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IMPLEMENTATION COMPLETION REPORT
(TF-25165 IDA-30910 PPFI-Q0140 TF-20412)

ON A

LOAN/CREDIT/GRANT

IN THE AMOUNT OF US\$ MILLION

TO THE

REPUBLIC OF GHANA

FOR A

NATURAL RESOURCE MANAGEMENT PROJECT, PHASE I

January 16, 2003

AFTS4
Country Department 10
Africa Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective May 2001)

Currency Unit = Ghanaian Cedi
0.000138 Ghanaian Cedi = US\$ 1
US\$ 1 = 7225 Ghanaian Cedis

FISCAL YEAR

January 1 – December 31

ABBREVIATIONS AND ACRONYMS

AfDB	African Development Bank
CFS	Collaborative Forest Committees
CIF	Community Investment Fund
CNRM	Collaborative Natural Resource Management
CONARs	Council for Natural Resources
DA	District Assembly
DANIDA	Dutch International Development Agency
DFID	Department for International Development
EIS	Environmental Information Systems
EPA	Environmental Protection Agency
EU	European Union
FC	Forestry Commission
FORIG	Forestry Research Institute of Ghana
FORUM	Forest Protection and Resource Use Management Project
FRMP	Forest Resource Management Project
FSDP	Forest Sector Development Project
FS	Forest Services
GBSA	Globally Significant Biodiversity Areas
GEF	Global Environment Facility
GFS	Ghana Forest Service
HFRMC	High Forest Resource Management Component
HIPC	Highly Indebted Poor Countries
HRDP	Human Resources Development Program
ICR	Implementation Completion Report
IDA	International Development Association
MLF	Ministry of Lands and Forestry
MOFA	Ministry of Food and Agriculture
NAFGIM	National Framework for Geospatial Information Management
NEDA	Netherlands Development Agency
NGO	Non Governmental Organization
NRMECG	Natural Resource Management and Environmental Consultative Group
NRMP	Natural Resource Management Project
PAD	Project Appraisal Document
PCC	Programme Coordination Committee
PLIRC	Policy, Legislation and Institutional Reforms Component

PPMED Project Planning, Monitoring and Evaluation Department
PRSP Poverty Reduction Strategy Paper
PTD Participatory Technology Development
RNG Royal Netherlands Government
SDF Southern Dry Forests
SRMC Savannah Resource Management Center
TEU Traditional Energy Unit
TIDB Timber Industry Development Board
TREP Traditional Renewable Energy Project
TUP Timber Utilization Permit
UNCCD United Nations Convention to Combat Desertification
WD Wildlife Department
WRM Wildlife Resource Management

Vice President:	Callisto M. Madavo
Country Director	Mats Karlsson
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GHANA
NATURAL RESOURCE MANAGEMENT PROJECT, PHASE I

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Map No. IBRD29270

<i>Project ID:</i> P000946	<i>Project Name:</i> Ghana:NAT.RES.MANAGEMENT
<i>Global Supplemental ID:</i> P045188 (Fully Blended)	<i>Supp. Name:</i> Ghana:FOREST BIODIVERSITY
<i>Team Leader:</i> Edward Felix Dwumfour	<i>TL Unit:</i> AFTS4
<i>ICR Type:</i> Core ICR	<i>Report Date:</i> January 19, 2004

1. Project Data

Name: Ghana:NAT.RES.MANAGEMENT *L/C/TF Number:* TF-25165; IDA-30910; PPF1-Q0140

Country/Department: GHANA *Region:* Africa Regional Office

Sector/subsector: Forestry (46%); Other social services (38%); Central government administration (9%); Sub-national government administration (7%)

Theme: Participation and civic engagement (P); Biodiversity (P); Environmental policies and institutions (P); Administrative and civil service reform (S); Rural non-farm income generation (S)

KEY DATES

	<i>Original</i>	<i>Revised/Actual</i>
<i>PCD:</i> 01/31/1996	<i>Effective:</i>	06/09/1999
<i>Appraisal:</i> 05/12/1998	<i>MTR:</i>	05/28/2001
<i>Approval:</i> 06/04/1998	<i>Closing:</i> 09/30/2000	06/30/2003

Supplemental Name: Ghana:FOREST BIODIVERSITY *L/C/TF Number:* TF-20412

Sector/subsector: General agriculture, fishing and forestry sector (60%); Central government administration (40%)

Theme: Biodiversity (P); Other rural development (P); Participation and civic engagement (S)

KEY DATES

	<i>Original</i>	<i>Revised/Actual</i>
<i>GEF Council:</i> 09/15/1997	<i>Effective:</i> 06/09/1999	
<i>Appraisal:</i> 11/24/1997	<i>MTR:</i> 05/28/2001	
<i>Approval:</i> 06/04/1998	<i>Closing:</i> 09/30/2004	

Borrower/Implementing Agency: GOVT OF GHANA/MLF; GOVT OF GHANA/GWD

Other Partners: DFID, DANIDA, AfDB,

STAFF

	<i>Current</i>	<i>At Appraisal</i>
<i>Vice President:</i>	Callisto E. Madavo	Callisto E. Madavo
<i>Country Director:</i>	Mats Karlsson	Peter C. Harrold
<i>Sector Manager:</i>	Mary Barton-Dock	Joseph Baah-Dwomoh
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<i>ICR Primary Author:</i>	Nyaneba E. Nkrumah	

2. Principal Performance Ratings

(HS=Highly Satisfactory, S=Satisfactory, U=Unsatisfactory, HL=Highly Likely, L=Likely, UN=Unlikely, HUN=Highly Unlikely, HU=Highly Unsatisfactory, H=High, SU=Substantial, M=Modest, N=Negligible)

Rating

Outcome: S

<i>Sustainability:</i>	L
<i>Institutional Development Impact:</i>	M
<i>Bank Performance:</i>	S
<i>Borrower Performance:</i>	U

	QAG (if available)	ICR
<i>Quality at Entry:</i>		U
<i>Project at Risk at Any Time:</i>	Yes	

3. Assessment of Development Objective and Design, and of Quality at Entry

3.1 Original Objective:

1. The wider NRMP project was envisaged as a ten year Adjustable Program Loan (APL) with three main implementation phases. The first phase (i.e., this project) was to begin putting in place the regulatory, legal and institutional framework to facilitate implementation of the ten year APL and be implemented over two years (1999-2000). In general, phase I was to focus on (a) restructuring and strengthening sector institutions, (b) finalizing policy reform and enacting legislation related to resource pricing, (c) forest concession allocation and management and (d) piloting collaborative resource management programs. Thus phase I was to set the stage for natural resource management interventions in Ghana. The second phase (NRMP II, to be implemented from 2001-2004) was to support the initial implementation of the collaborative resource management programs, focusing on selected sites considered priorities from environmental, economic or social view points. The third phase (NRMP III, to be implemented from 2005-2008) was to complete implementation of the program country-wide and ensure that the system of collaborative management with local communities were properly institutionalized at national, regional and district levels.

2. The developmental objectives for the entire ten year APL and specifically for Phase I (the Project) are listed below:

A. DEVELOPMENTAL OBJECTIVE FOR THE ENTIRE TEN YEAR APL: " To protect, rehabilitate and sustainably manage national land, forest and wildlife resources and to sustainably increase the income of rural communities who own these resources."

B. GLOBAL ENVIRONMENTAL OBJECTIVE FOR THE GEF PORTION OF THE PROJECT: "to increase the ecological security of globally significant biological resources, especially within threatened tropical moist forest ecosystems."

C. DEVELOPMENTAL OBJECTIVE FOR THE PROJECT: "establish the institutional and policy framework for implementing ecologically and socio-economically sustainable management systems for high forest, savanna woodland and wildlife resources, in collaboration with local communities."

3.2 Revised Objective:

3. The objective was judged pertinent throughout project implementation and not revised.

3.3 Original Components:

4. To achieve the first phase objectives, the project included 5 main components:

I. High Forest Resources Management: (US\$4.3 Million IDA, US\$14.2 Million Total)

This component focused on assisting the government to design and implement further sectoral policy and institutional reforms to substantially increase forest royalty rates and enhance revenue capture; improve concession allocation procedures and concession management; improve sustainability of the forest industry through the introduction of new legislation; and by streamlining mandates of forest sector agencies and strengthening their implementation capacity. The project would build on the experience of the pilot Collaborative Forest Management Initiative in participatory forest management and conservation education. The component encompassed 6 subcomponents: policy and legislative reform, sector institutional reform, integrated forest reserve management; forest resource management-off reserve, wood industry reform and plantation development.

II. Savannah Resource Management: (\$2.7 Million IDA, US\$4.5 Million Total)

This component focused on improving the operational framework for harvesting and processing woodfuels, and strengthen field extension capacity through the creation of a multidisciplinary resource management center to work in collaboration with local communities and the district level environmental and planning committees to promote integrated management of soil, water and natural land cover. Pilot activities to improve woodland management and revenue generation with increased local community involvement were to be developed, along with initiatives to improve woodfuel marketing and utilization.

III. Wildlife Resource Management (\$1.6 Million IDA, US\$3.2 Million Total)

This component was to strengthen the capacity of the Wildlife Department (WD) to improve the social and economic sustainability of wildlife management programs and foster effective collaboration with communities, private sector, NGOs and other partners. Through this component there would be implementation of park management plans, development of priority park infrastructure, building of an extension program for communities adjacent to wildlife reserves and increased public awareness. Specific activities in this component were to a) restructure the wildlife department; b) revise all protected area management plans and operationalize these through annual work planning procedures; c) prioritize proposed infrastructure development programs at each site to be implemented in later phases and d) develop extension capacity within WD to support district and community-level wildlife conservation and management.

IV. Environmental Management Coordination (\$ 0.7 Million IDA, US\$1.5 Million Total)

This component was to support the Environmental Protection Agency (EPA) to implement its Strategic Vision for environmental management coordination and through EPA and the Ministry of Local Government and Rural Development (MLGRD) strengthen the capacity of district level environmental management committees to prepare local environmental action plans based on catchment-level land use planning. Specifically the Project was to: a) implement EPA's human resources development plan; b) develop regional and district Environmental Information Systems (EIS) and a geo-spatial information framework; and c) prepare a National Action Program to Combat Desertification.

V. Biodiversity Conservation (US\$2.26 Million GEF)

This component was GEF funded and was to be implemented over six years, covering the first two phases of the program. It was to support implementation of key elements of the Forest Protection Strategy and the National Biodiversity Strategy, in particular the strengthening of the biodiversity conservation and management capacity of the Ghana Forest Service, protect priority conservation areas within existing production forest reserves, establish selected reserves as Globally Significant Biodiversity Areas (GSBAs) that were to be taken out of production, and initiate pilot activities to generate revenues from activities other than logging in selected forest reserves. The GEF grant supporting activities under this component is

still ongoing and it will therefore be evaluated under a separate review.

3.4 Revised Components:

5. The Components were not revised during project implementation.

3.5 Quality at Entry:

6. Quality at entry is rated *unsatisfactory* overall by the ICR team. The objectives clearly reflected the priorities identified in the Bank's Country Assistance Strategy at the time (Report No. 17002-GH, August 13, 1997, discussed by the Board on September 2, 1997) which called for the promotion of environmentally sustainable social and economic development by "capacity building within communities to encourage environmental protection and sustainable natural resource management." The project also reflected essential priorities of the Ghana Government's natural resource policy, embodied in the Forestry and Wildlife Policy and Forest Development Master Plan (1996-2000) which are still relevant today. This policy aims to a) ensure a sustained and adequate supply of forest and woodland products; b) prevent further environmental degradation due to forest depletion and inappropriate farming practices and c) stimulate community involvement in the management of the resources. In addition, the project design appropriately incorporated lessons learnt from previous projects, particularly the Forest Resource Management Project (FRMP) which closed in June, 1997 and provided vital lessons (i.e., ensuring that effective sector policy environment and efficiently operating sector institutions are in place before wider-scale resource management is initiated).

There were several serious flaws in project design, however that were largely responsible for the problems encountered during Project implementation. These flaws included complex project design, inadequate evaluation of institutional capacities and ambitious objectives for such a short implementation period. Examples of such complex design issues are:

- Many sub-components were funded using counterpart funding. Of the total project cost of \$25.7 million, almost half (\$12.1 million) was to come from 6 cofinanciers (AfDB, DANIDA, EU, DFID, NEDA, WFP) through 14 different technical assistance and investment projects. While this may have presented an opportunity for creating meaningful partnerships and for enhancing donor coordination skills, it also presented some significant challenges: a) the launching of some sub-components funded by donors and government counterpart funding was sometimes delayed; b) some donors (AfDB, EU, WFP) did not provide funding as expected for a variety of reasons, resulting in a significant funding gap; c) several donors were responsible for funding different parts of the same component and slippage in one area often affected the delivery of the rest of the component and d) the country had little experience in handling the level of coordination demanded by the project. In fact, this was the first time the Ministry of Lands and Forestry had worked with several of these donors and this was further complicated because each of these donors had their own procedures and requirements.
- The Ministry of Land and Forestry (MLF) had to work across four other line ministries (Energy, Food and Agriculture, Environment and Science, Local Government and Rural Development), creating delays.
- Project design failed to identify as a risk, that it would be very difficult to complete the myriad of policy reforms in a complex sector such as Forestry in 2 years. Thus, the project was overly ambitious given the number of activities in each sub-component, the number of co-financiers and the weak human capacity at the MLF.

8. These factors were major contributors to implementation slippages (overall 2.5 years), and also the relatively lower ratings since the Wildlife Component was significantly affected by delays in donor contributions.

9. No quality at entry review was carried out for this project.

4. Achievement of Objective and Outputs

4.1 Outcome/achievement of objective:

10. Overall, the achievement of objectives and outputs under the Project was *moderately satisfactory*. The objective of the project was to establish the institutional and policy framework for implementing ecologically and socio-economically sustainable management systems for high forest, savanna woodland and wildlife resources, in collaboration with local communities. Despite a myriad of problems, in large part caused by the complex design of the project, the developmental objectives were achieved for high forest and savannah woodland areas. Emphasis on the success of these two components in the rating is because these components are particularly important in setting the policy and institutional framework for sustainable natural resource management. Specifically, the project has a) made significant inroads in reforming the natural resource sector through legislative changes, although over a much longer time frame (4.5 years) than the two years originally envisaged. These included two forestry related Acts that targeted sector strengthening and plantation development for private sector and rural communities and two Forestry Amendments that have paved the way for competitive bidding in the allocation of timber resources and the adoption of social responsibility agreements between communities and timber contractors; b) increased revenues in the sector as a result of legislative and policy changes and c) made significant institutional reforms via the establishment and staffing of the Forestry Commission (FC) and the Savannah Resource Management Center (SRMC). These institutions were key to building capacity to manage reform in the sector.

11. Under these two components, the project has achieved many of its key outputs (see Annex 1): a) the new forestry regulations led to an observable increase in the collection of outstanding royalties - from 25% to 95%; b) 12 priority reserve management plans were completed; c) a log export ban study was completed; d) 6 community based pilots and 6 priority off-reserve watersheds were planned e) the revision of benefit sharing arrangements for natural forest timber revenue yielded about US\$1.25 million in incremental benefit to stool landowners per annum and f) a national action plan for Forestry was drafted though not yet formally adopted. The project also achieved 90% of its triggers for initiation of Phase II of the Program.

12. The pilot community participation aspect of the project worked well and was satisfactory in terms of involving communities in the formation of management plans. In total, 12 final collaborative management plans were completed for 6 reserves in the high forest zone and surveys and planning were completed for 6 priority off-reserve watersheds. In addition, 12 management plans for 12 communities were completed in the savannah zone. Phase I was to test out different methods of engaging communities and their relative costs and benefits prior to making an informed decision about what methodology/approach of collaborative management to use. These approaches were piloted in 12 different communities and community members engaged in a number of activities including agroforestry, beekeeping, nursery establishment, composting, small ruminant production, soya bean planting, and more.

13. There are areas where the project has been less than satisfactory and this has largely resulted in the lower ratings: The restructuring of the Wildlife Department was significantly delayed, primarily due to the late arrival (March, 2002) of donor funding for the component. This has led to non-achievement of key outputs (see Annex 1) for the Wildlife component, and subsequently, a failure to fully achieve the developmental objective related to this component. For example, the Institutional Restructuring Plan for the Ghana Wildlife Department has yet to be fully implemented and the NGO-implemented extension program for conservation education and community based wildlife management is not yet ready for implementation.

Thus, this component is rated unsatisfactory.

14. The GEF funded biodiversity conservation component's progress is unsatisfactory thus far in achieving its output targets. However, the GEF component does not close till September, 2004 and therefore, although its progress is described, it cannot be officially rated as part of this ICR. While there has been significant progress in identifying GSBAs, the demarcation and gazetting process is still incomplete. In addition the livelihood revolving fund, envisioned to reduce encroachment into GSBAs, has not yet been established. However, some of these activities may still be completed by the time the GEF grant closes. A separate ICR will be done once this GEF component is complete.

15. This was a very complex and ambitious project design that was impossible to complete in 2 years, and considerable effort on the part of the bank team was required to reach the targets of this project, even with the longer time-frame, given problems with donor and counter-part funding. Indeed, the fact that the developmental objectives were largely achieved (for high forest and savannah components) under these circumstances is impressive.

4.2 Outputs by components:

Component 1: High Forest Management (14.2 M Total, IDA 4.3 M; IDA Reallocation 2.73 M; Actual IDA 2.725M)

16. **SUMMARY.** Despite initial delays, largely due to a) the time required to get the cabinet and parliament to ratify and approve the policy and institutional reforms required under this component and b) a strong timber industry lobby which slowed down the implementation of the reforms (e.g., benefit sharing, taxation and fiscal measures were opposed by the industry); c) delayed cofinancing from the United Kingdom Department for International Development (DFID), and d) failure to obtain funding for the plantation sub-component, the component met most of its key objectives. In concrete terms, component outputs included a) significant legislative and policy reform that has led to an increased collection of outstanding timber royalties and a significant increase of revenues into the sector (US\$11.2 million); b) creation of a financially viable forest commission institution; c) preparation of a log export study and d) preparation of 12 priority reserve management plans with communities (see Annex 1). Only a few activities under some sub-components were not fully implemented largely due to failure to get the expected donor cofinancing. However, the key indicators important in achieving the DO were largely attained (4 out of 5 key performance indicators). Thus, in achieving the developmental objectives set out in the PAD, this component is rated satisfactory because it contributed significantly to establishing the legal and policy framework for NRMP. The rating is based on a detailed assessment of the sub-components below:

Detailed Analysis of Outputs for the High Forest Management Component

17. **Sector Legislation and Policies:** Under this sub-component, several vital pieces of legislation were adopted to establish the legal framework for NRMP management in Ghana, a) the Forestry Plantation Fund Act, 2000 (Act. 583) was revised to provide funding for plantation development and widen the scope of financial support to include small-scale plantation growers and public sector institutions. This legislation was aimed at ensuring the provision of sustainable livelihoods for rural communities through plantation development; b) The Forestry Commission Act, 1999 (Act 571) was to empower the FC to act as a corporate body responsible for the implementation of forest policies and the management of the utilization of forest resources in the country; c) The Amendments to the Timber Resource Management Act, 2002 (Act 547) and Timber Resources Management Act Regulations, 2002 (LI 1649) were to (i) extend liability to those who haul, evacuate or transport illegal timber, (ii) to provide for the adoption of transparent procedures for awarding timber rights through a timber utilization contract (TUC),(iii) to ensure

consultation with stools, landowners and district assemblies during the selection process, (iv) to adopt a social responsibility agreement to assist inhabitants within contract areas with amenities and (iv) to provide for the increase of stumpage rates to correctly reflect the market price of timber.

18. **Outputs:** The legislative reform was highly successful at redressing the underpricing of timber resources in the market by raising timber stumpage (royalty plus forest administration fees) from US\$2.00 to US\$11.00. Royalty and stumpage collection rates were also improved under the project. The price of logs were also increased from US\$3/m³ to US\$15/m³ to better reflect the real price of logs in the international market. In addition, the project has supported the lifting of a 45% duty on imported timber, to ensure that the timber prices are market based. A log-tracking system has also been developed which tracks trees from stock survey maps through felling and extraction, using District felling returns, to the mill, using Log Measurement and Conveyance Certificates, and eventually to an export permit which details the shipping information. As a result of legislative and subsequent policy interventions under the project, royalty collection rates increased from 25% to 95% and the stumpage collection rates from 45% to 97% (see Annex 1). The sum of these interventions has resulted in a significant increase in revenues to the sector. A total incremental revenue of 81.3 billion cedis (US\$11.2 million) was earned from 1999-2003, with 32.5 billion cedis (US\$4.5 million or 40%) and 48.8 billion cedis (US\$6.7 million or 60%) going to forestry/timber owners and Forestry Commission respectively. The project also introduced benefit frameworks using contractual agreements, which, over the long-term, are expected to lead to significant increase in the revenues going to the traditional areas and forest-owning communities. Modified Taungya Systems were introduced by the project and under a pilot scheme using the new benefit framework, farmers are expected to yield an additional benefit of approximately US\$8.00 per hectare per annum and stool landowners are expected to earn an additional US\$1.25 Million per annum.

19. **Institutional Development.** Originally, institutional reforms were aimed at: a) transforming the Forestry Department into a semi-autonomous Forest Service (FS) and b) establishing a Timber Industry Development Board by merging the Forest Products Inspection Bureau and the Timber Export Development Board. However, provisions in the 1992 Constitution did not allow for the transformation of the Forestry Department and therefore the old Forestry Commission Act was dissolved and a new act, The Forestry Commission Act, 1999 (Act 571) established a new Forestry Commission (FC), which as a corporate body created 3 divisions under it.

20. **Outputs:** The new FC was successfully established and has 3 new divisions that include the Forest Services Division, the Wildlife Division and the Timber Industry Development Division. A staff redeployment exercise which terminated 2500 staff allowed the FC to recruit fewer but more qualified personnel. In addition, all managerial positions in the FC have been filled. The FC has also embarked on a full-scale decentralization, creating charter service units attached to the district forestry offices and this has given local communities an avenue for interacting with the FC. Thus, the FC is functional and has started implementing some of the components. For example, one of the first tasks of the FC was fusing the two timber trade agencies into one. In doing so, the FC has removed duplications and overlaps, reduced transaction and overhead costs and increased corporate efficiency and performance while freeing resources for this operation. Most importantly, the project has created a financially sustainable institution. The FC receives a portion of the revenues from the increased royalty fees and is financially viable.

21. The institutional transformation of the sector has also culminated in the establishment of partnership arrangements (public-private sector forest forum and a public sector-parliament engagement platform) between public, private and civil society organizations. The platforms will share and exchange information pertaining to forestry and wildlife and for monitoring the performance and providing oversight

of the sector.

22. ***Private Sector Plantation Development.*** The sub-component aimed to establish a mechanism for funding private sector plantation development. A key activity in this sub-component was the establishment of the Forest Plantations Development Center and a Plantations Development Fund. The NRMP would finance personnel salaries and allowances, operating costs, equipment, seeds, civil works and consultancies on determining the economic feasibility of large-scale commercial plantations. To overcome the shortage of planting material, the project was to establish an autonomous and self-financing Seed Bank and support development of a decentralized private sector seed distribution system for the sale of certified tree seeds linked with the Forestry Research Institute of Ghana (FORIG) and its field stations. This sub-component is rated unsatisfactory because the funding mechanism was never established and thus there was no long-term involvement of the private sector. This was largely because, the sub-component was to be jointly funded by IDA, EU and AfDB. IDA support started with project launch in 1999 but EU and AfDB withdrew their support because they decided that the investment would not lead to poverty alleviation.

23. ***Outputs:*** The private sector plantation sub-component started off well, a series of workshops were held in Dec 1999 to inform diverse stakeholders on the fund. As a result, the project registered some 3500 expressions of interest, 1500 of which had confirmed access to land for planting 2 hectares or more per year for five years. Major civil works involving the construction of the forest plantation development center were completed and a plantation project manager appointed. In addition, the operating modalities for the Land bank, the Forest Plantation Development Fund and technical procedures were established. Seed collection had also been initiated and FORIG collected sufficient seed for 3600 ha in 2000 and 4600 in 2001. A seed storage facility and a small cool room were also established. However, in achieving its project objectives, this sub-component is rated unsatisfactory because all activity stopped after these major physical accomplishments. One of the problems was funding - the progress of the sub-component began to lag significantly as a result of the withdrawal of EU and AfDB funding. This was because the donors were concerned that this sub-component would have a detrimental effect on the poor. In addition, there was concern from a technical standpoint that FC planting may be proceeding without plans for best practice establishment and inadequate technical supervision. Thus, there were very valid and positive reasons for not going forward with this sub-component. The created infrastructure, however, will not go to waste - the center is to be used under the AfDB's Community Forest Plantation Project.

24. ***Integrated Forest Reserve Management.*** This sub-component was supported by the Project (IDA), Forest Protection and Resource Use Management Project (FORUM/GTZ), Forest Reserve Management in the Transitional Zone Project (JICA) and the proposed Forest Sector Development Project Phase 2 (DfID). Its aim was to produce collaborative plans to define long-term forest management objectives for each reserve and a cost-benefit analysis for six of these.

25. ***Outputs:*** Twelve strategic management plans for priority forest reserves were prepared collaboratively with communities. The management plans for each reserve describe the state of the resource, the management, prescribed rights of the communities bordering reserve to access forest and non-timber forest products, the responsibilities of the communities and the Forest Service (FS), benefit sharing arrangements and distribution and the monitoring system for the reserve. Collaborative Forest Committees (CFSs) were formed and tasked to oversee protection of the reserve and report any illegal activities, provide assistance for boundary control, assist in boundary clearing and develop wider use of the forest. In addition, integrated resource inventories (covering flora, fauna and socio-economic) were completed in over 110 on-reserve natural forests. A series of workshops were held to discuss and agree on management options with the communities. Each management plan was implemented collaboratively and meetings were attended by communities that bordered the reserve. Socio-economic and biological surveys

of 22 of the over 260 forest reserves have also been completed. Cost-benefit analyses however have yet to be completed for the six reserves (see Annex 1). This delay was due to failure to reach agreement on the approach/methodology for the analysis between the Government, DFID and the Bank.

26. **Log-Export Ban and Chainsaw Lumbering and Sales Ban** A log export ban study was successfully completed. The final study was technically sound but GOG was not convinced to immediately lift the log-export ban. It was agreed during the mid-term review that the Government would take measures to address market distortions and gradually lift the suspension by allowing exports of annually predetermined volumes of logs allocated to interested exporters through a well regulated competitive quota process.

27. **Outputs:** The ban on chainsaw lumbering put in place by the government was to be lifted under the project by ensuring that alternative livelihoods were provided for chainsaw operators (e.g., absorbing operators into reforestation, by engaging operators in legal ventures such as salvaging felling and forest plantation harvesting and mobile mills). However, this did not occur because the government was unwilling to lift the ban. Instead the government put some measures in place to try to reduce illegal chainsaw logging. These measures had mixed results. The measures included requiring TUC holders to supply 20% of their total production to the domestic market and granting felling permits to 56 selected timber companies to enable them to produce lumber solely for the local market. On the positive side, the Government had hoped that this would meet local demand and therefore put chainsaw operators out of business without lifting the ban and they report (borrower's ICR) that the supply of chainsaw lumber had been reduced by 40% in the market place. On the negative side, the milling industry is generally reluctant to put their sawn timber on the local market for prices many times lower than for the export price for wood. In addition, sawn timber has been generally more expensive than chainsaw timber, and some communities have complained about prices.

Component 2: Savannah Resource Management (US\$4.5 M Total, IDA 2.7 M; Reallocation 2.226M, Actual 2.178M)

28. **SUMMARY:** The component is rated *satisfactory* because it put in place the institutional framework for sustainable natural resource management in the savannah areas and was successful in collaborating with local communities to begin the process of producing sustainable management plans. The rating is based on a detailed assessment of sub-components outlined below. Implementing activities in the three northern Savannah regions of the country proved challenging because there was little knowledge of what worked and what did not. There were initial integration and coordination problems between this component and the DANIDA supported Traditional Renewable Energy Project (TREP) and further problems coordinating and managing the component with participation from 4 public organizations. Funding was also initially an issue. The component was coordinated by the newly created Savanna Resource Management Center (SRMC) which suffered most from the late and inadequate release of government counterpart funds (The center was funded by IDA, GEF, DANIDA and GOG). An added challenge was that the civil works procurement under the component exceeded budgetary provisions and this took time to resolve and 3 years before bidding documents went out for tender. These challenges were eventually overcome. To this extent, all 4 key performance indicators were satisfactorily attained. Specifically, the SRMC was established and staffed with operating modalities, six pilots for woodland reserve management were also identified and planned, surveys and planning were completed for six priority off-reserve watersheds and a National Action Program to Combat Dessertification was discussed and endorsed (Annex 1). Most successful was the collaborative community involvement. This component focused on using different collaborative schemes in several pilot communities to produce management plans

as well as to teach communities about natural resource management. The January, 2002 mission noted that this component "has shown an impressive record in the mobilization of community members and civil society organizations and the formation of community-based groups." This assessment was based on a survey carried out covering 146 people in three northern regions. This component worked across 26 communities and 9 district assemblies. Points of action included 8 forest reserves (Kenikeni, Sensanbligbini, Gambaga West, Tankwidi, Red Volta East, Red Volta West, Kamba and Nuale).

Detailed Analysis of Outputs for the Savannah Resource Management Component

29. ***Institutional Development:*** The SRMC was formed to help implement the activities included under the component which was seen as innovative because of its commitment to a participatory and integrated approach. The Project established the SRMC as an institutional framework to support implementation of project activities, as well as serve as a Technology and Systems Demonstration Center. The role of District Assemblies (DA) was also integrated into this component. The SRMC staff served as subject matter specialists to DAs, local communities and implementing agencies. The agency was to be funded by line ministries and through the project.

30. ***Outputs:*** Achievements by the end of Phase I include the establishment and operationalization of the SRMC. By June 2000, recruitment for the SRMC through secondment from various participating ministries was completed. Staff skills included competencies in collaborative resource management, integrated watershed management, woodland management and traditional energy resource management. By February 2003, all civil works were completed. This included 12 residential accommodation for staff in Tamale, 1 bungalow in Wa and 6 rehabilitated quarters in Bolgatanga. Forest offices in Tamale, Wa and Walewale were rehabilitated while a new regional/district Forestry office was constructed in Bolgatanga. A technology systems demonstration center was also set up in Pwalugu near Bolgatanga. SRMC staff have initiated several programs in the communities. These include nursery establishment, boundary planting, establishment of woodlots, contour bounding, composting of crop residue and improvement in small ruminants production (e.g., goats, rams, pigs) and soya beans for increasing farm income.

31. ***Collaborative Pilot-Programs in Off-Reserve and On-Reserve Areas:*** For off-reserve areas, collaborative programs were piloted to rehabilitate sections of degraded water catchment areas due to poor land-use practices, bushfires and excessive harvesting of fuelwoods. Infrastructure support included watering systems, propagation bins, potting facilities, water tanks and spray equipment. On the reserve areas, participatory programs were launched to support local communities and DAs to define interventions and prepare resource management plans for pilot forest reserves. The resource management activities varied from site to site but many included production of seedlings from private nurseries for rehabilitation of degraded areas, establishment and maintenance of firebreaks, sustainable harvesting of forest products and conservation of biodiversity. The SRMC assisted in training programs.

32. ***Outputs:*** Outputs for off-reserve areas included a) 6 integrated watershed management plans prepared to cover Kenikeni, Sinsagblewini, Naaha, Samoa-Pina, Sonyo and Larabanga. Communities were also organized to set aside part of their degraded and critical intact areas as community woodlands reserves covered by simple forest management plans; b) 1200 farmers in 12 pilot communities were taught soil and water management techniques including soil bunding, crop rotation, mulching, preservation and agroforestry techniques; c) 30 ha of enrichment planting in degraded forest reserves were completed and 10 ha of woodlots established; d) In all, about 6000 ha of woodlands outside the reserves were set aside and protected from fires and governed by local by-laws and regulations; e) 6 pilot communities were also assisted, with materials, training and simple tools, to operate their own nurseries; f) The project has established local community natural resource management committees (CONARS) in all pilot sites. These

committees are operational and have terms of references that go beyond simple advisory functions to planning, implementation and monitoring of annual programs and impacts; g) A Participatory Technology Development (PTD) manual for natural resources management was developed; h) about 1030 people, of which at least 118 were women, were beneficiaries of micro-project activities in improved bee-keeping, production and marketing of Shea Butter, rice processing and dry season gardening and i) baseline socio-economic and biological data needed for developing collaborative management plans for selected forest reserves in the three regions were completed. For on-reserve areas, outputs included: a) the establishment of 8 Collaborative Forest Management Plans and 6 Community Woodland Plans are about 70% completed; b) 200ha of exotic tree species were planted to ensure rapid re-growth; c) boundary pillars were repaired or replaced to ensure proper demarcation of the reserves; c) fire-belts were constructed to protect the reserves against perennial bushfire; d) protection of watershed areas as initiated through tree planting activities; f) agroforestry interventions - including the planting of fruit trees in fringe. Communities received revenue from the sale of seeds.

33. An analysis of the stakeholder involvement processes showed it was very high. Nine DAs were integrated into the savanna resource management system through the District Development Plans. Collaborative relations with NGOs and Civil Society was established using the PTD Approach developed by the SRMC and communities were involved through Councils for Natural Resources (CONARs).

34. **Woodfuel Energy Sub-component** The project supported activities aimed at securing a sustainable supply of woodfuels to meet current and future rural and urban demand and was supported by the Traditional Energy Component of DANIDA's Energy Sector Programme Support. The subcomponent was to establish a Traditional Energy Unit (TEU) to coordinate all activities. The TEU was established as part of the SRMC.

35. **Outputs:** This sub-component was satisfactorily established: a) The TEU was successfully established; b) A national woodfuels policy was drafted on the basis of a series of workshops in selected districts with key stakeholders; c) A study on the production and marketing of woodfuels in selected centers was also completed; d) 4 Woodfuel producing and trading associations were formed and strengthened in Tamale, Wa, Bolgatanga and Wulugu; e) 11 Community Natural Resources Management Committees (CONSARs) were formed to represent the communities on matters related to traditional energy planning and 36 village level groups were formed, trained and resourced in woodland management, fire management and tree planting; f) Various studies have been conducted into markets and marketing arrangements as a potential for revenue generation; g) training programs and information systems to account for woodfuel levy fuels have also been accomplished; h) 5 of 6 District Energy Profiles have been developed. The sixth was suspended due to security issues; i) 3600 hectares of woodlands outside the reserve were surveyed, mapped, inventoried and reserved by pilot communities for future production of woodfuels; j) 70ha of woodlots were established by communities to rehabilitate degraded woodlands; k) 20 farmers and 4 groups were assisted to establish agroforestry woodlots on farms in the Upper West Region and l) In Tamale, the Woodfuel Traders Association at Aboabo established 5 ha of woodfuel plantation of cassia and teak at Tolon Yipeligu.

Component 3: Wildlife Resource Management (US 3.2 M Total; IDA 1.6 M; Reallocation 1.28 M; Actual 1.263M)

36. **SUMMARY:** The objective of this component was to improve the institutional, legal, administrative and technical capacity for the management of Parks, Reserves and off-reserve wildlife resources and to establish a framework for community participation in wildlife management. financing of this component by

the Royal Netherlands Government (RNG) was much delayed, resulting in the poor progress of the component. In fact, the aid agreement between GOG and RNG was signed in November, 2001 and the release of funds only started in March 2002. This has meant that implementation of the component could not be completed by the end of the project. As a result, most of the activities in this component are still pending and others appear rushed, resulting in a very adhoc and superficial reform of the wildlife sector. In this regard, only 1 of 3 key indicators were sufficiently achieved. However, there have been some achievements in these component: Wildlife fees were been increased upward of 2000% to reflect current economic value of resources and this, coupled with the increase in tourism as a result of some improvements in some wildlife visitation areas, has resulted in an increase in revenues to the sector. For example, at the Agumatsa Wildlife Sanctuary in the Volta Region, the number of visitors in year 2001 was 6,432 with a revenue of 6.9 million cedis or US\$955 hundred. However, in 2002, this number had almost doubled to 12,319, with a corresponding revenue of 13.2 million cedis or US\$1826 thousand. This upward trend has also been observed in the Shai Hills Resource Reserve, where the number of visitors more than tripled to 4848 with a corresponding revenue of 28.2 million cedis or US\$3903 thousand. Despite these increases in revenues, the component did not complete improving the institutional, administrative and technical capacity for managing Parks and Reserves. Thus, in achieving the developmental objective set out in the PAD, this component is rated unsatisfactory. The rating is based on a detailed assessment of the sub-components outlined below:

Detailed Analysis of Outputs for the Wildlife Component

37. ***Institutional Development***; The Wildlife Department (WD) was to be completely restructured with new management procedures introduced and a Training Plan under implementation.

38. ***Outputs***: Although the restructuring is still underway and its new organization structure is still being developed, some progress has been made: a) New units, namely Operations, Planning and Development and Administration, Finance and Human Resources have been added to existing units; b) Job evaluation and competency profiles have been initiated and an institutional development advisor has been recruited. In addition, 4 consultants have been recruited to aid with the transformation process; c) training has been organized for senior staff but not other staff and d) a draft policy on Collaborative Wildlife Management is being finalized. Thus, institutional development is well underway, but not yet complete, given the late arrival of donor funding.

39. ***Community Participation in Wildlife Management***: This component was to ensure the participation of rural communities in wildlife management activities. NRMP I was to support the work of a Community Participation Desk within the Operations Unit. In addition, Protected Area outreach programs were to be initiated at 6 reserves (Kakum, Ankasa, Bia, Mole, Shai Hills and Kyabobo). Outside the reserves, community based activities were to focus on bush meat licensing and bush meat production projects.

40. ***Outputs***: A Community Participation Desk has been established within the Operations Unit. With support from the WD officers, some communities have started bush-meat production. There has been registration of hunters and bushmeat traders and formation of hunting committees within the 27 communities fringing Mole National Park. However, implementation of this sub-component has been limited. The protected area outreach plans have been prepared and costed for the 6 reserves.

41. ***Public Education and Awareness of Wildlife Resources***: This sub-component was to support activities for a public education unit complete with reference materials, desk-top publishing and audio visual facilities. Partnerships were to be developed with the formal education sector, NGOs and the mass

media.

42. **Outputs:** The wildlife education resource unit has been established and made functional and public education and awareness of wildlife resources has greatly been heightened. Evidence of the success of this sub-component is shown by the increase of visitors to several wildlife and nature reserves - As indicated earlier (also, see Annex 3) there has been an increase of visitors at the Agumatsa Wildlife Sanctuary, the Shai Hills Resource Reserve, and the Kakum National Park. This has translated to an increase in revenues to the Wildlife Division, District Assembly and Communities living close to the reserves.

43. **Infrastructure Improvements at Wildlife and National Parks:** These activities were to support limited and prioritized infrastructure improvements for selected protected areas such as Mole, Digya and Shai Hills national parks. This is still being implemented. At the close of the project, the civil works at Mole National Park have started but are not yet completed. Bidding has been completed for the Bia Hills Tourism Center and the fencing at the Shai Hills Park.

44. **Sub-Components that have not yet been implemented:** a) There is a sub-component to launch studies to develop ecotourism investment opportunities based around Ghana's National Parks to be initiated in collaboration with the Ministry of Tourism. This has not yet been implemented; b) a sub-component was to strengthen the capacity of WCD to undertake research and monitoring functions. A library was to be established and catalogued but this has not yet been done; c) The research and monitoring activities for wildlife resource management have not yet been implemented and d) a sub-component was to consolidate the achievements of the previous Wetlands Management Project by ensuring that the necessary policy framework and institutional arrangements were in place to support collaborative management initiatives for sustainable conservation of wetlands. In addition, the sub-component was to ensure the promulgation of a National Wetlands Policy as well as complete prioritized infrastructural development to support education, research and tourism. These activities have not yet been implemented.

Component 4: BIODIVERSITY CONSERVATION (US2.3 Million, GEF US2.1 Million; Actual 1.8M)

45. **Assessment of the Biodiversity Component:** The objective of this component was to identify, document, demarcate and legally establish areas of high importance for global biodiversity within the high forest zone. Implementation of this component has been very slow and unsatisfactory. However, it must be noted that this component is not complete and therefore will be evaluated separately in another completion report by GEF. To date, the elections and change in government delayed approval of the GBSA process. Following this, the long slippage in completing the demarcation and legal description of GBSAs and PPAs was due to delays in procurement. In addition, while biological surveys of GBSAs were started in August, 2001 and completed within a relatively short time, the physical and legal demarcation of the proposed GBSAs had to be deferred until negotiations on de-registration of TUCs that originally included those GSBAs were concluded and no battles or cases were pending before the court. 2) The sub-component on the alternative livelihood investment fund, which would have served to prevent encroachment into GBSAs, was never implemented because of delays caused by problems with the consultant's report on investment funds. Thus, modalities for the actual disbursement of the fund are yet to be produced although terms of reference have been prepared for the hiring of another consultant to finish this outstanding task. The implementation period of this GEF component is 6 years and, if considerable progress is made in the remaining time, this component could be eventually satisfactory.

46. **Outputs:** Despite the slow implementation rate, the component has made some progress - **The Site**

Preparation and Management Planning and **Southern Dry Forest Establishment** sub-components were successfully established: a) 30 forest reserves were identified and excluded from timber harvesting on the merit of their high significance as biodiversity-rich areas. These reserves were categorized as GSBAs and Southern Dry Forests (SDF) with the latter mainly in the Winneba forest district; b) Contracts have been awarded for the survey, demarcation and pillaring of 22 GSBA/SDFs and work has been completed on 17 of these forest reserves while work is still ongoing for the remaining 5. Thus 77% of GSBAs instead of the 90% expected (Annex 1) have been demarcated. **The Research and Monitoring sub-component** was successful in obtaining most of its objectives. Baseline surveys and research completed include: socioeconomic surveys for forest communities living close to 22 of the GSBAs and Floral studies for 22 GSBAs. Faunal Surveys for 22 GSBAs are yet to be completed. Feasibility studies on Ecotourism potential for Atewa and Cape Three Points GSBAs have also been completed. A MoU has also been signed between the FC and Conservation International to conduct an aerial survey and videography on the 22 GSBAs for establishment of digital database to support management decisions. Research into provenance protection for heavily exploited timber species has been completed but these areas have yet to be demarcated.

Component 5: Environmental Management Coordination (1.5 Million, IDA 0.7 Million; Reallocation 0.80M Actual 0.800M)

47. **SUMMARY:** The objective of this component was the environmental management coordination and monitoring of natural resources at national, regional and district planning levels. This component successfully completed the reporting requirements for the High Forest, Savannah and Wildlife Management Components. In addition, all of the key outputs for this component were satisfactorily accomplished. Therefore, this component is rated satisfactory based on the project outputs outlined below.

48. **Outputs:** **The EPA's Human Resource Development Plan (HRDP) sub-component** was successful in identifying and implementing specific staff development over the life of the project: In all, six staff members have been sent overseas to complete training in pollution control management and urban air quality, industrial waste management and environment and mining. One staff has been sponsored to pursue a Masters in International Maritime Law. At the end of the project, the HRDP had attained approximately 70% of its targets and has largely trained and oriented senior staff. **Regional EIS systems** were successfully installed in 10 regions and 6 pilot districts. The sub-component on land use mapping is almost complete. **The National Framework for Geospatial Information Management (NAFGIM)** was successfully set up as the Spatial Data Infrastructure for Ghana. As part of the Geo-Spatial Version of Census sub-component, participating institutions have begun creating and contributing metadata and national workgroups for data policy and data standards development have been formed.

4.3 Net Present Value/Economic rate of return:

49. A complete economic and financial analysis was carried out at appraisal. This analysis could not be reproduced for lack of complete information. The NPV for specific components has likely been achieved, even though it has not done so for the project as a whole given the status of implementation of some project activities. For the High Forest Component, there was an incremental benefit to the Forestry Commission of 48.8 billion cedis or US\$ 6.7 million from 1999 to 2003. The incremental benefit to forest owners was 32.5 billion cedis or US\$4.4 million. For the Savannah Component, a total of 180 ha of soya bean, 25 ha cowpea and 200 ha of maize were cultivated. The total incremental revenue was approximately 630 million cedis or US\$87,197 per year starting in year 2002. For the Wildlife component, revenues have increased upward of 422 million cedis or US\$58,000 dollars for the year 2002. Other economic benefits from improved protection and management of forests could not be computed but included biodiversity

conservation, carbon sequestration, regulation of stream flows and soil conservation.

4.4 Financial rate of return:

50. The PAD estimated the financial rate of return (FRR) for the Plantation Development sub-component at 12-18% depending on the model used. As this sub-component was not completed, no FRR can be estimated.

4.5 Institutional development impact:

51. The Project's institutional development impact is rated as modest. Although the FC and SRMC have had a substantive institutional development impact, the effect of the ongoing re-organization of the WD is still unknown and this largely accounts for the lower ratings.

- The FC's development from a civil service organization to a trim corporate body with corresponding improvements in its organization and operational performance were substantial as well as its ability to impact the project by helping to implement key activities, particularly in the High Forest Component. The full scale decentralization of the FC is already improving service and efficiency at the district levels. It was envisaged that after 3 years of implementation, the FC would be a financially viable institution. During the life of the project, royalty collection rates increased enough to allow the FC some financial autonomy.
- The effectiveness of the SRMC as an institution was initially hindered partly by financial issues. The budgetary responsibilities of the line ministries had to be more clearly outlined and enforced during the course of the project. For one, MOFA and Ministry of Environment sent seconded staff to the SRMC but without the accompanying budget because they thought the project would bear all costs. The financial issues have been resolved over the life of the project and the SRMC has had a substantial institutional impact and staff there have significantly contributed to the success of the component. To date, the SRMC is also being used by other bank projects, for example, the ongoing US\$7.6million GEF Northern Savanna Biodiversity Conservation Project (NSBCP) to launch pilot activities.
- The District Assemblies were targeted in the project and will eventually assume the role of the SRMC but there was no funding ascribed to strengthen them through NRMP I. Although District working groups ensure that SRMC activities are reflected in DAs 5-year programs and some initiatives began by the SRMC have been adopted by DAs for the entire district, there is a need to more clearly spell out how the transition will be implemented and the roles of each institution during the transitional phases.
- The re-organization of the WD is still ongoing and civil works are still being completed. Therefore, the exact impact of restructuring on the efficiency of the WD cannot yet be determined.
- Some assistance was given to the EPA to improve its human resources capacity. However, although mostly complete (70%), the institutional development impact of the re-organized EPA cannot be fully determined at this stage.

5. Major Factors Affecting Implementation and Outcome

5.1 Factors outside the control of government or implementing agency:

52. *Donor Co-financing:* The project was to be largely funded by 6 different co-financers and for many components, co-financing did not materialize or came too late. This had a significant impact on the project, given that donor financing of \$12.1 million was needed to support the project. This substantially affected the project outputs and, in particular, the successful completion of the Wildlife Component. For example, (i) funding from the EU (\$US1.4 million) and AfDB (\$US0.8 million) for plantation development

never materialized. This led to a gradual erosion of the plantation sub-component of the project; (ii) The late start-up (April, 2000) of the Forest Sector Development Project Phase II (FSDP II) supported by DFID, which provided funds to the Project, resulted in the implementation delay of some critical activities. These included the preparation of management plans for the twelve priority reserves and the analysis of the costs and benefits of six of those plans; and (iii) the late start-up of the Royal Netherlands Government (RNG) funded Fire Management and Wildlife Institutional and Human Resource Reforms sub-component significantly affected the implementation progress of the Wildlife Component.

53. *Elections:* The elections in December 2000 and change of Government in January 2001 had the effect of delaying some portions of the project. This is because with the new government came changes in personnel at the senior managerial levels including Ministers and their Deputies, Executive Directors, the FC Board and its Chief Executive. While this did not affect the quality of implementation, it contributed to a slower rate of implementation of project activities and reforms. For example, the late appointment of the members on the Forestry Commission Board and thus their delay in granting the establishment of GSBAs and PPA, adversely affected the biodiversity component.

5.2 Factors generally subject to government control:

54. *Counterpart Funding:* The GoG consistently failed to provide counterpart funding on time and in the amounts estimated by the project. Of the total US\$2.0 million budgeted for GoG, only US\$0.66 million was released by the Ministry of Finance. By February 2000, GoG had only provided 10% of the counterpart funding. At the beginning, this had little effect because the rate of implementation was very low. However, later, the slow release of counterpart funds had a substantial impact on (i) procurement of goods and equipment; (ii) civil works. The slow and untimely release of funds affected the disbursement of IDA and GEF funds.

55. *Parliamentary Processes:* It took a long time to get Cabinet and Parliament to ratify and approve policy and institutional reforms. This resulted in the initial effectiveness delay and subsequent slippages during implementation because many of the initial project activities hinged on the approval of legislative reforms.

56. *Slow Delivery of Timber Utilization Concessions (TUCs):* The slow pace at which GoG is implementing recommendations on the full-scale introduction of market-based competitive bidding and timber auctioning affected some businesses. Although there was an effort made to avoid crippling local wood-industries by allowing them to obtain an interim timber utilization permit (TUP) while waiting for TUCs, some companies may have fallen through the cracks. The ICR mission found that in at least one case, this policy had adversely affected the private sector. A business owner indicated since his timber contract was withdrawn, he had not been able to obtain a TUP license and therefore was in the process of losing his business. At the project close, the first batch of TUCs had still not been awarded and the lack of government expediency in this regard may ultimately alienate the private sector.

5.3 Factors generally subject to implementing agency control:

57. *Donor Coordination:* The MLF was responsible for ensuring that there was adequate coordination between the various donors that would contribute to the Project. At preparation, the donors participated in missions and were present and committed. However, once implementation started, MLF failed to provide for adequate coordination with concurrent donor programs that were to support the Project. In addition, by project close, it was extremely difficult to get financial figures for donor contributions, largely because some donors had their own systems and MLF failed to obtain any financial records of what donors had contributed in support of the Project.

58. *Monitoring and Evaluation:* The M&E portion of the project was very weak and this is attributed to both the Borrower and the Bank. The PAD indicated that it would be undertaken by the Project Planning and Monitoring and Evaluation Department (PPMED) of the MLF. There were a myriad of problems related to M&E in this project: (i) Baseline studies were not done (matrix of indicators and levels of monitoring); (ii) There was no M&E system in place at appraisal; (iii) Six desk officers were assigned to cover M&E and although they had an adequate technical background, they needed hands-on training in M&E and an effective leader to provide technical and administrative guidance. In addition, the officers operated on an ad-hoc basis with weak links to project implementing agencies; (iv) The PPMED was under the impression that what was in the project implementation manual (PIM) was sufficient i.e., technical workplans and setting up an M& E system in the field. Following the MTR mission, guidelines were given to clarify PPMED's role and recommend how baseline data could be obtained to provide benchmarks for evaluation. However, this was not done and thus monitoring and evaluation was limited to field visits by Desk Officers of the PPMED on an ad-hoc bases and the use of quarterly reports submitted periodically by the various component Team Leaders.

59. *Project Management:* Human capacity at the MLF was considerably weak during project implementation to the point where it was becoming increasingly difficult for MLF to effectively manage the requirements of the NRMP project. Unsatisfactory management performance in the first two years was exacerbated by delayed appointments of management staff. Furthermore, the MLF lacked clear lines of responsibility and accountability, especially as regards to the SRMP. Effective implementation of a complex project requires highly motivated managers able to devote 100% of their time to the project. The Borrower delayed resolving this issue and only after the MTR were the required adjustments made (by filling two key positions - a new Technical Director for Forestry and a Director for Policy and Planning, Monitoring and Evaluation). With these appointments, project management improved substantially.

5.4 Costs and financing:

60. As of June 30, 2003, IDA's total contribution to the project totalled US\$8.77 million compared to the appraisal estimate of US\$9.3 million and the reallocated amount of \$8.97. The difference of \$324,413 between the original allocation and the approved reallocation was a result of exchange differences between the XDR and the US\$ during the life of the project. Government contributions amounted to US\$0.66 million compared to an estimated US\$2.2 million at appraisal. The closing date for the credit was extended twice. The first extension was for one year to June 30th, 2002 and the second extension was for one year to June 30, 2003. During the project's life, the donor funding came from from DFID and DANIDA. DIFD has disbursed US\$11.7 million on their FSDP II project thus far, components of which were in support of the Project, and DANIDA has disbursed US\$1.55 million for the Traditional Energy Project which was to support the Project. The precise amounts that actually supported Project implementation from DIFD are yet to be disclosed since DIFD managed its own funding.

6. Sustainability

6.1 Rationale for sustainability rating:

61. The sustainability rating for the project is *likely* as the Project had a precise developmental objective, as well as a set of outputs that can be assessed irrespective of subsequent phases i.e., as a stand-alone. Thus, an examination of the outputs and developmental objective of this project (legislative, policy, institutional, collaborative mechanisms) and whether or not these can be sustained, and the relevance of the institutions and laws created, led to the "likely" rating.

a) Legislation and Policy

- The forestry legislation that was put in place and their effects (increased fees, improved royalty and stumpage collection rates and increased revenues in the sector) are sustainable because project closure is not likely to reverse the legislation, nor are collection rates likely to drop given the remarkable in-flow of funds to the sector. The legislation is therefore very relevant to the sector;
- Legislative and policy changes in natural resources management have created a transparent log-tracking system and a transparent permit system that are sustainable;
- The DFID supported Forest Sector Development Project (FSDP-2), which closes in 2005, is also providing support in the areas of policy, institutional and legislative reforms as well as other areas.

b) New Institutions

- Institutionally, the foundation has been laid for a longer-term sustainability of natural resource management in terms of capacity building at the FC. The FC reorganization has been successful and it has been able to assume many of its responsibilities. Most importantly, the FC is financially viable, indicating that even without support from subsequent APLs, the FC can continue to monitor and play a role in natural resource management in Ghana.
- The SRMC is also financially sustainable given that all staff costs come directly from the line Ministries which, after project closure, have continued with their support. The fact that the Ministries are still supporting the SRMC is a good indicator that it will be financially sustainable in the longer term. In addition, the SRMC is still a viable institution and provides support to other projects in the Northern part of Ghana. For example, the ongoing US\$7.6 million GEF-funded Northern Savanna Biodiversity Conservation Project (NSBCP) utilizes the existing structures and systems of the SRMC to provide support to pilot communities including those identified under the former Savanna Resources Management Project (SRMP).

c) Community Collaborative Plans and Investments

- Collaborative resource management plans and investments that have been so far supported by the Project will be continued under the Community Based Resource Management Project, which is presently under preparation, thus ensuring the long-term sustainability of the processes, structures and investments that have already been made under the Project.

6.2 Transition arrangement to regular operations:

62. Following consultations between the Bank and the Government of Ghana, it was agreed to not support a second phase of the program, but instead focus on other more targeted instruments. The Bank and the Government of Ghana continue to consider NRM a priority area and are therefore interested in using ESWs, community-based rural development initiatives, perhaps the PRSC and other types of projects to support Government's effort in ensuring sustainable management of the country's natural resources. Steps have been taken to ensure that the community collaborative natural resources management aspects of the Project will be taken on by another operation, the pipeline Ghana Community-Based Rural Development Project (CBRDP).

63. In addition, the institutions created by the Project will be maintained in the longer-term. The FC is now a financially viable institution with an approved mandate. The SRMC is comprised of staff funded by the Ministries. This funding has continued with a recent allotment of 150 million cedis from the Ministries. SRMC activities are currently being supported through the GEF Northern Savannah Biodiversity Conservation Project which has a budget of US\$7.6 million to support biodiversity conservation in 3 northern regions.

7. Bank and Borrower Performance

Bank

7.1 Lending:

64. The Bank's performance from identification to appraisal was *unsatisfactory* overall. Project preparation was carried out with an adequate number of specialists provided the technical skill mix necessary to address concerns. In addition, donor agencies that were to support the project came on the appraisal mission and met regularly with Bank staff. The Bank provided adequate resources in terms of staff weeks and dollar amount to ensure quality preparation and appraisal work. The project was consistent with the CAS and Government priorities in the sector at the time and was consistent with the Bank's environmental protection and safeguard strategies. It incorporated lessons from previous projects by building in the institutional strengthening objectives lacking in earlier projects. The lower ratings are due to the lack of oversight on the Bank's part to signal the risks associated with the complex project design and to take appropriate corrective measures. In addition it failed to properly assess the implementing agency's capacity to coordinate the different project activities and donors. These issues led to serious implementation delays of the Project.

7.2 Supervision:

65. Supervision is rated moderately satisfactory. On one hand, project supervision was intensive, with a mission at least every 6 months throughout the life of the project. Clear and detailed PSR and Aide Memoires attest to the detail-oriented missions and the superior quality of recommendations for each component and sub-component. The supervision teams also included the required expertise and local staff who continually monitored project activities. The latter was relatively easy since the TTL was in the field. Supervision, particularly at the Mid Term Review (MTR), helped turn the project around. For example, the supervision missions were responsible for identifying human capacity and morale problems within the MLF and for recommending that MLF begin to own some of the project administrative responsibilities. The mission also advised the borrower to formally request extension dates when it looked like it was impossible to attain the triggers for closing Phase I and initiating Phase II of the project. The supervision missions were also important in ensuring that most triggers for Phase II. However, supervision could have been better to help project staff with ensuring better donor coordination and, more importantly, supervision failed to correctly ensure the follow through of M&E recommendations provided at the MTR. As a result, the M&E of the project was very weak.

7.3 Overall Bank performance:

66. Overall, the Bank's performance is rated *moderately satisfactory* based on the ratings for lending and supervision.

Borrower

7.4 Preparation:

67. The Borrower's performance at preparation was *satisfactory*. The project was developed by the Government with the active participation of implementing agencies. There was adequate representation from Ministry of Lands and Forestry, the Forestry Commission and Ministry of Finance.

7.5 Government implementation performance:

68. Government implementation performance is rated *unsatisfactory*. As indicated earlier in the ICR, the government failed to release counter-part funding, resulting in significant delays in civil works and procurement of goods. Government's performance only slightly improved over the life of the project and during the last year of the project, MLF had to secure funding from other sources to match donor funds, thus enabling the project to meet some of its objectives.

7.6 Implementing Agency:

69. The Implementing Agency performance is rated *moderately unsatisfactory* due to problems that significantly impacted implementation. For example, human capacity at the MLF was considerably weak during project implementation to the point where it was becoming increasingly difficult for MLF to effectively manage the requirements of the NRMP project. Unsatisfactory management performance in the first two years was exacerbated by delayed appointments of management staff. The Borrower delayed resolving this issue and only well after the MTR were the required adjustments made (by filling two key positions - a new Technical Director for Forestry and a Director for Policy and Planning, Monitoring and Evaluation). Other significant problems included weak donor coordination and MLF's inaction in carrying out the recommendations by the MTR on how to improve the M&E of the project.

7.7 Overall Borrower performance:

70. Overall Borrower performance is rated *unsatisfactory*. Performance at preparation was satisfactory, however, this declined significantly during implementation. Delays in the promulgation of laws considerably slowed down project implementation and were responsible for the one year effectiveness delay and subsequent slippages during implementation since many of the project activities hinged on the approval of legislative reforms. In addition, Government of Ghana did not fulfill its financial obligations to the project (see Annex 2), resulting in significant delays in civil works and procurement of goods and equipment. Counterpart funding throughout the life of the project was irregular and did not match the requested amount.

8. Lessons Learned

71. Summarized below are important lessons learned.

- **Co-financing:** Joint financing has been shown to unify the funds and improve coordination to produce a beneficial synergy of effects. In contrast, the parallel financing under this project led to a fragmentation of the project authority, disjointed implementation and a funding crisis that almost derailed the project. **A lesson learnt** is that to achieve the benefits of a partnership with donors, it is essential that joint financing be sought. Other mechanisms of funding should be explored that ensure that funds come in simultaneously and well before implementation e.g., basket funding.
- **Overly Ambitious Project Designs as a stumbling block to implementation:** The project design included too many components, sub-components and activities to be carried out in a two year time-frame. The Ministry of Lands and Forestry did not have the capacity to fully internalize all project activities. **A lesson learnt** is that the project design should avoid being unnecessarily complex and must be tailored to the skills and institutional short and medium term implementation capacities of the implementing agency. For an agency with lower capacity, the design should focus on fewer, core project activities.
- **Addressing Community Needs in Natural Resource Management Projects:** In Natural Resource Management projects, there can be a tendency to focus on implementing natural resources management measures i.e., protection of forests, watersheds, etc without sufficiently addressing the needs of the community. This project responded well to communities articulated needs. **A lesson learnt** is that it is important to ensure that the natural resource goals of the project are well integrated into the wider developmental needs of the community such as access to water, energy and food requirements.
- **Proper Assessment of Government Commitment to Reform:** In this project, GoG's level of financial commitment to the project was low and therefore the project suffered from inadequate and untimely

release of funds. **The key lesson** here is that there is a need to make a determination, during preparation and the early stages of appraisal, about the level of Government commitment to the project. If it is perceived to be lacking, there is a need to engage in discussions with the government, at a higher level, to determine where the problem lies. In some cases, this may be due to a financial crisis in the government or changing priorities in the government's agenda or perhaps even a failure to engage the appropriate Ministers. Once the exact problem is determined, there are many ways to address it including scaling down the project, reshaping it to address particular priorities, etc. However, early diagnosis is important to ensure that this does not adversely affect the project.

- **Monitoring and Evaluation:** This project fell short in the area of monitoring and evaluation and, particularly in a longer-term APL, M&E needs to be very effective. **Lessons learnt** are that monitoring and evaluation needs and capacities should be assessed in the first two or three supervision missions to determine whether the team is correctly setting up the M&E system. Where M&E experience is lacking, the mission should make a concerted effort to ensure that capacity building issues are addressed by the implementing agency. For projects with a long time line such as NRMP, the project should consider establishing a separate M&E unit to increase effectiveness.
- **Legislation as a Requisite for Implementation:** Legislative procedures and creation of by-laws is a slow process that could confound the project if these are a necessary first step for core implementation. **A lesson learnt** is that in some case, legislation should be attained prior to effectiveness to ensure that this process is completed quickly.

9. Partner Comments

(a) Borrower/implementing agency:

72. The ICR has been distributed to the borrowers but there is no comment.

(b) Cofinanciers:

73. The only comment received was from DFID. DFID was mainly involved in the High Forest Component of the project. Their comments are summarized below:

- According to DFID, this project achieved a lot and its sustainability was likely. They indicated that there was strong evidence of GoGs commitment to the reforms across government from the Presidency and Parliament as well as sector institutions: revenue distribution, fee schedules, transparency of resource allocation, commitment to customer service orientation, a re-organised and autonomous FC, to name a few, who will carry forward with or without external support.
- DFID also commented that the Government of Ghana and the Natural Resource Sector had achieved far more, in terms of sector reform, than many other countries and certainly than in other civil service reform programmes in Ghana.
- DFID indicated that the design of the NRMP although ambitious, was driven strongly by the GoG, in particular by a Minister and Technical Director who wanted to push for a strong program, but who were ousted before their impact could be felt on the project. Without, strong leaders, the ambitious program was perhaps challenging for those who replaced them. However, they felt that the design was courageous, although risky.
- DFID thought that the project should be rated satisfactory because it achieved the developmental objective of the first phase, despite the longer period of time taken to implement the program. They indicate that implementation delays should not be used as an indicator of poor performance because they eventually obtained the expected results.

(c) Other partners (NGOs/private sector):

10. Additional Information

Annex 1. Key Performance Indicators/Log Frame Matrix

Outcome / Impact Indicators:

Indicator/Matrix	Projected in last PSR ¹	Actual/Latest Estimate
Enactment and promulgation of legislation for improved forest management, including establishment of Ghana Forest Service and improved revenue collection under an equitable distribution to local communities.	100% outstanding royalties to be collected. 100% stumpage fees to be collected.	FC established with four new departments, revenue collection rates have improved from 25% to 95%. Stumpage collection increased from 45% to 95%. Legislation enacted includes the Forestry Planation Fund Act (2000), The Customs and Excise Duties Amendment Act, 2000; The Forest Protection Amendment Act, 2002 and Amendments to the Timber Resources Management Act (1997) and the Timber Resources Management Regulations (1998)
Establish the policy and legal framework and technical capacity for sustainable management of woodlands and land resources within the savanna zone.	75% drafting work completed, 1 national workshop completed (February, 2003)	National Action Plan to Combat Desertification document completed and endorsed -1 national workshop completed, 6 other workshops completed
Improve the institutional capacity for management of Parks, Reserves and off-reserve wildlife resources and establish a framework for community participation in wildlife resource management.	<10% of rehabilitation work at Mole NP completed	Adoption and implementation of Institutional Restructuring Plan for Ghana Wildlife Department including recruitment and redeployment of staff not complete.
To establish effective systems for the protection of globally significant biodiversity in all tropical forest biomes in Ghana	90% of selected GSBA and PPAs demarcated. 1 management plan (Atewa GSBA) formulated	Contracts were awarded for the survey, demarcation and pillaring of 22 of 30 reserves and work has been completed for 17 of them. Thus, 77% of GSBA have been demarcated though not gazetted. There has been no demarcation of PPAs.

Output Indicators:

Indicator/Matrix	Projected in last PSR ¹	Actual/Latest Estimate
Ghana Forest Service (Forestry Commission) established and operational including recruitment of new staff and redeployment of surplus staff.	All managerial positions to be filled.	All managerial positions filled - june 2001
New forest policy and regulations adopted including an increase in the rate of collection of outstanding royalties to greater than 90%.	100% collection rate for outstanding royalty fees to be collected and 100% stumpage fees to be collected	Royalty rates increased from 25% to 95%. Stumpage fee collection increased from 45% to 97%
National Forestry Plan revised and published.	Inventory to be completed by 6/2002. Plan to be published by end December 2002.	National Forestry Plan Preparatory work still on-going with the Resource Management Support Center taking a lead role Log Export ban study completed
Economic options study for log export policy completed.		
Twelve priority reserve management plans prepared and analysis of cost/benefits analysis completed for six reserves.	12 final management plans completed.	12 final management plans completed However, cost benefit analysis not completed
Savannah Resource Management Center (SRMC) established and staffed and operating modalities developed.	12 residential accomodation for staff completed	SRMC established and staffed with operating modalities. 12 residential accomodation completed for staff
Six community-based pilots for woodland reserve management identified and planned.	12 management plans for 12 pilot communities completed.	12 management plans for 12 pilot communities completed.
Surveys and planning completed for six priority off-reserve watersheds.		Surveys and planning for 6 watersheds (off reserve) completed
National Action Program to Combat Desertification discussed, agreed and endorsed by regional and district	75% drafting work completed, 1 national workshop completed (Feb, 2003).	National Action Plan adopted and published.

<p>administrations in the three northern regions. Wildlife Department restructuring completed, new staff recruited and training program initiated and under implementation including redeployment of personnel to support district and community-level wildlife resource management</p>	<p>100% of rehabilitation work at Mole NP completed</p>	<p>Wildlife department restructuring not complete - recruitment still occurring. Wildlife education resources facility not operational. Rehabilitation work at Mole NP not yet complete and still ongoing in other areas.</p>
<p>Management plans revised and updated for all National Parks and Zoological Gardens and proposed infrastructure developments prioritized and costed</p>	<p>8 of 20 management plans completed</p>	<p>Plans completed</p>
<p>NGO-implemented extension program for conservation education and community-based wildlife management defined, costed and ready for implementation.</p>	<p>Blank in PSR</p>	<p>Not done</p>
<p>Five-year Strategy Plan and the human resources development plan for the Environmental Protection Agency are developed and adopted.</p>	<p>100% training in the HRD plan executed.</p>	<p>70% of the Human resources plan executed for the EPA</p>
<p>Regional and District level EIS capacity is developed and a national geo-spatial information framework is developed.</p>		<p>EIS capacity developed and geo-spatial information system developed</p>
<p>GEF- Baseline studies to identify, confirm and document Globally Significant Biodiversity Areas (GSBAs) completed and 25% of areas demarcated.</p>	<p>All GSBAs to be demarcated. 5 management plans to be approved</p>	<p>Baseline studies completed, 77% of area demarcated.</p>
<p>GEF-Provenance protection areas within production forest reserves identified and demarcated</p>		<p>Not yet completed</p>
<p>Legislative basis for providing permanent protection to GSBAs enacted.</p>		<p>Not yet enacted</p>
<p>Scope and operating modalities for an alternative livelihood investment program agreed with communities, government and GEF</p>		<p>Delayed-Not yet done.</p>

¹ End of project

Annex 2. Project Costs and Financing

Project Cost by Component (in US\$ million equivalent)

Component	Appraisal Estimate US\$ million	Actual/Latest Estimate US\$ million	Percentage of Appraisal
High Forest Resource Management Component (IDA)	2.73	2.73	100
Savannah Resource Management Component (IDA)	2.23	2.18	97.7
Wildlife Resource Management Component (IDA)	1.28	1.26	98.4
Environmental Management Coordination (IDA)	0.88	0.80	90.9
Biodiversity Component (GEF)	2.10	1.80	85.7
African Development Bank	1.03	0.00	
DANIDA (Savannah Component)	1.29	1.55	
European Union	1.29	0.00	
DFID (High Forest Management Component)	8.90	11.70	131
WFP	0.51	0.00	
Government	2.20	0.53	25.2
NEDA (Wildlife Component and Institutional Strengthening)	1.79	0.00	
Total Baseline Cost	26.23	22.55	
Physical Contingencies	2.30		
Price Contingencies	0.80		
Total Project Costs	29.33	22.55	
Total Financing Required	29.33	22.55	

Project Costs by Procurement Arrangements (Appraisal Estimate) (US\$ million equivalent)

Expenditure Category	Procurement Method ¹			N.B.F.	Total Cost
	ICB	NCB	Other ²		
1. Works	0.00 (0.00)	0.97 (0.90)	0.00 (0.00)	1.00 (0.85)	1.97 (1.75)
2. Goods	1.76 (1.76)	0.30 (0.26)	0.00 (0.00)	2.75 (0.96)	4.81 (2.98)
3. Services	0.00 (0.00)	0.00 (0.00)	1.87 (1.87)	5.30 (2.18)	7.17 (4.05)
4. Inc. Operating Costs	0.00 (0.00)	1.30 (1.20)	3.18 (3.10)	3.97 (1.62)	8.45 (5.92)
5. PPF Refinancing	0.00 (0.00)	0.00 (0.00)	0.65 (0.65)	0.00 (0.00)	0.65 (0.65)
6. GEF Investment Fund	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	2.65 (2.65)	2.65 (2.65)
Total	1.76 (1.76)	2.57 (2.36)	5.70 (5.62)	15.67 (8.26)	25.70 (18.00)

Project Costs by Procurement Arrangements (Actual/Latest Estimate) (US\$ million equivalent)

Expenditure Category	Procurement Method ¹			N.B.F.	Total Cost
	ICB	NCB	Other ²		
1. Works	0.00 (0.00)	(0.97)	0.00 (0.00)	(0.00)	0.00 (0.97)
2. Goods	(1.88)	(0.49)	0.00 (0.00)	()	0.00 (2.36)
3. Services	0.00 (0.00)	0.00 (0.00)	(0.93)	(0.12)	0.00 (1.05)
4. Inc. Operating Costs	0.00 (0.00)	(0.00)	(1.00)	(2.20)	0.00 (3.20)
5. PPF Refinancing	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
6. GEF Investment Fund	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Total	0.00 (1.88)	0.00 (1.46)	0.00 (1.93)	0.00 (2.32)	0.00 (7.58)

^{1/} Figures in parenthesis are the amounts to be financed by the IDA Credit. All costs include contingencies.

^{2/} Includes civil works and goods to be procured through national shopping, consulting services, services of contracted staff of the project management office, training, technical assistance services, and incremental operating costs related to (i) managing the project, and (ii) re-lending project funds to local government units.

Project Financing by Component (in US\$ million equivalent)

Component	Appraisal Estimate			Actual/Latest Estimate			Percentage of Appraisal		
	IDA	Govt.	CoF.	IDA	Govt.	CoF.	IDA	Govt.	CoF.
High Forest Resource Management Component	2.73	1.20	8.70	2.72	0.13	11.70	99.6	10.8	134.5
Savanna Resource Management	2.23	0.30	1.50	2.18	0.17	1.55	97.8	56.7	103.3
Wildlife Resource Management	1.28	0.30	1.30	1.26	0.09		98.4	30.0	0.0
Environmental Management Coordination	0.88	0.20	0.60	0.80	0.01		90.9	5.0	0.0
Biodiversity Component (GEF) (Data is incomplete since component has not ended yet)	2.10	0.20	0.00				0.0	0.0	0.0

Annex 3. Economic Costs and Benefits

EXECUTIVE SUMMARY

The Natural Resource Management Programme [NRMP] was designed by the Government of Ghana in collaboration with its Development Partners to protect, rehabilitate and sustainably manage national land, forest and wildlife resources through collaborative management and to sustainably increase the income of rural communities who own these resources.

There were seven components under NRMP 1 but those that lent themselves to some level of economic evaluation were 1) High forest resource management; 2) High forest biodiversity conservation; 3) Savanna resource management and 4) Wildlife resource management.

High Forest Resource Management

Under the High forest resource management component a total incremental revenue to resource owners and the Forestry Department from 1999 to 2003 was ₵81.3 billion with ₵32.5 billion (40%) and ₵48.8 (60%) billion going to owners and Forestry Department respectively.

The introduction of “Modified Taungya System” guaranteed greater security of tenure for farmers and generated incremental benefits of ₵600,000 to each farmer per hectare per annum. This was in respect of labour paid for the maintenance of plantations. In addition the community was allowed to inter-crop with food crops, which they harvested for use by themselves and/or sold to earn some income. The present worth of incremental revenue from these crops has been computed to be about ₵149 billion.

High Forest Biodiversity Conservation

The global environmental objective of Biodiversity Conservation Component of NRMP is to increase the ecological security of globally significant biological resources, especially within threatened tropical moist forest ecosystems.

The BC component of NRMP 1 did not lend itself to economic evaluation since no monetary value could be placed on species and/or ecosystem. However, some qualitative achievements were achieved and these included 1) a total of thirty (30) forest reserves had been identified and excluded from timber harvesting on the basis of their high significance as biodiversity – rich areas; 2) Contracts for the survey, demarcation and pillaring of seventeen (17) forest reserves as GSBAs (Globally Significant Biodiversity Areas) had been completed, while work was on-going on the remaining five; 3) Socio- economic surveys had been conducted for forest community living close to twenty-two (22) of the GSBAs.

Savanna Resource Management

The main economic benefits of the Savanna component were expected to be increased production of wood fuels, and crop production. Woodfuels are the main sources of energy in the savanna regions.

The incremental production of woodfuel and the corresponding incremental revenue generated from the woodland on-reserves and outside the reserves as well as community woodlots (plantations) as a direct result of the implementation of this component were calculated. For the natural forest, 90,000 ha on

-reserved and 3,600 from outside reserve were reserved for used for woodfuel production. If we project that this entire area will eventually be used for fuelwood production, from the total of 93,600 ha, there will be an incremental revenue of ₵5.2 billion annually.

With respect to the trees planted under this phase of the project, a total of 75 ha were cultivated which would generate incremental revenue of ₵3.43 million per annum starting from 2005.

Regarding crop production, 180 ha of soya bean, 25 ha cowpea and 200 ha of maize were cultivated. The total incremental revenue was calculated to be ₵630 million per year starting from the year 2002. A total of about 525 farmers benefited from the crop production aspect of the project.

Wildlife Resource Management

From an economic and revenue –generating perspective, two outputs were expected from the implementation of this component: 1) wildlife viewing and nature experiences and 2) bush meat production.

With respect to wildlife viewing and nature experiences, far-reaching actions were implemented in some of the resource locations. The activities implemented included 1) opening up of visitors centres as tourist attractions; 2) revenue sharing arrangement among the communities, Wildlife Division and the District Assembly; 3) Improvement in facilities at tourism sites; 4) Upward revision of wildlife fees of 2000% to reflect current economic value of resources

The above actions resulted in positive outcome regarding increase in number of visitors and revenues. For example, at Agumatsa Wildlife Sanctuary in the Volta Region, the number of visitors in the year 2001 was 6,432 and earned a revenue of ₵6.9million. But in the year 2002, the number of visitors attracted to the sanctuary almost doubled to 12,319 with a corresponding revenue of about ₵13.2 million. The same upward trend was observed at Shai Hills Resource Reserve in Greater Accra. In the year 2001, 1,517 people visited the Reserve and earned ₵8.2 million. However, in the year 2002, the number of visitors more than tripled to 4,848 with a corresponding revenue of ₵28.2 million. At Kakum National Park in the Central Region, the total number of visitors in the year 2001 and 2002 were 52,285 and 81,719 respectively. Revenues earned within the same periods were ₵234.6 million and ₵366.7 million respectively.

Annex 4. Bank Inputs

(a) Missions:

Stage of Project Cycle	No. of Persons and Specialty (e.g. 2 Economists, 1 FMS, etc.)		Performance Rating	
	Month/Year	Count	Specialty	Implementation Progress
Identification/Preparation 5/3/1997	4	NAT RES. MGMT (1); AGRIC. ECON. (1); PROCUREMENT SP (1); FINAN. MGMT (1)	S	S
Appraisal/Negotiation 11/24/1997	13	FORESTRY SPEC. (1); ECONOMICS SP (1); ENVIRON.ECON (1); NAT.RES. MGMT. SPEC (1); ENVIRON. MGMT (1); ECOLOGIST (1); ENVIR. INFO (1); BIO-RES. ENGIN (1); AGRIC (1); AGRIC. ECON (1); FINAN. ANAL (1); PROC. ANAL (1); PROGRAM ASS (1); Delegations	S	S
Supervision 5/12/1998			S	S
05/24/1999	3	AG. ECONOMIST (1); NAT. RESOURCE SPEC. (1); CONSULTANT (1)	S	S
02/15/2000	7	AGRIC. ECONOMIST (1); NATURAL RESOURCES SP. (1); AGRICULTURIST (1); PROCUREMENT SPECIALIST (1); FINANCIAL ANALYST (1); CONSULTANT FORESTER (1); ENVIRONMENT SPEC (1)	S	S
09/14/2000	33	NATURAL RESOURCE SPEC. (1); FORESTER (15); AGRIC ECONOMIST (1); ECONOMIST (2); SOCIOLOGIST (2); WILDLIFE (5); ECOLOGIST (1); ENVIRONMENTALIST (2); AGRICULTURIST (1); MIS SPECIALIST (1); LOCAL GOVERNMENT SPEC. (1); ENVIRONMENT (1)	S	S
02/01/2002	11	TTL,NAT.RES.MGMT.SPEC. (1); OPERATIONS OFFICER (1); AGRIC. SPEC. (1); AGRIC. ECONOMIST (1);	S	U

ICR	02/07/2003	1	FIN.MGMT.SPEC. (1); PROC. SPEC. (1); PROC. OFFICER (1); LEAD FORESTRY SPEC. (1); LEAD ENV. SPEC. (1); FORESTRY SPEC. (1); PROGRAM OFFICER (1) FORESTER (1)	S	S
	06/16/2003	4	TTL, NAT.RES.MGMT.SPEC (1); OPERATIONS OFFICER (1); PROCUREMENT SPECIALIST (1); FINANCIAL MGMT.SPEC (1); PROGRAM ASS (1)	S	S

(b) Staff:

Stage of Project Cycle	Actual/Latest Estimate	
	No. Staff weeks	US\$ ('000)
Identification/Preparation	115.2	399.8
Appraisal/Negotiation	68.2	187.9
Supervision	162.8	487.8
ICR	13.1	41.9
Total	359.3	1,117.4

Annex 5. Ratings for Achievement of Objectives/Outputs of Components

(H=High, SU=Substantial, M=Modest, N=Negligible, NA=Not Applicable)

	<u>Rating</u>				
<input checked="" type="checkbox"/> <i>Macro policies</i>	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input checked="" type="radio"/> NA
<input checked="" type="checkbox"/> <i>Sector Policies</i>	<input type="radio"/> H	<input checked="" type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input type="radio"/> NA
<input checked="" type="checkbox"/> <i>Physical</i>	<input type="radio"/> H	<input type="radio"/> SU	<input checked="" type="radio"/> M	<input type="radio"/> N	<input type="radio"/> NA
<input checked="" type="checkbox"/> <i>Financial</i>	<input type="radio"/> H	<input checked="" type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input type="radio"/> NA
<input checked="" type="checkbox"/> <i>Institutional Development</i>	<input type="radio"/> H	<input type="radio"/> SU	<input checked="" type="radio"/> M	<input type="radio"/> N	<input type="radio"/> NA
<input checked="" type="checkbox"/> <i>Environmental</i>	<input type="radio"/> H	<input type="radio"/> SU	<input checked="" type="radio"/> M	<input type="radio"/> N	<input type="radio"/> NA
<i>Social</i>					
<input checked="" type="checkbox"/> <i>Poverty Reduction</i>	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input checked="" type="radio"/> NA
<input checked="" type="checkbox"/> <i>Gender</i>	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input checked="" type="radio"/> NA
<input checked="" type="checkbox"/> <i>Other (Please specify)</i>	<input type="radio"/> H	<input checked="" type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input type="radio"/> NA
<i>Community Development</i>					
<i>Processes</i>					
<input checked="" type="checkbox"/> <i>Private sector development</i>	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input checked="" type="radio"/> N	<input type="radio"/> NA
<input checked="" type="checkbox"/> <i>Public sector management</i>	<input type="radio"/> H	<input type="radio"/> SU	<input checked="" type="radio"/> M	<input type="radio"/> N	<input type="radio"/> NA
<input type="checkbox"/> <i>Other (Please specify)</i>	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input type="radio"/> NA

Annex 6. Ratings of Bank and Borrower Performance

(HS=Highly Satisfactory, S=Satisfactory, U=Unsatisfactory, HU=Highly Unsatisfactory)

6.1 Bank performance

Rating

- | | | | | |
|---|-----------------------------|---------------------------------------|---------------------------------------|-----------------------------|
| <input checked="" type="checkbox"/> Lending | <input type="checkbox"/> HS | <input type="checkbox"/> S | <input checked="" type="checkbox"/> U | <input type="checkbox"/> HU |
| <input checked="" type="checkbox"/> Supervision | <input type="checkbox"/> HS | <input checked="" type="checkbox"/> S | <input type="checkbox"/> U | <input type="checkbox"/> HU |
| <input checked="" type="checkbox"/> Overall | <input type="checkbox"/> HS | <input checked="" type="checkbox"/> S | <input type="checkbox"/> U | <input type="checkbox"/> HU |

6.2 Borrower performance

Rating

- | | | | | |
|---|-----------------------------|---------------------------------------|---------------------------------------|-----------------------------|
| <input checked="" type="checkbox"/> Preparation | <input type="checkbox"/> HS | <input checked="" type="checkbox"/> S | <input type="checkbox"/> U | <input type="checkbox"/> HU |
| <input checked="" type="checkbox"/> Government implementation performance | <input type="checkbox"/> HS | <input type="checkbox"/> S | <input checked="" type="checkbox"/> U | <input type="checkbox"/> HU |
| <input checked="" type="checkbox"/> Implementation agency performance | <input type="checkbox"/> HS | <input type="checkbox"/> S | <input checked="" type="checkbox"/> U | <input type="checkbox"/> HU |
| <input checked="" type="checkbox"/> Overall | <input type="checkbox"/> HS | <input type="checkbox"/> S | <input checked="" type="checkbox"/> U | <input type="checkbox"/> HU |

Annex 7. List of Supporting Documents

1. Borrower's Report
2. Aide Memoire, Mid Term Report
3. Comments from Cofinanciers and Parralel Financiers
5. Maps

Additional Annex 8. Borrower's Report

NRMP 1 Implementation Completion Report
Ministry of Lands and Forestry
November 5, 2003

NATURAL RESOURCE MANAGEMENT PROGRAMME PHASE 1

EXECUTIVE SUMMARY OF IMPLEMENTATION COMPLETION REPORT

1. PRINCIPAL PERFORMANCE RATING

Various stakeholders rated NRMP Phase I outcome, bank and borrower performances as satisfactory (S), while programme sustainability had a highly likely (HL) rating with Institutional development impact having a substantial rating (SU).

Overall, the management and coordination of NRMP 1 is rated satisfactory. The NRMP I was implemented by five mainline Ministries including the Ministries of Lands and Forestry (MLF) the lead Ministry, Food and Agriculture, Environment and Science, Energy and Local Government and Rural Development. The programme was mainly implemented through existing departments and divisions of the collaborating line ministries. Two special units – Savannah Resource Management Centre and Plantation Development Centre were created to assist in the implementation of the savanna resource management and plantation component of the programme respectively.

2. ASSESSMENT OF DEVELOPMENT OBJECTIVES AND PROGRAMME COMPONENTS

2.1 Original Objectives and Revisions

The ten-year goal of the NRMP is to ‘protect, rehabilitate and sustainably manage national land, forest and wildlife resources through collaborative management and to sustainably increase the incomes of rural communities who own these resources’. The primary objective of the NRMP 1 was to promote and strengthen public and private sector efforts, through improved policy and regulatory frameworks, enhanced local community involvement in resource management and efficient biodiversity conservation practices. NRMP is based on a broad sectoral lending approach covering the management, conservation, enhancement and sustainable utilization of land, forest, and savanna woodlands and wildlife resources.

However, considering the period of implementation for the first phase (two years), the institutional and policy reforms required, the needed capacities of the implementing agencies and the general economic conditions, the NRMP 1 objectives were over ambitious. In spite of the broad scope of NRMP I, no revision was made of the objectives during programme implementation since such an action would have called for a programme re-design. However, substantial modification were made to programme components and activities.

2.2 Pre-NRMP Situation

Prior to the implementation of NRMP Phase I, perverse policy and market instruments, poor institutional capacities, poor governance, lack of transparency and bad resource management practices characterized the natural resources sector. This situation resulted in over-exploitation and depletion of stocks, destruction of

ecological systems and loss of biodiversity; high incidence of illegal harvesting and chainsaw operations; logging and processing inefficiencies and diminished capacity of forestry agencies to regulate the sector. These factors resulted in the under-valuation and skewed distribution of economic rent of natural resources, especially timber and other wood products in favour of the industry, with Government and landowning communities receiving negligible amounts. One of the key losers in this situation is forest-owning communities, which lacked the necessary empowerment to ensure the equitable flow of benefits to them.

Another major problem was the dependence of the timber industry on a few species resulting in the "creaming" of the affected species, a reduction in the raw material base and an increase in the cost of sawmilling operations. Inevitably, creaming and low product recovery rates in the wood industry sub-sector led to unsustainable levels of timber exploitation.

Legislation, regulations and codes of practice, which were in place to control harvesting and protect the forestry resource were either inadequate or were not properly enforced, probably because the forestry sector agencies were weak, under-resourced and suffering from low morale. Management planning and log movement monitoring were also weak and appeared ineffective in preventing over-cutting.

2.3 Programme Interventions and Components

In order to address the above sectoral issues, NRMP Phase I interventions sought to alter the incentive structures operating in the natural resources sector, so that professionals are encouraged to adopt a service role for communities; industry is encouraged to invest in more efficient equipment and value adding processing; private investors are encouraged to engage in plantation development; and communities and district assemblies are rewarded for pursuing sustainable forest management and conservation principles.

NRMP Phase I was originally divided into five components to facilitate programme implementation, namely; High forest resource management, High forest biodiversity conservation, Savannah resource management, Wildlife resource management, and Environmental management coordination. During programme implementation two additional components; Policy, legislation and institutional reforms and Programme management and co-ordination were introduced to ensure that the objectives were fully met.

A summary of the objectives, outputs and achievements of the seven programme components are as follows:

2.3.1 Policy, Legislation and Institutional Reforms Component (PLIRC)

This component was designed to assist the government to formulate and implement further sectoral policy and institutional reforms to enhance revenue capture; improve concession allocation procedures and concession management; and improve sustainability of the forest industry through introduction of new legislation, conduct log export ban study and streamlining the mandates of forest sector agencies and strengthening their implementation capacity.

The key activities under this component included the review of the log export suspension; addressing the issue of transparent and efficient allocation of timber resources; control of over-cutting of timber; formulation of the basis for the appropriate pricing of timber and other forest-based products; rationalisation of the timber industry and the adoption of appropriate fiscal and taxation measures; facilitation of equitable distribution of benefits to forest-owning communities; promotion of rights to community participation.

One of the key achievements of this component is the Cabinet and Parliamentary approvals for a number of policy measures and legislations designed to strengthen the forestry sector institutions and activities. The policy reform measures are as follows:

- Review of TUC allocation procedures and the introduction of transparent competitive bidding;
- Increased institutional transparency, consistency, and credibility so as to foster responsiveness, accountability and the rule of law in natural resource management.;
- Introduction of measures to rationalise forest fee and taxation systems and improvement of the framework for apportioning, recovering and distributing equitably and effectively forest rent (royalties) between the resource owners, state and the users of the resources;
- Introduction of measures encouraging the building of partnerships for and enhancing recovery of stumpage fees and taxes;
- Completion of 12 forest reserve management plans and the initiation of the formulation of management plans for various types of forests, particularly production forests;
- Development of a sustainable institutional framework for the effective participation of key stakeholders, including traditional authorities, landowners, civil society and rural communities in natural resource management including decentralization that fosters community-driven choices of natural resource use and project implementation.

Legislative improvements include the revision of the Forest Plantation Fund (Amendment) Act, 2002 (Act. 623), the removal of duty on the imported timber for processing (Customs & Excise Duties Amendment Act, 2000), the regulation of investments into the forestry sector (Revision of Ghana Investment Promotion Centre Act, 1994- Act. 478), increases in the fines and punishment for committal of forest offences (Forest Protection Amendment Act, 2002) , the introduction of competitive bidding in the allocation of timber and other forestry resources (Amendment to the Timber Resources Management (Amendment) Act, 2002 – Act 617 and the Timber Resources Management (Amendment) Regulations, 2002.

Based on the component achievements in relation to the outputs set out in the programme appraisal document (PAD), the policy, legislative and institutional reforms component was rated highly satisfactory.

2.3.2 High Forest Resource Management Component (HFRMC)

The high forest resource management component covered five elements, namely; public sector agency reform, integrated forest reserve management, forest resources management off-reserve, reforms and incentives for wood harvesting and processing; and plantation development.

Under the programme, various sector agencies were expected to devolve a considerable share of their responsibilities to local communities. The component project was also designed to assist private sector producer associations, non-governmental organizations and community-based organizations to improve timber production and processing operations. These activities were to complement the restructuring of the Forestry Department into a more efficient service-providing Forest Services Division. The project was also to build on the five-year experience of the pilot Collaborative Forest Management Initiative in participatory forest management and conservation education. The project was also to promote the development of privately owned plantations to supply the wood processing industry as the timber yield from natural forests continues to decline. Through the creation of a Forest Plantation Development Centre and Forest Plantation Development Management Fund with appropriate administrative arrangements, the project was to facilitate land allocation to qualified investors within degraded reserves, support for development of additional private plantation management companies.

The significant progress made were as follows:

- The Forest Resources Utilisation and Management (FORUM) sub-component of the High Forest Resource Management Component (HFRMC) pioneered effective integrated forest management strategies in the Volta Region. These involved the development of forest reserve management plans, focussing on appropriate silvicultural interventions, promotion of natural regeneration following exploitation and incorporation of fire preventive strategies.
- The Forest Sector Development Project II sub-component of the High Forest Resource Management Component (HFRMC) also supported the piloting of 3-year rolling District plans within five Forest Districts. This programme supported civil society groups in forest management and improved community voice in forest management. The sub-component has also commenced the mainstreaming of collaborative resource management (CRM) in forest resources management in 26 forest districts.
- Equitable resource allocation and benefit flows have been introduced.
- Alternative livelihood activities among forest dependent communities was promoted (e.g. diversification of non-timber forest products collection, cultivation and processing; modified taungya system).
- Increased collection and payment rate for forestry fees from 65% at programme inception to the current collection rate of 95%).
- Revision of benefit sharing arrangements for natural forest timber revenue which yielded about ₵10 billion (\$1.25 million) with incremental benefit to stool landowners per annum.
- Introduction of “Modified Taungya System” which guarantees greater security of tenure for farmers and also expected to yield additional and incremental benefit of ₵600,000 (US\$80) to each farmer per hectare per annum. In addition, food crops produced through the system will be solely for the farmers and is estimated earn them about ₵1.8 million (US\$230) per hectare per year for the first three years only.
- Prompt settlement in terms of payment of rent and stumpage liabilities or indebtedness to the stool landowners and District Assemblies.

Based on the above achievements in relation to the outputs set out in the programme appraisal document (PAD), the HFRMC is rated highly satisfactory.

2.3.4 Biodiversity Conservation Component

This component was financed by Global Environment Facility (GEF) to confirm, refine and document priority areas of global importance for biodiversity conservation to be excluded from future logging. The purpose of the component was to develop and implement community-based management plans for protection of the GSBA; finance alternative livelihood schemes for affected communities; and, provide for ongoing monitoring and evaluation of biological and social indicators of program performance.

Specific project activities under the component included: (i) mapping, delineation and demarcation of Globally Significant Biodiversity Areas (GSBAs); (ii) establishment of community-based monitoring program for key indicators; (iii) support for development of community based enterprises with direct linkage to biodiversity conservation objectives; (iv) integration of biodiversity conservation within the general Forest Services Division initiative for collaborative management of forest resources both on and off reserve (v) safeguard genetic diversity and diversity of indigenous species through an ecosystem approach to management within the high forest zone

The project was also aimed at financing income generating small scale enterprises and investing in alternative livelihood projects that were to: (i) improve the economic status of the communities living

around the GSBAs and compensate for income forgone; and (ii) relieve pressure on biological resources.

A summary of the component achievements include:

- Through the intervention of the BC project, over 100 Community Biodiversity Advisory Groups (CBAGs) have been formed around 20 Globally Significant Biodiversity Areas (GSBAs). The CBAGs represent a vital structure that serve as rallying points for ensuring voluntary community participation in project implementation.
- 118,000ha of land in 30 forest reserves have been added to global biodiversity management. Timber harvesting has been excluded from these areas on the merit of their high significance as biodiversity-rich areas. Eleven (11) of these forest reserves are wholly protected while the remaining 19 are partially covered. However, legal descriptions of these areas leading to their gazettement as GSBAs is yet to be completed since it hinges on the full compilation and examination of survey data by the Survey Department.
- Biodiversity management plans have been written for the Atewa GSBA, which is serving as a blueprint for the other management plans that are being written for the other GSBAs.
- Baseline socio-economic and eco-tourism studies have been conducted for some critical areas of biodiversity maintenance. In addition, floral surveys for the GSBAs have been done, while a faunal survey is underway.
- A reconnaissance survey was carried out to confirm the forest condition of the Southern Dry Forests (SDF).
- Conservation International (CI) conducted studies on how the Community Investment Fund (CIF) would be invested and disbursed to beneficiary communities. Modalities for the actual disbursement of the fund are being drawn up with the help of a consultant.

Based on the above achievements in relation to the outputs set out in the programme appraisal document (PAD), the biodiversity conservation component is rated satisfactory.

2.3.5 Savannah Resources Management Component (SRMC)

The goal of SRMP was to reduce poverty through the sustainable management and utilization of savannah natural resources. Unlike most other poverty reduction strategies, the emphasis of the project was on long-term-sustained poverty reduction based on prudent utilization and effective management of savannah natural resources.

The project was designed to help improve the operational framework for harvesting and processing of woodfuels; and strengthen field extension capacity by creation of a multidisciplinary resource management center to work in collaboration with local communities and the district level environmental and planning committees to promote integrated management of soil, water, and natural land cover. Pilot activities to improve woodland management and revenue generation with increased local community involvement were to be developed, along with initiatives to improve woodfuel marketing and utilization.

The SRMP concentrated on four main sub-components, namely; Institutional development, On and off-woodland reserve management, Land management off-Reserves and Improving woodfuel marketing and utilization. Specific activities were to:

- (i) establish and operationalize the proposed Savanna Resource Management Center (SRMC) with staff from Ministry of Lands and Forestry (MLF), Ministry of Food and Agriculture (MOFA),

Environmental Protection Agency (EPA) and Ministry of Energy (MoE);

- (ii) complete an assessment of natural resources of the savanna zone;
- (iii) plan and initiate six community-based resource management pilots on-reserve;
- (iv) complete surveys and planning for pilots in six priority watersheds off-reserve; and
- (v) complete a survey of woodfuel markets/marketing and organize a national woodfuels workshop.

The achievements of the Savannah Resource Management Component were:

- A Savannah Resource Management Centre (SRMC) was set up, which helped developed various skills and competencies in collaborative resource management, integrated watershed management woodland management and traditional energy resource management. A Technology and Systems Demonstration Centre was also set up.
- Integrated 9 District Assemblies into savanna resource management systems through the District Development Plans and developed collaborative relationships with NGOs and Civil Society.
- Preparation of six Integrated Watershed Management Plans to rehabilitate watersheds
- Establishment of 6,000 ha of woodlands outside the reserves managed by communities with traditional norms and local bye-laws (dedicated forests).
- Establishment of six pilot community nurseries to produce the needed planting materials for the establishment of woodlots and rehabilitation of degraded forest reserves.
- Drafted the National Energy Policy and strategy for ensuring sustainable supply and demand of woodfuels.
- Local fire volunteers from pilot communities were trained and encouraged to manage the bushfires through fire belt construction, early burning, and fire patrols at the beginning of the dry season. .
- About 1,200 farmers in 12 pilot communities were animated to adopt improved technologies in soil fertility and reduction of farm erosion including application of composting, soil bonding, crop rotation, mulching, preservation and development of indigenous and threatened crop varieties and adoption of agro forestry farming techniques.

Based on the above achievements in relation to the outputs set out in the programme appraisal document (PAD), the savannah resources management component is rated highly satisfactory.

2.3.5 Wildlife Resource Management Component (WRMC)

The main purpose of the Wildlife component was to reorient and strengthen the management of the Wildlife Division, develop its capacity to enhance the economic and social sustainability of wildlife management programmes, and foster closer collaboration between WD and rural communities, the private sector, NGOs and other partners. The project was also to support the implementation of management and infrastructure development plans for selected protected areas; support community-based initiatives to develop sustainable systems for bush meat production; promote private sector and community involvement in wildlife-related economic activities such as ecotourism, game ranching, and live animal export; and improve public understanding and support for wildlife conservation and management through public education.

Specific activities envisaged under the component were to (i) restructure the Wildlife Division, recruit new staff and initiate training programs; (ii) revise all Protected Areas management plans and operationalize these through the introduction of annual work planning procedures; (iii) prioritize proposed infrastructure development programs at each site to be implemented in later phases; and (iv) develop extension capacity within WD to support district- and community-level wildlife conservation and management.

A summary of the component achievements include:

- Wildlife Division restructuring is ongoing. In addition, a Collaborative Resource Management Unit (CRMU) has been established since 1999 with support from the European Union (EU) and SNV, a Dutch NGO.
- A policy on Collaborative/Community-Based Wildlife Management has been developed and a Community Resource Management Area (CREMA) concept has been developed and is being piloted
- All protected area management plans revised and operationalised through annual work planning procedures. The Ankasa and Bia Management Plans have been completed under the Protected Area Development Project with support of the European Union (EU).
- Proposed infrastructure developments at each park prioritized and costed for implementation in later phases
- Extension capacity within WD to support district and community –level wildlife conservation and management developed.
- Economic development of wildlife resources initiated. New fees on hunting, capturing, export and keeping of wild animals and their by products have been introduced.
- The WD collaborated with the Forest Services Division (FSD) to give more protection to primates in Krokosua Forest Reserve. The Wildlife Division also assisted the FSD with the identification of priority forest reserves and design of strategies to incorporate holistic biodiversity conservation into forest reserve management plans in a national forest inventory.
- A Wildlife Conservation Education Unit was established at the WD head office
- A protected area management information system (PAMIS) has been established at Ankasa and Bia Conservation Areas.

Based on the above achievements in relation to the outputs set out in the programme appraisal document (PAD), the Wildlife Component is rated highly satisfactory.

2.3.6 Environmental Management Coordination Component (EMCC)

The project was to support the Environmental Protection Agency to implement its 5-year strategic plan for environmental management coordination, which was under preparation (including the human resource development plan) and to develop sector-specific guidelines in support of project implementation. The project was to provide support, through the EPA and the MLGRD, the strengthening capacity of the district-level environmental management committees to enable them to prepare local environmental action plans and participate in local-level land use planning.

Specific component activities included the (i) implement EPA’s revised human resources development (HRD) Plan, based on the newly developed Strategic Vision; (ii) development of regional and district EIS and the proposed geo-spatial information framework; and (iii) Preparation of a National Action Program to Combat Desertification.

There was no change in the programme component during the programme implementation. However, during the implementation assistance mission a lot of suggestions and amendments to the various components were made to facilitate implementation.

A summary of the component achievements include:

- The Environmental Information Systems packaging for (10) ten regions of Ghana in addition to (6)

six pilot districts namely, Jirapa-Lambussie, Wenchi, Akatsi, Ga, Techiman and Wassa West was completed.

- The National Framework For Geospatial Information Management for Ghana (NAFGIM) was successfully set up. It is worth noting that in Africa, only NAFGIM (after South Africa) has come so far as to setting up a national structure for the management and co-ordination of geospatial information. NAFGIM has also developed National Data Policy Guidelines for the Policy Workgroup to develop substantive Geospatial Data policies for Ghana.
- Land Use /Land Cover map update has been completed.
- The National Action Programme to combat desertification has been worked on and the final document has been printed and distributed to ministries, agencies, and other stakeholders i.e. the secretariat of the United Nations Convention to Combat Desertification (UNCCD).

2.3.7 Programme Coordination and financial management

This sub-component was created to keep track of programme implementation, effective monitoring and evaluation, efficient procurement and financial management system to support programme implementation. A Programme Coordination Committee (PCC) was established, under the chairmanship of the Hon. Minister of lands and Forestry. The PCC was composed of a representation at Director-level from all participating ministries (Lands and Forestry [MLF], Food and Agriculture [MOFA], Environment and Science [MES], Local Government and Rural Development [MLGRD] and Energy [MoE]); Private Sector (plantation/processing/logging); NGOs; and relevant academic institutions. The PCC meetings were held on a quarterly basis to review proposed work programmes, monitor implementation performance, and foster inter-agency and inter ministerial cooperation in natural resource management.

Following issues that arose out of the PCC and in conformity with the Government directive, a Natural Resource Management and Environmental Consultative Group (NRMECG) was formed with representation from all the development partners in the natural resource sector. The chairmanship of the Group rotated between the MLF and MES. The meetings were used to discuss issues relating to programme implementation and the possibility of common basket funding for natural resource programmes. The issue of adopting a sector-wide approach to development projects in the natural resource and environment sector also dominated discussions of the Group. Unfortunately, the meetings of the Consultative Group fizzled out with time and there were no follow-up of the decisions that were reached.

The overall responsibility for programme management and coordination rested on the Project Coordination Unit (PCU) within MLF, headed by the Director of the PPMED and supported by administration/ procurement and financial staff.

3.0 CONSTRAINTS AND LESSONS LEARNT

The implementation of the NRMP was confronted with number factors which undermined the full attainment of the programme development objectives. Some of the factors that constrained the programme implementation were as follows:

- (a) It took much longer than anticipated to get Cabinet and Parliamentary ratify and approve policy and institutional reforms. This led to frustrations among implementation agencies and loss of donor confidence in the implementation of the NRMP thus limiting the realization of the development objectives of the NRMP I on schedule.
- (b) The non-availability of counterpart funding from GOG continued to pose a problem to

procurement of goods and operating costs.

(c) The staff capacity of MLFM and its implementing agencies was inadequate thus hampering effective implementation of the programme as most of the staff had to learn on the job. The situation was made worse with the constant changes in the programme directors also slowed down progress of the programme as the new people had to learn on the job.

(d) Low morale of the staff implementing the programme also affected the programme performance. The civil servants working on the programme have to spend additional time outside their normal working hours to push the programme forward. Unfortunately the salary and wages policy of the country did not allow such people to be remunerated accordingly. This compelled most of them to become very inactive towards the programme implementation.

(e) Monitoring of implementation progress was done mostly through field visits by Desk Officers of the PPMED and the use of quarterly reports submitted periodically by the various component Team Leaders. The monitoring process was ad-hoc with no feedback. Hence monitoring and evaluation under the programme became weak and ineffective.

(f) Financial pledges made by co-financiers to support NRMPI activities had not been fulfilled as at April 30, 2001 (2 years after programme inception). This delay had compelled the implementing agencies to cut back on the activities in their respective work plans. The reason being that, while the implementing agencies estimated to spend over US\$ 12.6m on their activities for year 2001 alone, the available financial resources from IDA and GEF were only US\$8.5m.

(g) The late start-up of FSDP2, supported by DFID had resulted in the delay in the implementation of some crucial activities of NRMPI. Most notable among them is the preparation of management plans for twelve priority reserves and the analysis of the costs and benefits of six of these plans. This activity was to be funded by DFID under the HFRMC and though some work was initiated on the preparation of the plans by FSD, new set of 12 reserves had recently been identified for the plans to be prepared.

(h) Similarly, the late start-up of FSDP2 and RNG has delayed the implementation of the training programmes of FSD and WD as the programme had to be halted until a needs assessment was completed.

(i) Although the DANIDA pledge a support to the traditional resource management component of the NRMP 1 for ten years, immediately after the initiation phase, (two and half years), they pulled out thus bring the project to an abrupt end. Without an immediate successor project, all the achievements made under the project are gradually being eroded. It would be difficult to revive the community interest and win their support if the activities are not continued immediately.

(j) The World Food Program was to support the field activities under the SRMP, particularly those directed at enabling the more deprived target groups, especially women, to pull themselves from their persistent poverty within a reasonable period of time; and become more self-reliant in providing the minimum food requirements for their families, either by direct production or by generating income from other village level service and production activities which would enable them to afford a satisfactory level of year round nutrition. After several years of waiting the World Food Programme announced their pull out of the programme. This affected the morale of the rural communities who have been working on the programme activities in anticipation of the food during the dry season.

After almost four years of implementing the NRMP Phase I, the forestry sector has not witnessed the needed progress, although more than 90% of the NRMP 1 objectives and activities have been implemented successfully. The lessons learnt during the implementation of NRMP Phase I is summarised as follows:

- To develop effective policy and legislative frameworks, it is necessary to have the support of civil society. In addition, without policy change, financial and technical assistance will not yield the full benefits.
- Sustainable resource utilization cannot be achieved only by improving management of the high

forest. It requires concerted efforts and a common strategy to manage the entire ecosystem including forest and savannah ecosystems; watersheds and mangroves.

- Actively involving local communities and civil societies in sustainable environmental management requires a resource-based management strategy. One of the greatest challenges to collaborative forest management strategy is how to integrate local communities into planning and management and still maintain a profitable and export-oriented forestry sector.
- Although the civil society is willing to participate in sustainable natural resource management, yet their capacities are weak to carry out the responsibilities. Genuine stakeholder involvement in management and sharing of responsibilities require that the capacities of these groups should be developed up a level where it can be self-sustaining.
- Commercial production of timber (legal and illegal) and woodfuel is an integral part of the survival strategy of most rural households, especially the rural poor. Therefore to halt the ongoing environmental degradation in the country, we need to combine poverty alleviation and environmental concerns by investing in activities that will try, to achieve tangible and immediate poverty alleviation through a more sustainable, or a less unsustainable, use of the natural resource base.
- Monitoring and evaluation should be considered as part of the implementation process. There should be a comprehensive programme, which will keep programme administrators informed of the progress and problems in the implementation process.
- In spite of the measures that have been put in place to strengthen the regulatory mechanisms for sustainable forest management, both forest and wildlife resources have been subjected to a dramatic rise in the rates of exploitation, mainly by logging and saw-milling interests, as well as by illegal chainsaw operators and hunters.
- Providing water resources are essential element for sustainable natural resource management.
- Rural enterprises if assisted can operate small-scale ecotourism around traditional protected areas, sanctuaries and community dedicated forest to generate sustainable income for the rural people.
- Development partners should first and foremost be *agents of change* seeking to change people's perceptions and behaviour. Changing people's perceptions and behaviour requires innovative and creative solutions. The Intervention Strategy must go beyond the classical "*problem: deforestation – solution: tree planting*" analysis approach and together with communities embark on activities are financially viable, feasible and profitable. This calls for flexibility during project implementation.
- Donor funding of all projects under a programme should be harmonised. Poor donor coordination coupled with ineffective monitoring and evaluation undermines the success of any development effort.

4.0 WAY FORWARD

Building on lessons and outputs/outcomes achieved from the first phase, there is the need for a second phase to consolidate the achievements of the first phase. The second phase objective will be to enhance and accelerate the development and implementation of participatory and collaborative practices under efficient partnership arrangements in natural resource policy formulation, management, utilization and conservation and to increase livelihood and income generating opportunities for rural communities.

The global environment objectives will be to increase the security of globally significant ecological and biological resources, including forests, woodlands, agricultural systems, water bodies and wetlands as well as biodiversity and medicinal plants; and reduce global greenhouse gas emissions through targeted carbon sequestration activities.

