Reserves in Brong Ahafo Region, followed by the assistance provided through a JICA expert stationed in Sunyani. From its experience, JICA has also gained substantial knowledge of the situation and the challenges faced by the Region in terms of forest management and development.

4.2 Problems to be addressed

As stated under Section 3.7, 54% of the forest reserve area in Brong Ahafo Region is degraded. Figure 3 summarizes the direct causes of forest degradation of the 5 forest reserves and their surrounding areas, as identified by farmers and government officers at the workshop held on 14 and 15 March 2003 in Sunyani¹⁴.

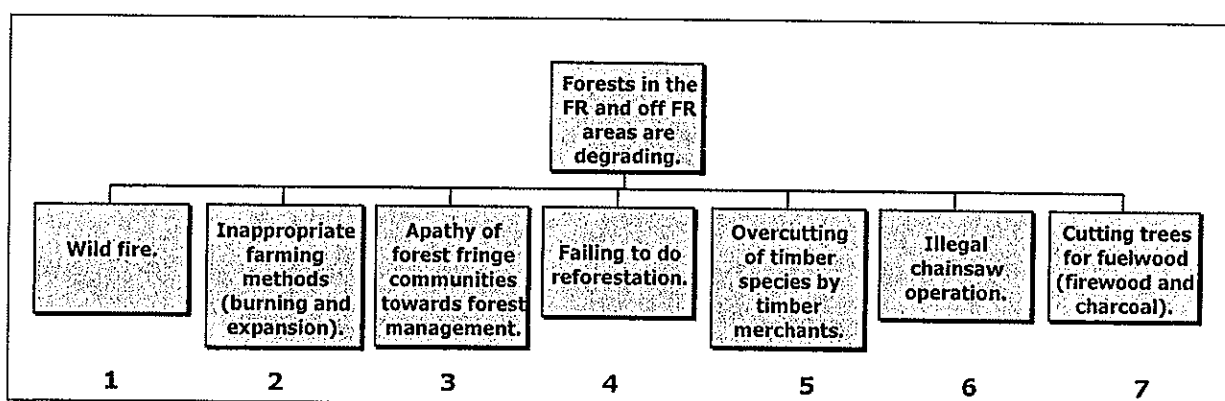


Figure 3 Causes of forest degradation in the target area

Detailed results of the problems analysis can be referred to in Annex 11, in which the root causes of the 7 direct problems are presented in forms of problem trees. Summary of the findings are presented below, which provide the basis for the project design. More specifically, focus is given on the *apathy of the forest fringe communities towards forest management*, which must be addressed in any effort of forest resource management, the *difficulty to implement reforestation measures*, which is the area that receives the highest policy interest at present, and the *wildfire*, which is a critical issue in the Region. Some of the important *underlying causes* are also highlighted, as a good understanding of these issues is critical in order to address the issue of forest degradation.

Apathy of the forest fringe communities towards forest management

This issue, identified as one of the direct causes, can also be considered as a common root cause that has implication in many aspects. One of the important reasons why communities are not willing to cooperate with the government authorities is because they do not feel that they are stakeholders of the forest resource management. The land of the forest reserve is Stool Land, which is vested in the Stool on behalf of the community represented by the chief. However, all timber is vested in the state, which means the owners of the land cannot harvest timber without permission from the state. Furthermore, forest reserves are

¹⁴ The target area was initially agreed to be the 5 forest reserves covered by the “JICA Study on the Reserve Forest Management in the Transition Zone in Ghana.” These were Tain I, Tain II, Nsemere, Sawsaw, and Yaya forest reserves.

managed by FSD with little involvement of forest fringe communities except in the districts where collaborative resource management is being piloted. Although the forest reserve management plans are to be formulated with participation of various stakeholders including local communities, such participatory processes have not fully been realized in the target areas. The fact that communities do not receive direct benefits in form of royalty also attributes to this situation (Refer section 3.5).

Wildfire

In Brong Ahafo Region, wildfire is by far the most serious problem that has a significant impact on forest degradation. Wildfire has become an annual phenomenon following the vast fire experienced in 1982/83. Over 60% of the forest reserves in the Region have had their structure and composition adversely affected by wildfire¹⁵. Between January 2000 and April 2001, there were 173 fire incidences in off-forest reserves burning 3,173ha, and 14 fire incidences in forest reserves burning 5,828ha reported in Brong Ahafo Region. The total estimated cost of damage was over 1.3 billion cedis¹⁶. Wildfire has been a serious hindrance for natural regeneration in Brong Ahafo Region, which should not be difficult given the climatic and soil conditions. While there are many causes of fire breakout, generally it is understood that hunting and agriculture are the main causes. Fire prevention and fire fighting efforts have been facing difficulties, although fire volunteer squads have been formed in communities and have been trained by the Fire Service. Ineffective law enforcement has also been attributed to the frequent occurrence of wildfire.

Difficulty in implementing reforestation measures

Difficulty in implementing reforestation measures was another important problem identified by the workshop participants. Since the large-scale nation-wide program of plantation development has just begun in 2002, it may be too early to make a holistic assessment of the true problems on the ground. However, there are many issues that must be addressed for the forest resource restoration to succeed in the long term. These include the establishment of an adequate incentive mechanism for forest fringe communities, securing of financial resources for plantation development, and improvement of knowledge and awareness among the forest fringe communities on forest resource conservation and restoration. Issues on land use and land tenure must also be addressed to enhance community and private sector involvement in forest resource restoration. While it is important to put in place efforts to increase the forest cover, it must also be reminded that reforestation alone would not solve the problem of forest degradation, unless the pressure on the forest is not reduced and adequate management practice is put in place.

Underlying causes

Analysis reveal that many of the issues that result in forest degradation, such as wildfire caused by hunting, inadequate farming methods aiming at maintaining agricultural productivity, and illegal chainsaw operation, share a common root cause related to the socio-economic condition of local people. More specifically, the situation that *forest fringe communities lack alternative livelihoods opportunities* is one of the most important root causes that lead to forest degradation. Unless this problem is addressed, it would be difficult to manage forest resources sustainably, even if stricter law enforcement and/or regulation are put into place.

¹⁵ FSD Brong Ahafo Regional Office. *Plantation Plan for Brong Ahafo Region*.

¹⁶ Environmental Conservation Unit and Rural Fire Directorate, 2002. *Annual Report on Incidence of Bushfires in Ghana (January 2000-April 2001)*.

Ineffective law enforcement on the ground is another root cause commonly noted under the problems of wildfire, illegal chainsaw operation, over cutting, and harvesting for firewood and charcoal production. This is also one of the reasons why forest fringe communities hesitate to cooperate, as they perceive that offenders are often set free without due punishment, and as they fear being victimized in the community when they report the offenders.

Local people have a sense of distrust on FC/FSD, due to the long history of the forest resource management by the government alone with little involvement of forest fringe communities. While government officers are aware of this issue, they lack professional expertise and experience on extension, or more generally, on skills to communicate and work with local people. The analysis indicates that limited knowledge on law and regulations is an issue not just on part of the local people, but also for field staff of FSD. This further complicates the relationship between the people and the government, as there have been incidences in which inappropriate or inconsistent measures were enforced. While the relationship is improving in some areas, for example where MTS is introduced, more needs to be done to create an environment in which government and local people can collaborate in forest management.

5. PROJECT STRATEGY

5.1 Focal Areas of the Project

In view of the significance of the impact on forest degradation, government's policy priority, and local people's perception, following areas have been identified as the focal areas for the technical cooperation project: (1) formulation of forest reserve management plans through involvement of various stakeholders, including the local community, to provide a firm base for any measure to be taken in respect of resource management in the forest reserves, (2) restoration of off-reserve forest resources by initiatives of people in the fringe communities, intending to address to the issues of the forest resource degradation outside the forest reserves, (3) alternative livelihood activities for the fringe communities to reduce pressure to the forest resources on and off reserve, and (4) wildfire prevention to secure the outcomes of the above-mentioned efforts that should also incorporate active participation of the fringe communities.

5.2 Strategies

The project is designed adopting the strategies listed below, taking into considerations various factors such as the benefits to the local people, on-going efforts in the Region, and sustainability.

Consolidation of good practices to formulate adoptable recommendations on participatory forest resource management

Since promulgation of the Forest and Wildlife Policy of 1994, the GOG has consistently taken the position that local people's participation in forest resource management is indispensable in order to restore and maintain the forest resources in Ghana. Based on the concept that local people should become a true stakeholder in forest resource management, and that they are to receive adequate benefit from forest resources they manage, various trials have been made on participatory forest resource management, including actual mobilization of local people and even reviewing the relevant legal framework. While the Project is also focuses on the participation as its essential principle, it does not aim to build a totally new model, but rather, it aims to integrate various on-going efforts and present successful examples of participatory forest resource management both on and off forest reserves. Therefore, it has already been agreed that Project should review the past and current activities related to participatory forest resource management in the beginning of the implementation, and it will plan its activities based on the lessons obtained from prior and on-going efforts, learning from what has worked and what has not. Project activities undertaken on the ground should be regarded as process of practical verification of participatory trials, through which successful examples are to be consolidated and be presented as recommendations to the GOG both at the regional and central levels.

Accumulation of field experiences for institutionalization of participatory approach

Since the concept of participatory forest management has been emphasized both in current policy framework such as the collaborative forest management (CFM) strategy and in the on-going programs of FSD, levels of understanding on the concept itself seem to be fairly high among its personnel, at the central level as well as at the field level. However, despite the fact that there have already been efforts made to further enhance the collaborative forest management, the first-hand experiences in putting the participatory approach in practice are limited yet. Some of the field level personnel still show basic orientation of conventional government-led development, and there still exists a sense of distrust on FSD for the part of the fringe communities, which has been identified in the problem analysis workshop as one of the

underlying causes of forest degradation as discussed in 4.2 above. The project will contribute to accumulate practical know-how and to institutionalize the participatory approach to sustainable forest resource management by sharing the field experiences among personnel who directly interact with local people, as well as by presenting realistic recommendations.

Participation as the process of empowering people in the local communities

It is generally agreed that local people's participation is inevitable for sustainable forest resource management. With this understanding, various initiatives are taken to encourage people's participation in problem identification and decision making, as well as in implementation of the forest management activities. The Project regard participation not only as the effective means of sustainable forest resource management, but also as the process of empowering rural communities and building their capacity towards attaining self reliance. Therefore, in order to foster the sense of ownership and responsibility among the community people, the Project will mobilize and involve the local people in the entire process of the field level activities, such as off-reserve resource conservation and restoration, and alternative livelihood. It is anticipated that well-facilitated process of involvement in the Project could provide learning insights and opportunities of building up self confidence among local people, which would contribute in long-term to the ultimate objectives of poverty alleviation.

6. PROJECT DESIGN

This section explains the details of the tentative Project Design Matrix (PDM) attached as Annex 1. It should be noted that this PDM will be reviewed at the very early stage of Project implementation through discussion among the Project personnel, and appropriate indicators will be set, with necessary benchmark information gathering upon commencement of the Project.

6.1 Project Site

Project activities will be implemented in five (5) pilot forest reserves (i.e. Nsemere, Sawsaw, Tain I, Tain II, and Yaya) under Sunyani Forestry District in Brong Ahafo Region and the selected fringe communities. It should be noted that these five pilot forest reserves are to be considered as the pilot for the entire Region, not only for the Sunyani Forestry District.

6.2 Target Beneficiaries

The beneficiaries of the Project will be the residents of the selected fringe communities around the five pilot forest reserves in Brong Ahafo Region. Through the implementation of the Project, the concerns and aspirations of the local communities would not only to be incorporated in the forest reserve management plans but also be embodied in the forest resource management in the off-reserve areas. Equally important beneficiaries will be the relevant personnel of Forest Services Division (FSD) in Brong Ahafo Region, particularly those in the Sunyani District Office of FSD, who will directly be involved in the Project implementation and obtain learning on the essentials of participatory forest resource management.

6.3 Overall Goal

The overall goal states the desirable situation, or the positive impact, which is expected as a result of achieving the Project Purpose. The Overall Goal of the Project reads as “*Status of forest resources in Brong Ahafo Region is improved through participatory forest resource management (PFRM).*”

Participatory forest resource management in the Project context means comprehensive resource management initiatives to cover both forest reserve and off-reserve area. It includes not only the measures to address the forest resource conservation and restoration but also preventive measures such as wildfire prevention and alternative livelihood to reduce the pressure to forest resources. Since the expression of “participatory forest resource management” is a general term, it is essential to have clear common understanding on these initiatives among all of the Project personnel upon commencement of the Project.

Achievement of the Overall Goal of the Project will partially be verified by the indicators such as the number of the forest reserves managed with forest management plans formulated through participatory processes. Ultimately, the achievement will be measured by the improvement in the status of forest resources in Brong Ahafo Region. It is therefore necessary upon commencement of the Project to set the concrete indicators for the verification and to gather the benchmark data. Possible indicators to measure the improvement of the forest resource may include increase of forest cover, the areas in forest reserves that received proper replenishing measures through participatory forest resource management, and so forth.

6.4 Project Purpose

The Project Purpose is: *Participatory forest resource management is implemented in and around the five*

pilot forest reserves in Brong Ahafo Region.

Achievement of the Project Purpose can be verified by the indicators such as the number of communities involved in the participatory forest resource management, i.e. participation in the process of formulation of forest reserve management plans, in off-reserve forest resource restoration, in alternative livelihood activities, as well as in the wildfire prevention initiatives. Since the Project intervention may be limited in terms of geographical coverage, it is also necessary to verify whether these measures would be included as essential parts of the district management plans in relevant administrative districts under which parts of the five pilot forest reserves fall.

6.5 Output and Activities

The outputs of the Project include five important issues to be tackled: (1) participatory forest reserve management planning, implementation and monitoring; (2) off-reserve forest resource management and restoration; (3) promotion of alternative livelihood activities in the fringe communities; and (4) enhanced involvement of fringe communities in wildfire prevention; and (5) dissemination of the Project's experiences through recommendation to the government. Details of each output, and the activities necessary to achieve the outputs, are elaborated below.

Output 1: Participatory forest management plans are formulated for the five pilot forest reserves and implemented in the sample areas.

Activities to attain the Output 1:

- 1-1. To organize workshop(s) for forest management planning for each of the five pilot forest reserves
- 1-2. To support the planning process to ensure the community involvement
- 1-3. To select the sample areas within the five pilot forest reserves for trial implementation of the plans
- 1-4. To organize workshop(s) to formulate operational plans for the sample areas
- 1-5. To carry out and monitor the implementation in the sample areas

While there are various on-going measures being taken to rehabilitate the degraded forest reserves, comprehensive forest reserve management plans for the pilot forest reserves are yet to be formulated through participatory processes that are officially recommended. Some of the old forest management plans formulated way back in 1950s are hardly available, let alone their being too outdated thus no longer applicable to the present administrative, legal, environmental and social conditions. Hence the pilot forest reserves are currently managed only with the mini strategic plans with tentative nature. Output 1 is primarily to address to this issue, while involving stakeholders in the planning process to ensure the sustainable implementation of the plan in the later stage. "The sample areas" are geographically designated portions within the pilot forest reserves where the Project will actually implement the management plans. This partial implementation in the sample areas will serve as demonstrations and practical learning opportunities for the personnel of FSD at the same time, thus it is quite important to monitor and evaluate the outcomes as well as the process itself.

Since there are already published official manuals of procedures (MOPs) for formulation of forest management plans, the Project will follow the participatory steps in accordance with the MOPs in the beginning, assuming that possible modification would be applied in the later course of implementation. Although the Project is to cover the five pilot forest reserves, it is not possible to formulate the management plans for all of the reserves simultaneously at the initial stage of implementation. Since the

process of participatory planning for one management plan would take long time, realistic option might be to formulate the management plan per Forest Management Unit (FMU) that covers several adjacent and ecologically similar reserves. Meanwhile, the Project will start other activity components in line with the existing mini strategic plans for the respective forest reserves.

Achievement of Output 1 can be verified by: (1) official endorsement of the management plans formulated by the Forestry Commission; and (2) the number of communities involved in the planning process throughout the project duration. Upon commencement of the Project, however, the agreement should also be made through discussions among project personnel on the qualitative indicator to measure the degree of community involvement, not only the numbers of the communities.

Output 2: Off-reserve forest resource restoration activities by fringe communities around the sample areas are promoted through extension activities.

Activities to attain the Output 2:

- 2-1. To provide training to the relevant FSD personnel on extension and participatory approaches
- 2-2. To identify needs of the fringe communities on and possible means for off-reserve forest resource restoration
- 2-3. To support the off-reserve forest resource restoration activities by small-scale farmers and/or public entities in the fringe communities

In view of the importance of forest resources as economic assets, forest resource management in off-reserve areas is equally vital. Reforestation strategy should not limit its scope to forest reserves; rather, it should be geared towards promotion of off-reserve forest resource conservation and restoration, which may benefit communities in both direct and indirect ways. Thus Output 2 aims to encourage effective forest resource restoration as well as to enhance conservation and sustainable utilization of the existing forest resources in the off-reserve areas.

In the very initial stage, knowledge, skills and attitude needed for extension and participatory approach among the FSD personnel should be enhanced. Special training for personnel of FSD, especially for those who closely deal with local people at field level, will be given, not only in classroom sessions, but also in the on-the-job exercises, which should systematically be designed, monitored, and evaluated.

It should be noted, however, that there may be difficulties in promoting off-reserve forest resource restoration by community people, due to the complicated land tenure system in the locality. It is generally observed that there are disparities in terms of access to land for any productive purpose between those originated in the locality and the settlers. Therefore, detailed survey on the tenure systems and possible arrangements should be conducted prior to designing these activities, in order to identify practical and appropriate approach, which should not by any means marginalize those who may be handicapped in respect of their access to the land.

Possible indicators to measure the achievement of Output 2 may include: (1) knowledge of personnel of Sunyani District Office of FSD of extension and participatory approaches; (2) number of trees planted and grown under project activities; and (3) perception of community people on tree planting activities. For qualitative indicators, proper benchmark and impact analysis studies should be conducted.

Output 3: Alternative livelihood activities are promoted in the fringe communities around the sample areas.

Activities to attain the Output 3:

- 3-1. To assess the needs for alternative livelihood activities in the fringe communities
- 3-2. To examine potential markets for products of alternative livelihood activities
- 3-3. To provide necessary technical and managerial training for the selected livelihood activities in collaboration with relevant institutions
- 3-4. To support the implementation of the selected livelihood activities by the people in the fringe communities in collaboration with relevant institutions

As discussed in section 4.2, the root causes of forest degradation lie in the socio-economic conditions of the local people. Provision of alternative livelihood means to the fringe communities is one of most significant challenges in achieving sound forest resource management. Efforts have recently been made in the Project areas, yet in the limited scale at the initial stage. Output 3 is to further promote these initiatives with examination of the potentials and feasibilities of the possible alternative livelihood activities and carefully designed support system to sustain the effects of those activities.

Although the range of alternative livelihood activities will not strictly be limited to those already explored NTFPs utilization, it is advisable to relate these activities in one way or another to the forest resources, so as to create incentives among the local communities for actively participating in the forest resource management in general. Taking the realistic scale of the inputs by the government in consideration, it is also important to integrate certain device in the support system, such as revolving scheme, in order to replicate and to spread out the livelihood activities to the communities other than those directly supported by the Project.

In providing technical and managerial training to the community people, external expertise should be mobilized from relevant institutions who have already been engaged in the particular livelihood activities. In this relation, it is essential to establish collaborative linkages with agricultural extension agents and/or NGOs working in the area.

In order to obtain sustained impacts of these livelihood initiatives, the sense of ownership among the community people is of absolute importance, since they will be the sole implementers of livelihood activities on the ground. Therefore, the detailed activities should be implemented in the manner to maximize the involvement of the community people, not only in needs assessment, but also in examination of market, in identification of necessary skills, and even in designing the training for themselves. By these careful design and mode of operations, the Project could contribute to support capacity building of fringe communities and process of their empowerment.

Indicators to measure the achievement of Output 3 are tentatively set as: (1) number of livelihood projects initiated; (2) number of communities undertaking livelihood activities; and (3) skills and knowledge of the community people on the livelihood activities. There may be other indicators to be discussed upon commencement of the Project, since the livelihood activities are to bring about actual benefit to the fringe communities, and the livelihood projects carried out by them should be examined not only in quantity, but also qualitatively. As to the level of skills and knowledge of the community people, it is necessary to conduct pre- and post activity evaluation.

Output 4: Involvement of the fringe communities in wildfire prevention is enhanced.

Activities to attain the Output 4.

- 4-1. To develop the project action plan to enhance the wildfire prevention in line with the existing programs
- 4-2. To carry out the action plan in collaboration with relevant institutions

As single outbreak of wildfire may cause fatal effects to any efforts to manage the forest resources, the Project also highlights the necessity of addressing to the issue. There have been various region-wide measures for the wildfire prevention in the Project areas through collaborative initiatives by local government and relevant agencies such as Fire Services, and by the support from donor assistance, including awareness raising campaigns, public education, information dissemination and so forth. The Project will, in line with those already on-going endeavors, formulate an action plan for wildfire prevention and implement it throughout the project duration. It should be noted, however, that the action plan will be formulated in order to clarify the possible scope of Project's intervention, and that the implementation of the plan will indispensably involve participation of fringe communities.

Output 4 aims to bring about the change in community people's behavior, not only their awareness in this regard. Therefore, indicators for achievement of Output 4 should be on the actual action taken by the communities, such as: (1) percentage of fire cases detected and responded to by the communities among the total fire incidents; and (2) knowledge of community people on initial fire extinction. These indicators should be compared with those in the areas outside the Project sites, as the regional initiatives on wildfire prevention would also contribute to achievement of Output 4. The indicators should thus be reviewed after Project's action components would be determined.

Output 5: Policy and program recommendations based on the project experiences are presented to the government.

Activities to attain the Output 5.

- 5-1. To provide opportunities to share the project experiences with and obtain feedback from the FSD personnel in Brong Ahafo Region
- 5-2. To organize workshops to analyze the outcomes of the project activities at the end of the project
- 5-3. To formulate a set of recommendations on PFRM based on the project experiences

It is quite important that the project's experiences and learning insights are properly incorporated in the FSD operation in wider areas, and Output 5 is solely for this purpose. Dissemination of information on the Project activities and sharing of experiences to the FSD personnel other than the counterpart personnel who directly involve in the implementation is crucial in this respect.

To formulate the realistic and adaptable recommendations, it is absolutely necessary to keep all documents and information on the process of Project implementation in detail. Scale of inputs required for attaining certain achievement of any activity, including the financial inputs, should also be planned and recorded with possibility of replication in mind. It is also important to ensure that all of the counterpart personnel and experts should take part not only in the discussion for analysis but also in the actual drafting of the final recommendation.

Ultimate achievement of Output 5 is the formulated recommendation itself. However, it may also be

useful to measure the level of involvement of counterpart personnel in drafting process, and the degree of understanding on the Project experiences among the FSD personnel in Brong Ahafo Region.

6.6 Inputs

6.6.1 Japanese Side

(1) Dispatch of Japanese Expert

Long-term experts will be dispatched in the following fields, and short-term experts will be dispatched in the field of specialization upon necessity. It should be noted that Chief Advisor and Project Coordinator may serve concurrently as experts in one or two of the technical fields listed below;

- 1) Chief Advisor
- 2) Project Coordinator
- 3) Expert in the technical field of Forest Resource Management Planning, Participatory Forest Resource Management, Participatory Rural Development, Extension

(2) Training for Counterpart Personnel

Ghanaian counterpart personnel will be provided with training opportunities in Japan and/or a third country according to the work plan of the Project within the budget allocated for technical cooperation.

(3) Provision of Machinery, Equipment and Materials

Vehicles, machinery, equipment and materials necessary for the implementation of the Project will be provided.

6.6.2 Ghanaian Side

(1) Assignment of Counterpart Personnel for the Project

Following counterpart personnel will be assigned to the Project:

- 1) Project Director (Executive Director, FSD)
- 2) Project Manager (Regional Manager, Brong Ahafo Regional Office, FSD)
- 3) Counterpart personnel such as District Manager and Range Supervisors in Sunyani District Office, FSD, and Relevant personnel in FSD

(2) Provision of land and facilities

Space for the Project offices will be made available at Headquarters-FSD, Accra, and Brong Ahafo Regional Office of FSD.

(3) Administrative and Operational Costs

The administrative and operational costs for the Project will be covered under financial arrangement of the Ghanaian Government.

6.7 Pre-Conditions and Important Assumptions

Pre-Conditions

As the general requirement, there are two pre-conditions that are to be met for Project implementation. The first condition is the allocation of sufficient number of project staff. The second one is in terms of changes in organizational setup: since the FC is in the process of its restructuring and will be autonomous entity by the year 2005, such a pre-condition should be met that any possible organizational changes would not affect the project activities. In this relation, it is also important to review the project implementation

structure upon actual inauguration of new unit under FC which will be in charge of plantation development, since division of responsibilities and close coordination between the new unit and FSD are expected.

Important Assumptions

In the PDM, the risks are listed under the column 'Important Assumptions.' They are written in positive terms, because, by definition, important assumptions in the PDM are the conditions required for the success of the project but that exist outside of the project's control. While it is described in different phrases, the issues covered are the same as the risks presented below.

The important assumption for the achievement of Outputs is on the understanding of and supports to the Project activities from local government institutions and traditional administrations to be obtained for the entire period of Project implementation. Since the Project emphasizes the participatory approach in its framework, it inevitably incorporates various stakeholders, including the community people and local officials, in the implementation processes. The Project will address this issue by organizing workshops with local people and administration to determine the detailed contents of each activity. However, it still remains as an important assumption since it cannot be guaranteed whether the Project could actually gain these understanding and supports required for its successful implementation.

The important assumption for the achievement of Project Purpose is on the continuous measures to address the illegal forest violation. Although the Project activities cover both on and off-reserve forest resource management, including wildfire prevention, it is still out of control of the Project itself to take any countermeasures for illegal undertaking, such as illegal logging or chainsaw operations. As these illegal violations will be fatal to any forest resource management effort, it is necessary to address this issue as an important assumption at this level.

As the important assumptions for the achievement of Overall Goal, there are two aspects that need to be paid attention. The first assumption is the replication of the measures taken by the Project to the other forest reserves and their surrounding areas in Brong Ahafo Region. Since the target area of the Project is limited to the five pilot forest reserves and their fringe communities, it is necessary to monitor whether there are any political or institutional obstacles to spread out similar efforts to other forestry districts in the region, in order to attain the Overall Goal. Another important assumption to be monitored is the occurrence of natural disasters. The Overall Goal would be achieved only if any serious natural disaster would not damages forest resources in Brong Ahafo Region.

7. PROJECT MANAGEMENT AND COORDINATION

There will be two operational levels in the structure for project implementation as shown in Annex 6. One is at the central level, and another is the regional level. At the central level, the FSD headquarters is to bear entire institutional responsibility and the Executive Director of FSD will be in charge of overall supervision of the Project implementation and management as a whole. At the regional level, the Brong Ahafo Regional Manager of FSD, as the project manager, will be responsible for achieving the Project Purpose.

Since the five pilot reserves fall under its jurisdiction, Sunyani District Office of FSD will be the core

implementation unit, which will directly involve in the field operations together with communities and other relevant organizations. Brong Ahafo Regional Office of FSD will act as the managing body of the project implementation by planning and monitoring the activities in detail together with the Sunyani District Office, and by disseminating information to and mobilize involvement of the FSD personnel in other district offices in the Brong Ahafo Region.

Chief Advisor of the Project will provide appropriate advice to the relevant project members and monitor the project's progress both at the central and the regional level. The technical experts will provide guidance to counterpart personnel, and will support implementation of activities by the counterpart personnel.

The ultimate decision-making body of the Project will be the Joint Coordinating Committee that will be composed of the members listed in Annex 8. The Joint Coordinating Committee will meet at least twice a year to formulate annual work plans, monitor and assess the implementation, and identify issues and countermeasures.

In order to ensure the effective communication in this two-level structure and to enhance smooth coordination among relevant institutions involved in the Project implementation, it might be worthy to examine the possibility of setting up a steering committee at the regional level. The steering committee is an organizational device to be composed of the personnel at working level, and they meet on regular basis to discuss daily issues that occur at the field level, which may not be discussed at the Joint Coordinating Committee.

8. EX-ANTE ASSESSMENT

8.1 Relevance

In most developing countries, participatory resource management is recognized as an important means to manage forest sustainably, and Ghana's national policy also stresses on it. Therefore, necessity to promote participatory forest resource management in Ghana is extremely high.

Ghanaian national development policy focuses on poverty alleviation, and overall natural resource and environment sector policy expressed in NRMP put emphasis on the promotion of local people's participation in forest resource management as discussed in 3.5. The Project aims to contribute to the poverty alleviation through strengthening people's participation in forest resource management, which is very consistent with the GOG's policy direction.

JICA Ghana Office has identified as the major priority areas of the assistance, (1) rural development, (2) development of potential industry, and (3) institutional capacity building for good governance, as discussed in 4.1 above. The Project aims to contribute to empowering rural population in the fringe communities, supporting the forest resource restoration that would provide vital basis for industrial development, and institutionalizing participatory approaches among the FSD personnel at the same time. Hence, the Project is considered to be quite relevant to the policy and programs of JICA.

Forest resources are considered as public property; its conservation directly and indirectly benefits general public of the country, particularly the people in the locality. Environmental conservation is one of the issues covered under the Japanese ODA principles, thus it is justifiable to provide official assistance to the Project.

The project is to be implemented in and around the five pilot forest reserves in Brong Ahafo Region, where GOJ had already initiated supports in the past. The Project aims to further enhance these already piloted activities, as well as to address the issues and problems raised during the participatory problem analysis workshop with stakeholders in the locality. It is evaluated that the Project is designed with sufficient reflection of needs and aspirations of the people who will be involved in the Project.

8.2 Effectiveness

The project aims at integrated forest resource management of the area including forest reserves and village areas. The Project also includes activities for strengthening livelihood of local people, which is indispensable for appropriate forest resource management. In addition, wildfire prevention, one of the most important threats against forest management, is raised as an important component of the activities. To implement these activities comprehensively by initiative of communities is effective for the forest resource management in the area.

Illegal offences to the forest resources, another important threat against sustainable forest management, will be external matter for the Project since the Project does not include the related activities. However, it is not likely to be an obstacle for the achievement of the Project Purpose, since the GOG strongly commits to fight against such illegal activities.

8.3 Efficiency

Various initiatives on participatory forest resource management are under progress in the Project area and other areas in Ghana. The Project will collect information on those initiatives at the beginning of the Project to avoid overlapping and to reflect their experience to the Project activities. In addition, the Project intends to conduct activities through cooperating with these initiatives in order to increase efficiency, especially in the field of extension through cooperation with Ministry of Food and Agriculture and Regional Government that have much experience on them. Effectiveness from the aspect of finance will be high, since the Project will not use special expensive equipment, and consequently, the input will be relatively low.

8.4 Impact

Technical transfer will be conducted not only to Brong Ahafo Regional Office and Sunyani District Office of FSD but also other district offices through training activities. Therefore, the impact of the project activities will spread out to other areas of the Brong Ahafo Region. Policy and program recommendation to GOG is included in the project activities, Therefore, output of the project will be reflected to the whole forestry administration of GOG.

Implementation of appropriate participatory forest resource management certainly results in restoration of forest resources. Therefore, once the project purpose is achieved, possibility to attain the overall goal is high.

Since this Project aims at the environmental conservation with local people's participation in forest resource management, there is no assumed negative impact on environment or on the lives of local people. Nevertheless, it is essential to grasp the details on the land tenure arrangement in the locality prior to designing the detailed work plan, so as to avoid possible marginalization of those who has limited access to the land in designing the off-reserve activity components.

8.5 Sustainability

Participatory forest resource management is already introduced by the government as a national strategy, and the framework of the implementation also exists. It means the Project will not introduce completely new concept and approach, but conduct activities through supporting and improving present frameworks. Therefore, it is generally expected that GOG will continue the efforts, utilizing the outcomes of the Project after the cooperation period.

Institutional capability of FSD is considered to be fairly high, since it has vast experiences in implementing forest resource management in the past. It has also experienced donor-supported projects such as Development Study of JICA, projects supported by GTZ and DfID. Therefore, FSD is competent to accept and sustain outcome of the Project.

As to the financial requirements, it is anticipated that the GOG will continuously allocate the fund to basic forest management activities after completion of the Project, since participatory forest resource management is one of the fundamental strategies of GOG. However, it is necessary to closely monitor the future course of institutional changes to be taken by the year 2005 when FC will bear financial autonomy. It is also quite essential in this respect to plan the scale of inputs by the Project taking into consideration this aspect of sustainability in the future.

Since various participatory forest management trials have already been introduced in the target areas of the Project, including community organizing and systematic fire prevention campaigns, technical and social acceptability is considered to be high. It is generally assumed that there exists basis for the acceptance of the Project activities among the personnel of relevant institutions as well as among the local people. As the Project will also facilitate the entire process of its implementation with maximal involvement of the relevant stakeholders including community people, it is expected that the sense of ownership will be fostered to contribute to sustaining the activities after the completion of the Project.

8.6 Overall Assessment

Overall assessment of the project is summarized as in the table below.

Criteria	Assessment	Summary
Relevance	High	Very consistent with the direction of the national development plans as well as with current policies and programs of the FC and FSD.
Effectiveness	High	There is a high possibility that the Project would integrate various on-going efforts in participatory forest resource management and present effective recommendation to further promote the participatory strategy to forest resource management
Efficiency	High	The Project will be very efficient once close linkages and collaboration with relevant institutions are established through coordinating activities at the initial stage.
Impact	Moderate	Positive impact on participatory forest resource management to other areas in Brong Ahafo Region as well as national level is expected. It should be noted however that the Project needs to design careful measures to avoid possible marginalization of a part of the fringe communities.
Sustainability	Moderate	Participatory forest resource management activities are expected to be sustained after the completion of the Project. However, institutional changes should closely be monitored and scale of Project input should be designed taking sustainability aspect into consideration.

9. REFERENCE DOCUMENTS

- Agyeman, V. K. et. al. *Draft report on Equitable Cost and Benefit Sharing in Plantation Development: Public Private and Local Community Partnerships in Ghana.*
- Environmental Conservation Unit and Rural Fire Directorate, 2002.
Annual Report on Incidence of Bushfires in Ghana (January 2000-April 2001).
- Forestry Commission, 2001. *Ghana Wood Industry and Log Export Ban Study.*
- Forest Plantation Development Center, 2003.
Overview of the National Forest Plantation Development Program.
- FORUM, 2002. *Developing the Legal Framework for Collaborative Forest Management in the Republic of Ghana.*
- FSD Brong Ahafo Regional Office. *Plantation Plan for Brong Ahafo Region.*
- Ghana Forest Service. *National Forest Management Plan 1998-2002.*
- Plantation Strategy Development Horizontal Working Group, Forestry Commission, 2002.
Plantation Strategy for the Forestry Sector and the Forestry Commission (Draft version of November 2002)
- Plantation Strategy Development Horizontal Working Group, Forestry Commission, 2002.
Proposal for the Establishment of a Plantation Development Division for the Forestry Commission.

10. ANNEXES

Annex 1: Tentative Project Design Matrix (PDM)

Annex 2: Tentative Plan of Operations (PO)

Annex 3: Terms of Reference for Long-term Experts

Annex 4: Terms of Reference for Counterparts of the Japanese Experts

Annex 5: List of Equipments

Annex 6: Organizational Chart of the Project

Annex 7: Information on Concerning Counterpart Organizations

Diagram 8-1: Forestry Commission

Diagram 8-2: Forest Services Division (FSD)

Diagram 8-3: FSD Brong Ahafo Regional Office and FSD Sunyani District Office

Diagram 8-4: Proposed structure of the new Plantation Development Division/Unit

Diagram 8-5: FSD Resource Management Support Center

Diagram 8-6: Brong Ahafo Regional Coordinating Council

Annex 8: The Joint Coordinating Committee

Annex 9: Supplementary Tables

Table 9-1: Chronology on the forestry laws and policies

Table 9-2: Objectives of the Forest and Wildlife Policy of 1994

Table 9-3: Recent developments in the forest sector policy reform (as of April 2003)

Annex 10: Maps

Map 10-1: Locations of the forest reserves in Ghana

Map 10-2: Locations of the forest reserves in Brong Ahafo Region

Annex 11: Workshop Results