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PROJECT PERFORMANCE ASSESSMENT REPORT

GHANA

**ENVIRONMENTAL RESOURCE MANAGEMENT PROJECT
(CREDIT 2426-GH)**

AND

**GEF COASTAL WETLANDS MANAGEMENT PROJECT
(WBTF 28619)**

AND

**NATURAL RESOURCES MANAGEMENT PROJECT
(CREDIT 3091-GH)**

June 24, 2008

*Sector Evaluation Division
Independent Evaluation Group (World Bank)*

Currency Equivalents

Currency Unit = Ghanaian Cedi (C)

1998 (May)	US\$ 1.00	=	C 2,200
2003 (January)	US\$ 1.00	=	C 7,225

Abbreviations and Acronyms

AfDB	African Development Bank
APL	Adaptable Program Loan
CIF	Community Investment Fund
CISF	Community Investment Support Fund
DA	District Assembly
DANIDA	Dutch International Development Agency
DFID	Department for International Development (UK)
EIS	Environmental Information Systems
EPA	Environmental Protection Agency
EU	European Union
FC	Forestry Commission
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
GWS	Ghana Wildlife Society
HIPC	Highly Indebted Poor Countries
ICR	Implementation Completion Report
IDA	International Development Association of the World Bank
IDA	International Development Association
MLF	Ministry of Lands and Forestry
MLFN	Ministry of Lands, Forest and Mines
MOFA	Ministry of Food and Agriculture
NEDA	Netherlands Development Agency
NGO	Non-Governmental Organization
NRMP	Natural Resource Management Project
PAD	Project Appraisal Document
PRSP	Poverty Reduction Strategy Paper
RNG	Royal Netherlands Government
SRMC	Savannah Resource Management Center
TIDB	Timber Industry Development Board
TREP	Traditional Renewable Energy Project
TUP	Timber Utilization Permit
WLD	Wildlife Department (earlier the WD)
WRM	Wildlife Resource Management

Fiscal Year

Government

January 1 – December 31

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IEGWB Mission: Enhancing development effectiveness through excellence and independence in evaluation.

About this Report

The Independent Evaluation Group assesses the programs and activities of the World Bank for two purposes: first, to ensure the integrity of the Bank's self-evaluation process and to verify that the Bank's work is producing the expected results, and second, to help develop improved directions, policies, and procedures through the dissemination of lessons drawn from experience. As part of this work, IEGWB annually assesses about 25 percent of the Bank's lending operations through field work. In selecting operations for assessment, preference is given to those that are innovative, large, or complex; those that are relevant to upcoming studies or country evaluations; those for which Executive Directors or Bank management have requested assessments; and those that are likely to generate important lessons.

To prepare a Project Performance Assessment Report (PPAR), IEGWB staff examine project files and other documents, interview operational staff, visit the borrowing country to discuss the operation with the government, and other in-country stakeholders, and interview Bank staff and other donor agency staff both at headquarters and in local offices as appropriate.

Each PPAR is subject to internal IEGWB peer review, Panel review, and management approval. Once cleared internally, the PPAR is commented on by the responsible Bank department. IEGWB incorporates the comments as relevant. The completed PPAR is then sent to the borrower for review; the borrowers' comments are attached to the document that is sent to the Bank's Board of Executive Directors. After an assessment report has been sent to the Board, it is disclosed to the public.

About the IEGWB Rating System

IEGWB's use of multiple evaluation methods offers both rigor and a necessary level of flexibility to adapt to lending instrument, project design, or sectoral approach. IEGWB evaluators all apply the same basic method to arrive at their project ratings. Following is the definition and rating scale used for each evaluation criterion (additional information is available on the IEGWB website: <http://worldbank.org/ieg>).

Outcome: The extent to which the operation's major relevant objectives were achieved, or are expected to be achieved, efficiently. The rating has three dimensions: relevance, efficacy, and efficiency. *Relevance* includes relevance of objectives and relevance of design. Relevance of objectives is the extent to which the project's objectives are consistent with the country's current development priorities and with current Bank country and sectoral assistance strategies and corporate goals (expressed in Poverty Reduction Strategy Papers, Country Assistance Strategies, Sector Strategy Papers, Operational Policies). Relevance of design is the extent to which the project's design is consistent with the stated objectives. *Efficacy* is the extent to which the project's objectives were achieved, or are expected to be achieved, taking into account their relative importance. *Efficiency* is the extent to which the project achieved, or is expected to achieve, a return higher than the opportunity cost of capital and benefits at least cost compared to alternatives. The efficiency dimension generally is not applied to adjustment operations. *Possible ratings for Outcome:* Highly Satisfactory, Satisfactory, Moderately Satisfactory, Moderately Unsatisfactory, Unsatisfactory, Highly Unsatisfactory.

Risk to Development Outcome: The risk, at the time of evaluation, that development outcomes (or expected outcomes) will not be maintained (or realized). *Possible ratings for Risk to Development Outcome:* High, Significant, Moderate, Negligible to Low, Not Evaluable.

Bank Performance: The extent to which services provided by the Bank ensured quality at entry of the operation and supported effective implementation through appropriate supervision (including ensuring adequate transition arrangements for regular operation of supported activities after loan/credit closing, toward the achievement of development outcomes. The rating has two dimensions: quality at entry and quality of supervision. *Possible ratings for Bank Performance:* Highly Satisfactory, Satisfactory, Moderately Satisfactory, Moderately Unsatisfactory, Unsatisfactory, Highly Unsatisfactory.

Borrower Performance: The extent to which the borrower (including the government and implementing agency or agencies) ensured quality of preparation and implementation, and complied with covenants and agreements, toward the achievement of development outcomes. The rating has two dimensions: government performance and implementing agency(ies) performance. *Possible ratings for Borrower Performance:* Highly Satisfactory, Satisfactory, Moderately Satisfactory, Moderately Unsatisfactory, Unsatisfactory, Highly Unsatisfactory.

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This report was prepared by George T. K. Pitman who assessed the project in June 2006. Soon-Won Pak provided administrative support.

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Principal Ratings

	<i>ICR*</i>	<i>ICR Review*</i>	<i>PPAR</i>
Environmental Resource Management Project			
Outcome	Satisfactory	Moderately Satisfactory	Moderately Unsatisfactory
Institutional Development Impact**	Modest	Modest	nr
Risks to Development Outcome	nr	nr	Significant
Sustainability***	Likely	Likely	nr
Bank Performance	Satisfactory	Satisfactory	Moderately Unsatisfactory
Borrower Performance	Satisfactory	Satisfactory	Unsatisfactory
GEF Coastal Wetlands Management Project			
Outcome	Unsatisfactory	Unsatisfactory	Moderately Unsatisfactory
Institutional Development Impact**	Modest	Modest	nr
Risks to Development Outcome	nr	nr	Significant
Sustainability***	Unlikely	Unlikely	nr
Bank Performance	Satisfactory	Satisfactory	Unsatisfactory
Borrower Performance	Unsatisfactory	Satisfactory	Unsatisfactory
Natural Resources Management Project			
Outcome	Satisfactory	Moderately Satisfactory	Unsatisfactory
Institutional Development Impact**	Modest	Modest	nr
Risks to Development Outcome	nr	nr	Significant
Sustainability***	Likely	Non-evaluable	nr
Bank Performance	Satisfactory	Unsatisfactory	Unsatisfactory
Borrower Performance	Unsatisfactory	Unsatisfactory	Unsatisfactory

* The Implementation Completion Report (ICR) is a self-evaluation by the responsible operational division of the Bank. The ICR Review is an intermediate IEGWB product that seeks to independently verify the findings of the ICR.

** As of July 1, 2006, Institutional Development Impact is assessed as part of the Outcome rating.

*** As of July 1, 2006, Sustainability has been replaced by Risk to Development Outcome. As the scales are different, the ratings are not directly comparable.

nr = not rated

Key Staff Responsible

<i>Project</i>	<i>Task Manager/Leader</i>	<i>Division Chief/ Sector Director</i>	<i>Country Director</i>
Environmental Resource Management Project			
Appraisal	Ian Hill	J. Joyce	E. Lim
Completion	Patience Mensah	Jean-Paul Chausse	Peter C. Harrold
GEF Coastal Wetlands Management Project			
Appraisal	Ian Hill	J. Joyce	E. Lim
Completion	Patience Mensah	Jean-Paul Chausse	Peter C. Harrold
Natural Resources Management Project			
Appraisal	Robert Epworth	Jean-Paul Chausse	Peter C. Harrold
Completion	Edward E. Dwumfour	Mary Barton-Dock	Mats Karlsson

Preface

This is the Project Performance Assessment Report (PPAR) on the Ghana Project (Credit 2426), its associated GEF Coastal Wetlands Management Project (WBTF 28619), and the Natural Resources Management Project (Credit 3091).

The Environmental Resource Management Project, estimated at appraisal to cost US\$35.9 million, was approved in October 1992 for an IDA Credit of US\$ 18.1million. Total project costs at completion were US\$31.4 million of which IDA provided US\$18.5 million. While the Government of Ghana planned to contribute US\$5.4 million, by project closing only US\$0.9 had been disbursed. Parallel financing was provided by DANIDA (US\$4.1 million against its planned amount of US\$4.3 million) and DFID (US\$1.2 million against its planned amount of US\$0.9 million). The credit closed on December 31, 1998 after a one year extension, when US\$7,777 was cancelled.

The GEF Coastal Wetlands Management Project, estimated at appraisal to cost US\$ 8.3 million, was approved in August 1992 for a GEF Grant of US\$ 7.2 million. The final cost of the project was US\$ 6.9 million of which GEF disbursed US\$ 6.05 million. Government of Ghana disbursed US\$ 0.2 million of the US\$1.1 million it allocated to the project. The funding gap was closed by contributions from project beneficiaries. The grant closed in December 31, 1999 after a two-year extension when US\$ 0.85 million was cancelled.

The Natural Resources Management Project, estimated at appraisal to cost US\$ 29.33 million, was approved in June 1995 for an IDA credit of US\$ 10.11 million. The final cost of the project was US\$22.55 million of which IDA disbursed US\$ 9.02 million. The Government of Ghana disbursed US\$0.74 million against its planned allocation of US\$2.2 million. Parallel financing of US\$13.25 million was contributed by DFID (US\$ 11.7 million through their Forest Sector Development II Project) and DANIDA (US\$1.55 million through their Traditional Energy Project). The credit closed June 30, 2003 after two extension totaling 33 months.

This report is based on the review of the respective Staff Appraisal Reports and Project Appraisal Documents, credit and legal documents, project files, Implementation Completion Reports and discussions with Bank staff in Washington and Accra. An Independent Evaluation Group (IEG) mission visited Ghana in June 2006 to discuss the effectiveness of the Bank's assistance with the Government, development partners, implementing agencies, and beneficiaries. Their cooperation and assistance is gratefully acknowledged.

These projects were selected for assessment because there had been no independent assessment of the Bank's environmental projects in Ghana. This assessment is also a key input to IEG's assessment of the Bank's global environmental portfolio (1990-2007); Ghana is one of the case study countries.

Following standard IEG procedures, copies of the draft PPAR were sent to the Borrower for comment, but none were received.

Summary

Designed to support implementation of the Government of Ghana's 1990 National Environmental Action Plan, the three assessed projects all sought to strengthen the capacity of both government and people to manage environmental resources. The African Development Bank, DFID and DANIDA, the European Union, GEF and the World Food Program provided either cofinancing or parallel financing.

The **Environmental Resources Management Project (ERMP)**, approved in 1992, focused on building capacity and natural resources information systems in central institutions, introducing improved, community-led stewardship of land and water resources, and promoting environmental awareness and education. It took special steps to maintain and restore the coastal wetlands and reduce wastewater pollution, this component being separately financed through the **GEF Coastal Wetlands Management Project (CWMP)**, which was also approved in 1992.

The **Natural Resources Management Project (NRMP)**, approved in 1998, built on the Forest Resource Management Project that was completed in 1988, as well as the ERMP. The NRMP was phase one of the three-phase ten-year Natural Resources Management Program, and was formulated as an adaptable program loan (APL). Its goal was to help protect the high tropical forests and the savanna by strengthening the network of Ghanaian conservation areas and developing sustainable use and management systems. It also sought to restructure and strengthen natural resource management, finalize policy reforms and legislation on forest pricing, and pilot community-led natural and forest resource management.

The *outcome* of the ERMP is rated as moderately unsatisfactory. Reorganization and strengthening of the Environmental Protection Agency significantly increased its effectiveness and visibility and its role as a policy and regulatory agency. Even so, staffing is less than half of that required, reflecting the lack of adequate salaries and incentive packages, high staff turnover and the lack of champions for environmental stewardship. Generating income from fees and permits has taken precedence over non-remunerative activities such as biodiversity conservation and grass roots awareness-raising—activities that are costly and time-consuming—and this has influenced staffing priorities. Achievements in land and water management were modest because of delayed start-up, continued duplication of responsibility among government agencies, and fragmented small-scale community interventions that were not aligned to watershed management areas. Land and water management activities are not yet part of a comprehensive and mainstreamed management approach to sustainable land development.

The *outcome* of the CWMP is rated moderately unsatisfactory. While the project helped with the preparation of the 1999 Wetland Management Regulations and the national strategy for wetland management adopted in 2000, many communities complained that they had not been consulted about, or compensated for loss of access to, the six coastal wetlands that were earmarked for protection under the Ramsar Convention. The wetlands remain under threat because there is pressure on their margins from the expansion of agriculture, logging, urbanization, and salt gleaning. Management is weak because the

Wildlife Department lacks capacity and is under-equipped and under-funded. The Community Investment Support Fund component, directed at ecologically sustainable income-generating activities, was unsuccessful due to poor and rushed investment selection criteria, neglect of local institutions and failure to recover costs. The revolving funds that were set up were perceived by communities as a safety net and the link to environmental conservation activities was not generally understood.

The *outcome* of the NRMP is rated unsatisfactory. While substantial progress was made on policy and legislation, translating this into sustainable management practices has proved to be challenging because of overlapping responsibilities, distorted incentive structures, lack of transparency, poor governance and the declining importance of ‘non-productive’ environmental concerns to government. The slow and uneven pace of reform, low government interest in the environment, and the switch to budget support mechanisms led to the cancellation of the APL at completion of the substantially extended first phase NRMP. Environmental management, despite the earlier improvements, was recently fragmented across two ministries and one line agency greatly weakening a coherent and comprehensive approach to the overall management of Ghana’s natural resources. The new Ministry of Local Government, Rural Development and Environment is primarily concerned with provision of water supply, pollution control and other “brown” issues and overall environmental policy coordination is lacking. Legislation introduced or amended to improve the management and commercial viability of Ghana’s forests is only modestly effective.

All three projects share the same *risks to development outcome* and these are rated as significant. Notwithstanding the gains on environmental policy under the projects the capacity to implement it is weakened by low levels of government ownership. This has been a long-term phenomenon caused by the government’s willingness to allow donor grant aid to substitute for its own resources. Recent reorganization of environmental agencies and management and its downgrading as a “non-productive” sector indicates government’s waning interest in the environment despite high-level rhetoric. The ability for day-to-day management is further weakened by reducing agency budgets, inability to retain or attract qualified professional staff, poor regulation and corruption. The phasing-out of project support in favor of budget support, and the loss of substantial external technical support, has left technical weaknesses that are unresolved and threaten sound regulation and protection of the environment.

Bank performance on the Environmental Management Project is rated moderately unsatisfactory, and unsatisfactory for its GEF Project component and the follow-on Natural Resources Management Project. *Borrower performance* for all three projects is rated as unsatisfactory.

Experience with these projects confirms seven IEG lessons:

- **Borrower ownership is key to achieving project objectives.** It is essential to gauge support at higher levels of government than the concerned environmental agencies. Care has to be taken that international environmental pressure, vested interests and the understandable enthusiasm of the Bank’s own appraisal process does not lead to financing of worthy causes that governments are unwilling to support.

- **Sound environment policy and management require inclusion of all stakeholders and incentives to keep them engaged.** Care has to be taken that individuals and community stakeholders are empowered in the decision-making process, particularly over allocation of rights to utilize natural resources. The assessed projects clearly show that insecure property rights allied with centralized, top-down award of concessions to commercial operations and capture of economic rents creates conflict and promotes non-sustainable natural resource utilization.
- **Agriculture and environment are different sides of the same coin and should not be considered in isolation.** Insufficient attention to addressing the causes of rural poverty drives people to live off the environmental commons where short-term survival interests typically outweigh consideration of longer-term stability.
- **Lack of good governance and high poverty are frequently the main risks to environmental sustainability.** Without addressing these two inter-linked issues good environmental policy, programs and projects remain a partial solution. All too often the enthusiasm for environmental rescue and ‘doing something rather than nothing’ outweighs the commitment to the more mundane and focused attention needed for systemic reforms and the incentive structures in other areas of the economy.
- **Capacity building may be a two-edged sword.** Poorly targeted environmental TA may be a substitute for inadequate local resources and this is potentially a serious problem when government has low project ownership. Dependence on external funding, advisory and analytical work enabled by TA, while ensuring project objectives are achieved in the short term, poses high risks to longer-term sustainability.
- **Adjustable Program Loans need to have clear objectives and performance indicators that are realistic and achievable for each phase.** The lesson of the NRMP was that the APL did not work because of highly complex and overlapping objectives, too many actors, unresolved financing problems and poor managerial oversight. A comprehensive approach to reforming environmental management need not be complex.
- **International conventions and trade agreements may provide powerful levers for reform of timber harvesting.** The key challenge is to identify the suite of minimum enabling actions and incentives to achieve reform, and to agree to benchmarks that trigger outcome-based financial aid according to negotiated international agreements. A key requirement would be the establishment of independent regulators to ensure transparency.

Vinod Thomas
Director General
Evaluation

1. Background

1. Located on West Africa's Gulf of Guinea only a few degrees north of the Equator, Ghana's 239,000 km² have a diverse and rich resource base. About two-thirds of Ghana's 22 million (2005) inhabitants live in the high forest zone that occupies about a third of the south and western Ghana. The remainder lives in two savanna zones. The northern savanna – occupying about half the country – stretches north of the semi-deciduous forest to the border with Bukina Faso. The coastal savanna forms a narrow belt south of the high forest widening eastwards to encompass the delta of the River Volta.

2. Agricultural production is predominantly small-scale and is concentrated on cocoa and staple food crops that include maize, cassava and yams which are mostly cultivated using traditional land-use methods such as slash-and-burn. Cocoa grows in all the regions except the north. Forestry is important to Ghana's economy and is the third leading source of foreign exchange earnings. It also yields environmental benefits mainly by protecting soils from erosion and providing habitat for wildlife. In addition, forests and the woodlands serve as the major source of fuelwood energy for three-quarters of the total population and about 90 percent of the rural population.

3. Ghana's economy is sustained on gold, precious minerals, cocoa, and timber. The major foreign exchange earners include cocoa (which accounts for over 40 percent of export earnings), followed by gold, timber, fish, bauxite, and aluminum. Agriculture is the dominant sector, accounting for almost two-thirds of employment and around 40 percent of total GDP. Services comprise the second largest sector in the economy, accounting for an increasing share of GDP.¹ There is a small industrial sector that includes textiles, steel (from imported scrap), tires, oil refining, flour milling, beverages, tobacco, simple consumer goods, and car, truck, and bus assembly. Tourism has become one of Ghana's largest foreign income earners (ranking third in 2003 at \$600 million), and the Ghanaian Government has placed great emphasis on further tourism support and development and much of this is linked to eco-tourism.

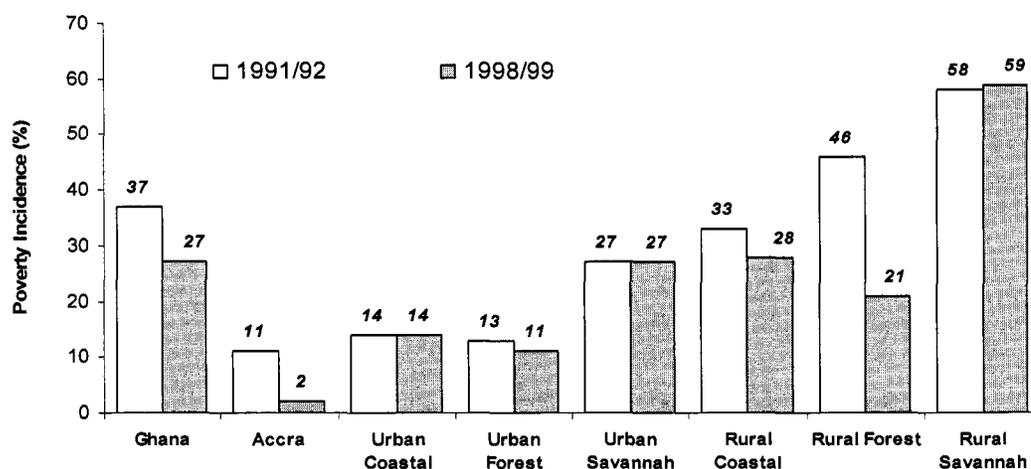
4. One of Ghana's fundamental problems is the persistent reliance on the export of a few primary products with little or no value added (cocoa, gold, timber and others) that has made the economy vulnerable to price fluctuations dictated by buyers in the developed economies. The low earnings from primary products lowered revenues and made it difficult to create wealth in the country.

5. Classified currently as a lower-income country, Ghana's per-capita income stood at US\$3,800 in 2004 and overall levels of poverty declined during the 1990s (Figure 1). Despite this, more than a quarter of the population is estimated to live below the poverty line and average per capita income in Ghana today is less than that at independence 44 years ago. This reflects annual population growth that is greater than the rate of decline in

1. The service sector grew from 30% of GDP in 1980 to 39% in 2005. Agriculture's share of GDP has declined steadily from 58% in 1980 to 37% in 2005. Industry's contribution has doubled over the same period and now accounts for a quarter of GDP.

poverty levels. In some areas growing and deepening poverty has intensified vulnerability and exclusion among some groups.² Half of the ten regions in Ghana had more than 40 percent of their population living in poverty in 1999 and these are closely linked to the agro-ecology of these areas, especially in the north and central regions of the country (Figure 1).

Figure 1: Ghana's poverty is closely linked to agro-ecological regions



Source: Ghana PRS. 2003. Derived from the Ghana Statistical Service.

6. Food crop farmers in the savanna areas have the highest incidence of poverty and comprise almost two-thirds of the poor in Ghana. Factors exacerbating poverty include lack of access to markets, high cost of inputs, low levels of economic infrastructure and the mining, rather than nurture, of natural resources. Thus high levels of rural poverty have increased also the pressure on the environment.

7. After independence in 1957 and following a period of political instability, the current constitution was approved in 1992 and since then Ghana has been widely viewed as one of Africa's most stable democracies. Extensive liberalization and adjustment in the 1980s produced some growth in services and mining but did little to produce and sustain growth in agriculture and manufacturing. Following an economic crisis in 1999, the local currency (the *cedi*) had lost around half of its value against the US dollar, external reserves were depleted and external payment arrears accumulated, and the fiscal deficit rose to about 9 percent of GDP. Historically, government expenditure has been biased in favor of recurrent expenditure, the majority of which went into salaries - the latter representing about 30 percent of total government expenditure.³ Conversely, government spending on poverty reduction, growth programs and projects has been low in part because the donor community has shouldered much of these expenditures.

2. Ghana Poverty Reduction Strategy 2003-2005: An Agenda for Growth and Prosperity. February 19, 2003.

3. Civil service employment as a percentage of population was the third highest (1.8%) in sub-Saharan Africa (SSA). The government wage bill as a percentage of GDP (5.6%) was significantly higher than the average for low wage non-CFA countries, (4.1%).

8. Ghana's relatively good governance and macro-economic management since 2001 has enabled continued access to substantial financial and technical assistance from the international community, including significant amounts of Multi-Donor Budget Support. Ghana's success in attracting budget support has paid dividends in the form of greater predictability of external funds and lower transaction costs. However, this level of donor support for poverty reduction and growth-oriented activities – more than 70 percent of total expenditure – represents an unsustainable situation in the long term.⁴

9. In 2005 robust receipts from the gold sector helped sustain GDP growth along with favorable prices for Ghana's cocoa crop. Government's progress in restoring aggregate fiscal discipline and implementing economic reforms facilitated the earning of substantial HIPC debt relief in 2004 and qualification for debt relief under the Multilateral Debt Relief Initiative in 2005. Improved control over monetary aggregates has led to a halving in the rate of inflation since 2001, to about 15 percent by 2005.⁵ Remittances from expatriate Ghanaians, encouraged by a stronger economy, now rival commodity exports as a source of foreign exchange earnings.

ENVIRONMENTAL VULNERABILITY

10. The country can be classified into well-defined agro-ecological zones (Figure 1) each of which has specific environmental problems and risks. The largest risk is caused by increasing population pressure.

INSTITUTIONAL CHALLENGES AFFECTING ENVIRONMENTAL MANAGEMENT

11. Sound environmental management in Ghana is challenged in three ways. First population pressure is testing traditional community approaches to land management that placed a high premium of sustainable management. Second, the national knowledge base on land and environmental resources has had difficulty in keeping pace with local realities. And third, while there is a strong and evolving regulatory framework, responsibility for the environment and land is fragmented across many agencies (some of which have overlapping responsibilities) that are inadequately staffed and budgeted.

12. Traditional land tenure arrangements historically secured the land from over-exploitation and degradation. In the Akan culture of southern Ghana land belonged to the community and most individuals had only usufructuary rights while others participated in share cropping and cash rental. In the north, land ownership is vested in a clan or stool and land is allocated to individuals by the stool holder.⁶ Land not assigned to an individual remained a common pool resource that could be utilized by others in the community, or outsiders with the stool holder's approval. Rights to use trees or tree products were traditionally determined by the head of the stool, but outsiders had no

4. Multi-Donor Budget Support in 2005 was US\$282 million, or around 11 percent of total budgeted expenditure. Donor aid to economic services and infrastructure represents a substantial proportion of total expenditure in those two areas. In 2001 this was distributed as follows: Agriculture 86%, Energy 90%, Industry 72%, Water 76%, and Roads 76%.

5. World Bank, DANIDA and DFID. 2006. Ghana – 2006 External Review of Public Financial Management. 2 Volumes. Report No. 36384-GH.

6. A "stool" refers to a community governance or administrative structure similar to dynasties and is derived from the traditional symbol of authority – the chief's carved sitting stool.

rights to “permanent” vegetation such as trees, even if they planted them.

13. With the advent of British colonial rule in Ghana natural resources were regarded as a source of income and the primary objective was to safeguard their integrity to produce sustained harvests. Thus in forests, indigenous practices that valued non-commercial and traditional attributes and outputs were seen as irrelevant and, generally, natural resources of value were ‘ring fenced’ to stop encroachment by local people.⁷ And given the economic importance and symbiotic relationship between cocoa production and forestry, most legislation had a secondary objective to maintain agro-climatic conditions conducive to high cocoa productivity. Forest reserve areas were created from 1927, a process that continued until the 1950s by which time 279 forest reserves covering about 20 percent of all forested area or 1.8 million hectares.^{8,9} Subsequently, after independence, management of all stool land and revenues derived from them, and the right to grant timber concessions and management of all timber resources, including those outside reserves, became vested in central government.¹⁰

14. The change in property rights, allied with a population that quadrupled since the 1950s, reduced the efficiency of natural resource utilization and extraction, increasing environmental risks. Land use changes triggered the primary risks. Increasing urbanization around Accra and along the coastal belt created high point source and non-point source pollution as urban growth outstripped the ability of municipal authorities to collect solid waste and treat wastewater. And this pollution adversely affected near-shore waters and the network of coastal lagoons and wetlands.

15. Of the 8 million hectares of forest cover at the start in the 20th century, only about 1.4 million hectares remained by 2000. By the early 1990s between 50 and 70 percent of the total area of reserve forests in western Ghana had been illegally encroached upon primarily for timber extraction, cocoa plantation or mining activities.¹¹ Additionally, non-reserve forests provide about two-thirds of Ghana’s annual timber harvest and their rapid exploitation increases the pressure on the remaining reserve forest areas. By the early 1990s, there were approximately 220 lumber processors in Ghana, employing an estimated 70,000 people, or about 15 percent of the total workforce.

16. Deforestation and extensification of agriculture led to deterioration of soil and

7. Non-timber forest products for example include: charcoal, food wrapping leaves, medicinal plants, spices, bushmeat, chewsticks, cane for utensils and furniture and cala nuts.

8. Kotey, N A, J Francois, J G K Owusu, R Yeboah, KS Amanor, L Antwi. 1998. *Falling into Place: Ghana Country Study*. International Institute for Environment and Development. London.

9. The Forest Ordinance (1927) initiated the process of creating the reserves. The 1948 Forest Policy provided for conservation and protection of the forest environment, management of the permanent forest estate and the felling of off-reserve forest. The Protected Timber Lands Act (1959) gave the Forestry Department power to control and regulate farm expansion in heavily forested areas outside formal forest reserves. Within the reserves forests about 1.37 million ha is for production and 0.43 million ha is protected.

10. In 1962 The Administration of Lands Act (Act 123) vested all stool lands; the Concessions Act (Act 124) centralized control of timber concessions and management.

11. England, O. 1993. Forest protection and rights of cocoa farmers in Western Ghana. *J. African Law*. 37(2). 164-176. Kasanger, R.K. 1994. Land tenure systems and forest reserve management: tenurial conflicts and forest conservation in Ghana. Workshop on Forest Land use Options: Conflicts and Solution. British Council. Kumasi, Ghana. January 1994.

land resources. Driven by plant diseases that started before independence, cocoa production shifted from the eastern regions to the high forest and forest-transition areas towards the west where the climate was more conducive and land for agriculture—including cleared forest areas—was relatively abundant. Most of the cocoa farmers were immigrants from the northern and eastern regions driven by economic necessity, and where cocoa proved to be unprofitable, food crops were substituted. In comparison with indigenous subsistence farmers, migrants were mainly commercial farmers.¹²

17. To maximize incomes to pay land rents demanded by stool holders, most of these new sharecroppers mined the soil fertility by shortening fallow periods and cutting back on fertilizers – a practice that also safeguarded tenancy rights given that “unused” land could be reallocated by the stool holder.¹³ Elsewhere woodland and bush were burnt to extend agriculture and between 1978 and 1990 the total cultivated area increased from 1.8 million ha to 4.3 million ha. A bushfire epidemic in 1983 following a period of severe drought destroyed large areas of cocoa and forest in and off reserves.¹⁴ Over the same period fertilizer use fell from 22 kg per ha to 7 kg per ha.¹⁵ And an adverse consequence of the Forestry Department’s practice to award timber concessions within agricultural land to outsiders was that farmers frequently burned or destroyed timber they were not allowed to use because concessionaires generally caused considerable crop damage and paid no compensation.¹⁶

18. Excessive centralization of state control after independence, allied with an overvalued currency, lack of foreign exchange for spare parts and deteriorating road and port infrastructure, led to a recession in timber, cocoa and gold production. Thus value of timber exports dwindled from \$91.4 million in 1975 to \$15.3 million in 1982, reducing support for the Forestry Department and weakening its ability to police the timber industry and reserve areas. Cocoa suffered the same fate: low producer prices reduced investment incentives and cocoa production fell from its peak of half a million tons in 1964 to only 150,000 tons in 1983. Reduced income accelerated soil resource mining as fertilizer and expensive inputs dwindled. This vicious cycle was only halted after the new Rawlings government took extraordinary measures to halt the slide of the economy – specifically a series of structural adjustment loans and technical assistance aimed at bolstering export-promoting activities in mining, cocoa and timber.

19. The economic recovery program was supported by an IMF standby arrangement of SDR 500 million and US\$890 million from the World Bank, the African Development Fund and bilateral donors. IDA provided four credits totaling US\$250 million, two of which financed urgently needed imports of spare parts, transport equipment, fertilizer and agro-chemicals while the other two supported rehabilitation of traditional exports through

12. Codjoe (ref 13) found that migrant farmers in 1984 has twice the cropped area of indigenous farmers and by 2000 this had risen to three times the area.

13. Codjoe, S N A. 2006. Migrant versus indigenous farmers. An analysis of factors affecting agricultural land use in the transitional agro-ecological zone of Ghana, 1984-2000. *Danish J. of Geography* 106 (1).

14. Kotey, N A. et alia. Page 17-18. Cereal production also fell by 332,000 tons in the period 1982-83. An historic low of the Lake Volta reservoir shutdown aluminum production and its foreign exchange earnings.

15. www.fao.org/ag/aGI/swlwpnr/reports/y_sf/z_gh/gh.htm 06/13/2007

16. Boni, S. 2006. Ghanaian Farmers’ Lukewarm Reforestation: Environmental degradation, the timber option and ambiguous legislation. *International Colloquium: At the Frontier of Land Issues*. Montpellier.

physical investment, policy reform and upgrading of institutions focusing on cocoa, gold mining, timber, and ports.¹⁷ Independent evaluation of the outcomes of the IDA assistance for the 1980s' economic recovery program was mixed.¹⁸

20. While the impact of the import credits was highly positive – leading to rapid growth in output and recovery of export earnings – the Export Rehabilitation and associated Technical Assistance Project was only moderately successful. Ports and the cocoa industry were rejuvenated and benefited from greatly improved roads and transport and improved foreign exchange regime. However, the institutional inertia of the gold and timber sectors slowed efficiency improvements primarily because the long lead time required to build capacity was out of phase with an adjustment operation. The Timber Marketing Board was disbanded. A Timber Export Development Board was established to promote timber sales, exports and trade information, while a new Forest Products Inspection Bureau ensured export standards were met and that invoices conformed to product value. At the same time over half of the timber credit of US\$26 million was used to purchase new logging equipment and about a third for new saw milling machinery.

21. The prevalence of weak forestry institutions, allied with the greatly increased logging capacity enabled by the adjustment program, led to a resurgence of Ghana's forest industry driven by almost uncontrollable exploitation of the forest that was not anticipated by either the government or Bank.¹⁹ Not surprisingly these unanticipated environmental impacts fuelled international debate about the efficacy of adjustment.^{20, 21} The yearly rate of high forest production rose rapidly and by 1987 the actual cut was as much as 180 to 250 percent of the best estimates of sustainable production.²² In addition, there was a substantial and rapid increase in off-reserve production in farmed areas. According to the 1988 World Bank President's Report for the Forest Resource Management Project (FRMP) this accelerated exploitation was due largely to the government's inability to control and manage its forests. Combined with the encroachment by cocoa and food crop farmers, continued felling at that pace would lead to the destruction of the resource itself within 20-30 years.²³ The UK's Overseas Development Administration (later renamed Department for International Development – DFID) project memorandum of its parallel-financed forestry project stated “urgent action is now required to sustain the forest resource and protect the environment.”²⁴

22. Adjustment revamped the mining sector enabling recapitalization and retooling and a more liberal legislative and fiscal regime. While the majority of large-scale gold extraction is from underground mines, about 10 percent derives from small-scale open-pit alluvial mines following 1989 legislation that legalized unregistered gold mining to

17. Ghana Reconstruction Imports Credit I & II (Cr 1393 and 1573) and Ghana Export Rehabilitation and Export Rehabilitation Technical Assistance Projects (Cr 1435, SF-9 and 1436).

18. World Bank. 1991. Program Performance Audit Report No. 9580. Operations Evaluation Department.

19. World Bank. 1991. op cit., paras 5.20-5.21.

20. Lensink, R. 1996. Structural Adjustment in Sub-Saharan Africa. Longman: New York and London.

21. Owusu, J. Henry. 1988. *Current Convenience, Desperate deforestation: Ghana's Adjustment Program and the Forestry Sector*. Professional Geographer. 50(4), 1999. 413-436.

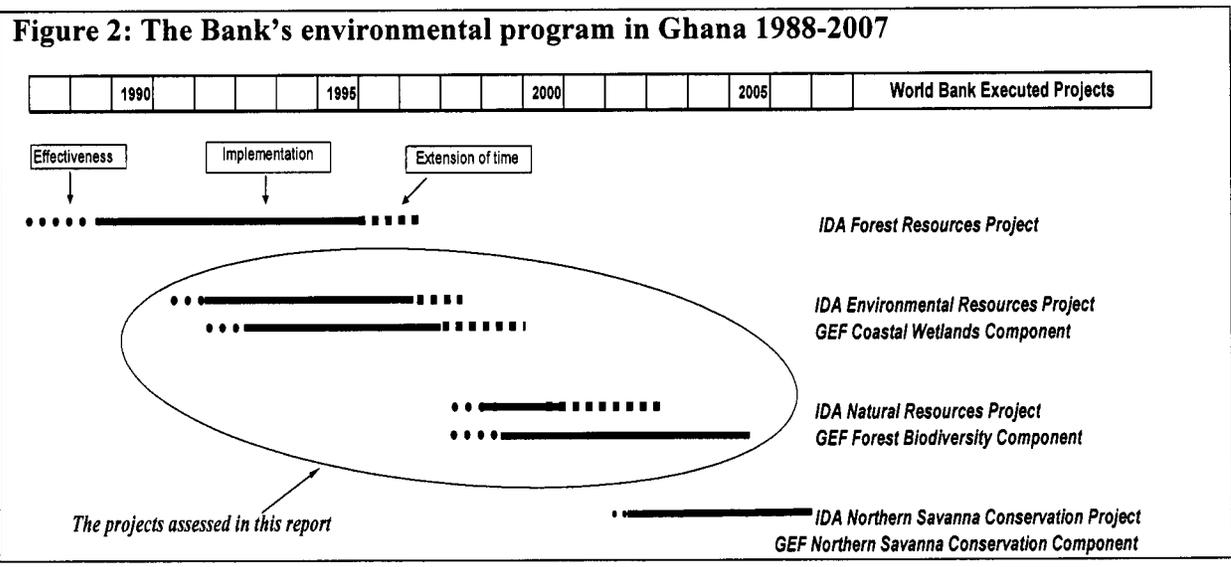
22. The official allowable annual cut was set at 1.35 million cubic meters.

23. World Bank. 1988. Staff Appraisal Report. Ghana Forest Resource Management Project. Para 3.03.

24. ODA. UK-Ghana Forest Inventory and Management Project Memorandum. December 1988. page 7.

improve regulation and increase revenue. Small-scale mines typically divert rivers and use mercury to separate the gold particles from the sediment. The aquatic contamination produced poisons to downstream ecosystems and poses high risks for humans and animals. Some of the richest gold and bauxite resources lie within reserve forest areas, thus mining not only threatens biodiversity but also forestry as for example in the Neung North Forest Reserve. The high forest area contains over 200 species of mammals, over 200 species of birds and more than 2,100 species of plants, 23 of them endemic.

23. Given these challenges, the government initiated a major effort in 1988 to place environmental policy issues on its policy agenda and, assisted by the Bank, a National Environmental Action Plan (NEAP) was approved in 1990. Subsequently, the Bank agreed to underwrite institutional support for the Environmental Protection Council to implement the NEAP through an Environmental Resource Management Project (ERMP) to be implemented over the period 1993-1998. Prime NEAP concerns were to introduce improved land management practices, reduce land degradation and improve management of areas of importance for the conservation of biodiversity. GEF agreed to provide a grant to finance a coastal wetlands conservation component. The Natural Resources Management Project (NRMP 1998-2000) was designed to follow on the Forest Resource Management Project that was completed in 1988. NRMP was designed as the first of the three-phase ten-year Natural Resources Management Program that would absorb the follow-on activities initiated under ERMP. Its goal was to address conservation of the high tropical forests and the natural land cover, woodlands, soil and water of the savanna by adopting a cross-sectoral approach to strengthening the network of conservation areas in Ghana and developing sustainable use and management systems for biodiversity resources. Thus this report assesses the initiation and implementation of the Bank's key environmental activities in Ghana. The relationship of the assessed projects to the Bank's Ghana environmental portfolio is shown in Figure 2.



2. The Projects

The Environmental Resources Management Project

OBJECTIVES, COMPONENTS AND COSTS

24. The overriding goal was to maintain the integrity of the environment through support of the NEAP and development of mechanisms for communities to manage their own resources. At the national level the Environmental Resources Management Project (ERMP) aimed to support the Technical Secretariat of the Environmental Protection Council to ensure coordination of the actions, information systems and monitoring needed to bring about sustainable management and use of the environment, and creation of public awareness. Table 1 summarizes project objectives, components and costs including the second objective and its components financed by GEF.

25. Project financing comprised the IDA credit for US\$ 18.1 million and grants from DANIDA, DFID and GEF totaling US\$ 12.4 million. The contributions from DANIDA and DFID for technical assistance managed by them was parallel and independent. DANIDA's grant supported the land-related (fuelwood) activities of the project, while DFID's supported capacity-building of central environmental institutions.

PROJECT DESIGN

26. The tripartite approach that targeted capacity improvements of central and local institutions while building the environmental knowledge base and piloting their application to management of the environment through community involvement was relevant and appropriate. Although the close linkage with DANIDA and DFID on their parallel projects greatly supported the increased importance being given to the environment and partnerships, it created coordination problems because of cross-conditionality and dependence on timely supply of inputs.²⁵

27. The apex national institution – the Environmental Protection Council – had been unable to function effectively because its technical secretariat (EPC/TC) was chronically understaffed and budgeted given its wide ranging inter-sectoral responsibilities and government's policy to decentralize.²⁶ Responsibilities included advising on natural ecosystems, environmental education, marine and coastal ecosystems, water management, toxic chemicals, industrial pollution and human settlements and coordinating with four ministries, six specialist departments and non-governmental organizations (NGOs).

25. For example, DANIDA's technical assistance for training was conditioned on the merger of the agro-forestry unit with the Ministry of Agriculture's land and water unit and depended on supply of Bank-financed computers.

26. Of the 219 established staff positions only 108 were filled. Within the technical cadre only about half of the 37 staff were graduates of whom 10 had post-graduate qualifications. Half the annual budget (\$338,000 in 1991) was used to pay salaries and the balance was insufficient to discharge operations. There were 5 computers, 7 vehicles and a cinema van.

Table 1: ERMP -Objectives, Components and Costs

Objectives	Components	Project Costs US\$ millions	
		Planned	Actual
	<u>Develop an Environmental Resource Management System</u>		
	<i>Capacity-building:</i>	7.90	18.40
	<ul style="list-style-type: none"> Strengthen the institutional capacity of EPC/TS to conduct environmental resource planning and management, through provision of offices, equipment and housing, management information systems and commissioning of studies regarding resource management. Training and provision of fellowships for central and local governmental agencies in environmental resource management. Develop and implement a public awareness program on environmental resource management. 		
	<i>Develop Environmental Information Systems:</i>	10.40	
	<ul style="list-style-type: none"> Develop and implement air and water quality monitoring systems and an environmental quality data base. Strengthen the operational capacity of government departments to produce analog, digital and land use maps and provide training of staff, rehabilitation of facilities and equipment. Strengthen the operational capacity of the Meteorological Services Department, the Lands Commission and the Soils Research Institute, including training of staff, to prepare and produce maps. 		
(IDA Objectives) 1. Improve the capacity of (a) the borrower and (b) its population to manage environmental resources.	<u>Land and Water Management</u>	5.50	5.80
	<ul style="list-style-type: none"> Implement a pilot community-based land resource management program that promotes soil fertility, water and soil conservation, and biomass enhancing, technologies. Train staff of MOA's Department of Crop Services and Department of Agricultural Engineering Services, NGOs and other entities to support the community-based land resource management program Support operation within MOA of a Land and Water Management Central Unit to promote sound land and water resource management. Establish and operate a land management fund to encourage sound land management practices by farmers. 		
	<u>Coastal Wetland Management (GEF Grant)</u>		
	<i>Institutional</i>		
	<ul style="list-style-type: none"> Demarcate 5 coastal wetland sites under the Ramsar Convention and develop a public awareness program 	4.32	3.05
	<ul style="list-style-type: none"> Establish and operate a Wetlands Management Unit. 	2.75	2.33
	<ul style="list-style-type: none"> Establish and operate an investment support fund to encourage investments in the Ramsar Sites. 	0.65	0.46
	<i>Physical</i>		
	<ul style="list-style-type: none"> Prevent pollution of Sakumo Lagoon through physical works. 	0.53	0.41
	<i>Physical and Price Contingencies</i>	5.90	-
	<i>Total Cost</i>	37.96	30.45

28. Decentralization and creation of District Assemblies, District Planning Authorities and District Environmental Committees also required that the regional offices of EPC/TC and local government be strengthened through training and equipment.

Technical assistance at all levels, mostly short-term, was a major project input financed by DANIDA and DFID under separate bi-lateral agreements. This included 250 person months of international consultants and 450 person months of local consultancies plus overseas training for Ghanaians.

The Coastal Wetlands Management Component

29. While a component of ERMP it was separately appraised by GEF and called a 'project' in the documents. However, it was indistinguishable from the over-arching ERMP in implementation. The special attention given to the coastal wetlands reflected the global importance of these areas that were identified as a key environmental issue in the NEAP, and the concern that government action to maintain their ecological integrity would only occur if GEF grant financing was made available.

30. While the districts of the coastal zone represent less than 7 percent of the land area of the country, they are home to a quarter of Ghana's total population. Associated urbanization has pressured basic environmental services such as water supply and land productivity and lowered the productivity of natural ecosystems. Mangroves, wetlands, fisheries and water quality are particularly affected. Thus the decision to give these areas special status through formal recognition as Ramsar sites,²⁷ prevent pollution and focus on community approaches to management was timely and appropriate. In terms of design this component was similar to that for the community-based approach adopted for land and water pilot projects except that it would develop capacity in the Department of Game and Wildlife within the Ministry of Lands and Natural Resources.

The Natural Resource Management Project

OBJECTIVES, COMPONENTS AND COSTS

31. The Natural Resources Management Project (NMRP) was approved seven months before closure of the ERMP. It was intended to be the first phase of the ten-year three-phase Natural Resource Management Program – an Adjustable Program Loan (APL) – that aimed in the longer term to protect, rehabilitate, conserve and manage national land, forest, savanna woodland and wildlife resources in a sustainable manner and to permanently increase the income of rural communities who owned these resources.²⁸ The goal of the first phase was to establish an effective national policy and institutional framework for sustainable natural resource management and to develop and test

27. The Convention on Wetlands, signed in Ramsar, Iran, in 1971, is an intergovernmental treaty which provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. There are presently 155 Contracting Parties to the Convention, with 1,675 wetland sites, totaling 150 million hectares, designated for inclusion in the Ramsar List of Wetlands of International Importance. Ghana became party to the Convention in 1988

28. The 2nd phase (2000-2004) was anticipated to operationalize management plans for 70% of all forest reserves; introduce collaborative management of high forest and savanna woodlands; initiate controlled burning in the savanna zone; completed update management plans for Ghana's principle protected and biodiversity conservation areas; and establish the alternative livelihoods investment fund. The 3rd phase ((2004-2008) proposed (a) that all forest reserves should be collaboratively managed by local communities; (b) that savanna management, sustainable farming and fuel wood production should be devolved to district assemblies; and (c) fully operationalized management plans for all 15 wildlife protected areas.

collaborative resource management systems. Initial activities concentrated on finalizing policy reform, undertaking institutional restructuring and strengthening, and initiating baseline surveys and pilot projects to support natural resource management programs.

32. The development objective of NRMP in the Development Credit Agreement (DCA) differs from that stated in the Project Appraisal Document (PAD):

- **DCA:** The objectives of the project are to: (a) promote sustainable use of the Borrower's national land, forest and wildlife resources; and (b) better conserve the rich biodiversity of its forests.
- **PAD:** is 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.

The reason the DCA differs from the PAD is that it took the development objective of the overall 10-year Natural Resources Management Program of which the project was the first phase. How far this was a mistake is uncertain; the PAD dwells at length on the program and in comparison the objectives of the first phase project received modest coverage. Although the original length of the project was to be only two years it was extended to almost five years and the DCA objective was never changed. Accordingly IEG have assessed the project according to the DCA objectives. Objectives, components and costs are summarized in Table 2.

33. Complex project financing and the failure to finalize it at appraisal created problems for implementation. This was a major omission given the short two-year implementation period. In addition to government and the Bank, four multilaterals and three bilaterals were involved (Table 3). Apart from GEF all other donor funding was parallel and this greatly complicated attempts to coordinate and phase inputs supported by these donors, particularly as their inputs were not finalized when the Bank's project was approved by the Board. GEF financing was for six years to cover the first two phases of the program even though the Bank's financing of the second phase was conditional upon on certain targets ("triggers") being met in phase one. The amount shown in Table 3 is for the GEF funding under the first phase only. Total GEF funding over the six years was expected to be US\$8.7 million. It is also seen that the total cost estimated at appraisal in Table 2 is less than that expected contribution from other donors shown in Table 3; this is because not all donors' potential contributions could be allocated to project components at appraisal.

PROJECT DESIGN

34. The original proposal was to follow up the recently closed Forest Resources Management Project with a five-year sector investment project that focused on and further developed the forestry and wildlife subsectors. However, the impending closure of the Environmental Resources Management Project, and the lessons learned from the Forest Project – to think and plan comprehensively and long-term, ensure effective institutions, and work collaboratively with communities – caused the Bank to consider support for a more general environmental program that would seek to mainstream environmental issues across all projects and sectors, continue systemic reform of the sector and assist the government to coordinate external assistance for the environment.

Table 2: NRMP – Objectives, Components and Costs

Objectives	Components	Project Costs US\$ millions	
		Plan	Actual
1. Promote sustainable use of: (a) the national land (b) forest and (c) wildlife resources	Environmental management coordination:		
	• Implement EPA's human resource development plan according to the new Strategic Vision	1.68	0.81
	• Develop regional and district environmental information systems		
	• Prepare a national action plan to combat desertification		
	High Forest Resource Management:	14.20	14.55
	• Establish and operationalize the Ghana Forest Service (GFS) and Merge the Timber Export Development Board and the Forest products Inspection Bureau to form the Timber Industry Development Board		
	• Introduce a forest certification and computerized log tracking system and undertake a log export ban study		
	• Prepare and publish a National Forestry Plan		
	• Prepare 12 priority Reserve Forest Management Plans and analyze the cost/benefit of collaborative management in 6 of these areas; initiate forestry pilot in 2 off-reserve districts		
	• Establish a central bushfire detection system and green firebreak program in 5 reserves		
	• Design a financing mechanism, legal framework and operating policies and procedures for private sector plantation development		
	Savanna Resource Management:	4.50	3.90
	• Establish a multidisciplinary Savanna Resource Management Center and complete an assessment of the natural resources in the savanna zone		
2. Better conserve the rich biodiversity of Ghana's forests	• Plan and implement 6 community-based resource management pilots on-reserve and in 6 priority watersheds off-reserve		
	• Complete a survey of wood fuel markets and organize a national workshop		
	Wildlife Resource Management:	3.20	1.35
	• Restructure the Wildlife Department (WD) and build its capacity through recruitment and training; develop WD extension capacity to support district and community-level conservation and management		
	• Revise Protected Area management plans and operationalize them		
	Biodiversity Conservation:	2.30	1.84
	• Identify 25 Globally Significant Biodiversity Areas		
	• Establish a Biodiversity Advisory Group to train GFS and WD staff to implement collaborative management		
	• Demarcate provenance reserves within production forest reserves and define operational modalities for alternative livelihood investment programs acceptable to all stakeholders	3.10	-
<i>Physical and Price Contingencies</i>			
Total Cost		28.80	22.55

Table 3: NRMP Project Financing was Complex (US\$ millions)

<i>Component</i>	<i>Financier</i>	<i>Planned</i>	<i>Actual</i>	
		<i>US\$</i>	<i>US\$</i>	<i>%</i>
All component except Biodiversity Conservation	IDA	7.12	6.97	98
Biodiversity Conservation	GEF	2.10	1.80	86
High Forest Management	DFID	8.90	11.70	130
Savannah Resource Management	DANIDA	1.29	1.55	120
Plantation subcomponent	AfDB	1.03	0.0	0
High Forest Management	EU	1.29	0.0	0
Savanna subcomponent tree planting	World Food Program	0.51	0.0	0
Wildlife and Institutional Strengthening	Netherlands	1.79	0.0	0
All components and support	Government of Ghana	2.20	0.53	25
Contingencies	IDA and GEF	3.10	-	-
	Total	29.33	22.55	76

35. The program was designed to develop institutions to support and encourage community and other private sector involvement in sustainable management of key natural resources, and help reduce poverty in the more disadvantaged rural areas. To embrace these ideas the Bank chose to use adaptable program lending as it gave greater freedom to sequence policy initiatives, institutional development, pilot resource management programs, and at the same time allow investments in relevant civil works, goods and services.

36. Accordingly, the program adopted a strategy encompassing four main themes:

- **Production:** to stimulate private investment in plantations off reserve and in degraded forest reserves and encourage efficiency in logging and wood processing.
- **Protection:** to establish special biological protection areas within forest reserves
- **Collaboration:** to support community-based high forest, savannah woodland and wildlife resource management, and
- **Institutional:** to promote better coordination between ministries and agencies in management and monitoring of environmental resources and increase their capacity.

37. Project components in Phase I, the NRMP, separately targeted the two major ecological zones - high forest and savanna - wildlife resource management, and the cross-cutting institutional issues of coordinating environmental management and biodiversity conservation.

38. GEF support was to be implemented by the Bank over 6 years in three phases. The first two-year phase under NRMP I was to focus on biodiversity conservation in the high forest areas. On satisfactory completion, a second phase was to extend resource management country-wide over the four years of the proposed NRMP II. The GEF grant targeted six subcomponents:

- Establishment of a biodiversity advisory group in Ministry of Land and Forests through the provision of technical advisory services

- Implementation of key elements of the National Forest Protection Strategy and the National Biodiversity Strategy and strengthening the capacity of the GFS and FD particularly in conservation and community-based participation
- Baseline surveys to identify and demarcate GBSAs
- Identification and demarcation of “Provenance Reserves” within the production forest reserves.²⁹
- Establishment and operation of an “Alternative Livelihood Investment Fund” through the promotion, design, appraisal, supervision and evaluation of subprojects and financial support for communities living in GBSAs, and
- Strengthening the capacity of WD in wildlife management and conservation through the provision of technical advisory services, civil works and training.

3. Implementation

IMPLEMENTING ARRANGEMENTS

39. **EMRP.** The EPC/TS, which was renamed the Environmental Protection Agency (EPA) in 1994, was the lead agency charged with coordinating implementation and procurement. Project activities were grouped according to outputs associated with the three main project components and oversight was delegated to five specialist Project Operations Committees covering environmental quality, land information, coastal wetlands management, land and water management, and studies and investigations. Memoranda of Understanding with the six organizations responsible for the technical aspects of the project defined the scope of work and financing arrangements.³⁰

40. **GEF.** The GEF wetlands component was implemented by the Ministry of Lands and Forest’s Department of Game and Wildlife (later renamed the Wildlife Department.) It was expected that the Wildlife Clubs of Ghana would be contracted to manage public awareness campaigns and community mobilization and that other NGOs would actively participate in project activities and their review. Technical assistance to assist capacity-building was to be provided by DFID and DANIDA but the inputs of other donors was not finalized before project approval and subsequently lapsed.

41. **NRMP.** Overall project coordination was through an inter-agency Project Coordination Committee chaired by the technical director of The Ministry of Lands and Forests (MLF) that was the lead implementation agency responsible for policy and institutional aspects. Later mines were placed under MLF and it became the MLFM. The EPA was responsible for coordination of environmental management. Under the MLFM the NRMP’s high forest, forest resource management off-reserves and biodiversity conservation activities were to be managed by the proposed autonomous Forestry Service, while the Wildlife Department would be responsible for wildlife resource

29. “Provenance Reserves” are high biological priority zones within production forests where logging and other consumptive uses were to be either eliminated or very tightly regulated (PAD para 48.)

30. The organizations were: Institute of Aquatic Biology; the Water Resources Research Institute; the Remote Sensing Applications Unit; the Soils Research Institute; the Meteorological Services Department; and the Lands Commission.

management. A new Savanna Resources Management Center located in Tamale was staffed from the four participating ministries.³¹ Investments in plantation development and wood industry restructuring were to be handled by the private sector. Day-to-day management was handled by a project coordination unit successfully established under the earlier Forest Resources Management Project.

IMPLEMENTATION EXPERIENCE

42. The difficulty of ensuring coordination of the multiple organizations implementing these projects and maintaining focus on expected outcomes was the major problem. This was exacerbated by inadequate counterpart funding – a reflection of low government buy-in to the projects given its preoccupation with macroeconomic issues and revenue generating activities – that adversely affected most activities in both projects and the GEF subcomponents. Government funds were generally released late and typically ranged between a quarter and half of the amount agreed at negotiations. High turnover of government staff and continued lack of specialist expertise plagued both projects further undermined timely and efficient implementation. Poor synchronization of donor supporting activities slowed their disbursement. The high reliance on external funding and expertise, and uneven and inadequate local technical capacity in the various responsible agencies slowed implementation. Delayed establishment of project cadres and training hindered coordination among the five participating ministries; however, this improved as capacity expanded but remained a problem. Many of these coordination and human resource problems were amplified in the field as central government agencies started working with local governments, communities and NGOs.

43. **ERMP.** Late project start-up and shortages of counterpart funds delayed implementation of some major project activities and these were not completed. Creation of the EPA during the first year of the project completely changed the managerial set-up, leaving the post of Executive Director vacant for the first year, and staffing misaligned with its new responsibilities. As a result the project lacked leadership and coordination at its most critical time. The uncertain supply of counterpart funds made planning difficult – in the two year period 1996-97 government contributions were only 15 percent, and in the last year of the project none were received. The average for the whole project was only 20 percent. The land and water management component was a year late in starting because the Borrower's lack of familiarity with Bank procurement delayed purchase of computers and equipment that were a condition of DANIDA's technical assistance.

44. Institutional strengthening of EPA was much slower than planned due to understaffing caused by the difficulty in attracting and retaining well-qualified and experienced staff because of a poor incentive package compared with the growing private sector. As a result technical assistance was misaligned with staffing availability and, in many cases, substituted for them. Thus local capacity building was less than planned. While EPA was eventually successful at coordination, inadequate financial and procurement management slowed implementation. Thus, for example, delayed procurement of equipment for air and water quality monitoring delayed data acquisition

31. Ministry of Lands and Forests; Ministry of Food and Agriculture; Ministry of Environment, Science and Technology; and the Ministry of Mines and Energy.

and processing. Field activities lacked harmonization among the contributing agencies.

45. **GEF.** The GEF wetlands component suffered from lack of counterpart funds, delayed recruitment of key staff, weak communication between finance controllers, technical assistance and management, and the WLD's lack of familiarity with Bank procurement procedures. Recruitment of site staff was delayed by 30 months. Contracts of most civil works under this component performed poorly requiring either retendering or abandonment of works. Local funding appears to have been under-budgeted: while \$1.1 million was agreed at appraisal, the amount requested by the WLD to do the work was \$4.4 million. Despite this only 71 percent of the appraisal amount, \$0.79 million was actually released to the project and in 1995 there was no counterpart fund. Exacerbated by these problems the GEF component was extended by two years and even then there were no counterpart funds in the last year (1999) when the lack of GEF procedures to award grants directly to NGOs came to light. Enabling the WLD to do this instead caused more delay. Implementation accelerated once subcomponent responsibility was transferred in the last year of the project from EPA to the MLFN who were better able to manage field activities. Even then the GEF grant utilization was slow and \$0.81 million had to be cancelled. A proposal to use the undisbursed funds to create a trust fund was turned down by Bank management because of unsatisfactory progress. An independent review by QAG stated that the GEF component should have been either radically restructured or suspended given government's poor commitment to environmental management.

46. **NRMP.** The major problem was that the project was too complex and had too many actors for its short two-year implementation period – as a result it was extended by 33 months and thus provided continued support for the longer-term GEF component that also suffered delays. Initiation of policy reforms and their processing and ratification at Cabinet and Parliament, as so often in Bank projects, faced far more hurdles than anticipated and they were unable to keep to the ambitious schedule. A strong timber industry lobby slowed down the implementation of the reforms (e.g. benefit sharing, taxation and rationalization of fiscal measures.) These problems were exacerbated by poor donor co-ordination and the failure to create monitoring, tracking and evaluation systems within MLFN all of which undermined effective management and coordination. Thus a number of the components operated in isolation – particularly the biodiversity components. The GEF component under NRMP effectively lost its identity due to insufficient focus on tracking achievement of its specific objectives. A lack of appropriate expertise and experience greatly hindered capacity development at the local level. In most respect these issues were a repeat of the problems experience with ERMP.

Monitoring and Evaluation

47. **ERMP. Overall M&E is rated as modest with several shortcomings.** M&E was not explicitly covered at appraisal but subsumed in the detailed list of inputs and outputs expected from each component. Where these were physical, such as maps, they were clearly defined and monitorable indicators were available. Training and related technical assistance inputs were well defined. However, no formal M&E system was established to monitor accomplishments, outcomes and impacts of the institutional aspects of the project or capacity building. Implementation and utilization of the modest

M&E established provided adequate information to track progress on inputs, outputs and expenditures and take corrective actions. It was clearly expected that the Environmental Resource Management System would produce data that could be used to measure environmental outcomes but the actual details were left with EPA.

48. **GEF. Overall M&E is rated substantial.** While rated high on design, implementation slipped from substantial to modest over the life of the project, and subsequent utilization has been modest. In contrast to the ERMP, the GEF wetlands intervention put a high premium on M&E, and clearly defined indicators that would measure ecosystem health and describe the requirements for baseline creation in great detail. In large part this reflects the prominent role of environmental specialists during appraisal; such a technically prominent role is seldom seen in non-GEF projects and probably accounts for their generally less comprehensive M&E arrangements and indicators. While comprehensive baselines were established for all five Ramsar sites by 1998, subsequent environmental M&E by government agencies was fragmentary and was heavily criticized at mid-term review. Socio-economic monitoring, in contrast to biological monitoring, was poor. While several NGOs (e.g. Birdlife International) have continued routine monitoring this tends to be narrowly focused on specific genera and an integrated approach is lacking. Conversely, routine monitoring of inputs and outputs was good.

49. **NRMP. Overall M&E is rated as negligible.** Although a full list of input, output and APL outcome indicators was developed at appraisal the government was slow to staff the M&E activities. Baseline studies were not done, utilization was *ad hoc*, and reporting was sporadic. But because the phase I project was so short, its specific indicators were primarily outputs as it was assumed that development outcomes and impacts would mature in the second and third phases of the APL. As the subsequent phases of NRMP were cancelled few of the longer term outcomes were achieved.

4. Project Evaluations

Relevance of Objectives

50. **The objectives of the ERMP and its GEF component were highly relevant and remained so at the time of this assessment.** The ERMP was designed to support Ghana's NEAP and NRMP continued this assistance. The introduction of community participation and management was highly relevant to the Bank's earlier experience in Ghana and the main thrust of Ghana's Environmental Action Plan. In terms of sustainable land and agricultural practices the projects resonated strongly with the priority reforms identified for the 1990s in the 1991 Ghana Medium Term Agricultural Development Strategy.³² More generally these included greater sectoral coordination to reduce

32. World Bank. 1991. Ghana Medium Term Agricultural Development Strategy (MTADS): An Agenda for Sustained Growth and Development (1991-2000). 2 volumes. Report No. 8914-GH. The strategy, *inter alia*, also emphasized the need to improve the enabling environment for private sector participation, provide a more efficient marketing system and improve the rural transport systems and infrastructure. Interestingly these same

duplication of effort and increase transparency of trade-offs among subsectors; increased public sector planning and implementation capacity and increased decentralization and beneficiary participation through promotion of grassroots organizations in decision-making. Specific environmental priorities included better knowledge of soil status and agroclimates and actions to reverse soil nutrient depletion through incentives to increase fallow land, and maintenance of closed forest and woodland canopies to reduce degradation of soil physical properties.

51. The 1995 Country Assistance Strategy (CAS) strongly supported actions that would accelerated Ghana's growth and focus on regions and sectors which showed the greatest promise. Identification and better understanding of growth and environment linkages, using a broadly participative process was key to this strategy.

52. The conclusions of the 1996 National Capacity Assessment that formed a building block for the 1997 CAS highlighted the need for improvements to local capacity: "*Ghana's capacity to handle various technical and managerial activities in most sectors of the economy has worsened in the last two decades, and efforts to rebuild these have not been successful.*" Specifically it noted that the root causes of this decline were the lack of investment in the institutions and processes that form capacity; and the slow destruction of the enabling environment for maintaining existing capacities. And it recommended that the Government's efforts should focus on capacity retention, and that Donors support capacity formation. The 1997 CAS endorsed this approach in its recommendation that improved environmental management in rural areas was needed to reduce deforestation and land resource degradation while noting that implementation of biodiversity conservation policies, and mitigation measures (including reforestation) were critical for sustainable rural development. The major challenge it identified - the lack of capacity to carry out environmental assessments, planning, and monitoring at the district level, as well as the low level of community awareness and understanding of environmental issues – were embodied in the ERMP and NRMP.

53. The 2004 CAS was built on the findings of extensive consultations with the government and the first Ghana Poverty Reduction Strategy (GPRS). It supported deepening the harmonization among development partners, a practice mainstreamed within the assessed projects, and greater inclusion of rural areas into national development. It emphasized development and marketing of agricultural commodities, improved land use, and greater attention to environmentally-friendly agronomic practices. Agricultural development strategies, both in traditional and non-traditional crops, not only needed to be guided by market demand but also by their environmental soundness. Subsequently, the 2006 CAS reaffirmed the centrality of sound natural resource management in economic terms. Overall, the annual cost to the economy of inadequate attention to sustainable environmental and natural resource management was estimated to be about 5 percent of GDP because forests, wildlife, livestock and fisheries and land remained stressed by poor management and overexploitation.

themes are seen as priorities in the 2004 CAS and the 2003 Ghana Poverty Reduction Strategy suggesting little progress in these areas in the previous decade.

54. GEF support for the biodiversity and wildlife component of the projects was globally relevant to conservation of tropical forest ecosystems by strengthening the network of conservation areas in Ghana and reinforcing the development of sustainable use and management systems for biodiversity resources. By financing the incremental cost of addressing global and regional biodiversity conservation priorities within the framework of the National Biodiversity Strategy and the Forest Protection Strategy, GEF funding would complement Bank and bilateral donor-financed programs for development of forest production systems that are environmentally and socially sustainable, and for management of protected areas.

55. Within Ghana the GEF wetlands objective was and remains highly relevant to the conservation concerns expressed in the Save the Seashore Birds Project sponsored by the UK's Royal Society for the Protection of Birds and Ghana's Coastal Zone Indicative management Plan prepared as part of NEAP.

56. **The overall relevance of NRMP's objectives is rated high.** Promotion of sustainable land use was essential given the critical issues relating to land rights, access and use of land resources (paras 11 to 17). The focus on sustainable use of forests and wildlife resources, and conservation of biodiversity is also highly relevant.

Relevance of Design

57. **ERMP.** The centralization of environmental regulation was highly relevant as it put in place mechanisms for undertaking EIAs, and reviewing and acting upon them. However, omitting the forestry sector because the Bank and DFID were dealing with this separately (para 21), was a substantial issue given the critical position of sound forest management policy and planning to environmental sustainability. This was a major shortcoming in Bank design and donor coordination design that later undermined establishment of a fully integrated approach to environmental management under ERMP, a point also made by the Bank's Quality Assurance Group in its 1998 Review of Biodiversity Projects in Africa. **Thus the relevance of the design to improving the capacity of the borrower to manage environmental resources is rated as modest.**

58. The role of NGOs to facilitate community participation and availability of environmental specialist and knowledge dissemination was important given government's capacity constraints and the objective to empower communities on environmental issues. The modernization and upgrading of governmental organizations and facilities responsible for environmental data (mapping, land and water resources) was necessary to improve geographic scoping and planning to define and mitigate environmental problems. The aim to create a new land and water management unit within the Ministry of Agriculture to pilot new approaches to environmental management within communities was consonant with the objectives of NEAP. The initial year building capacity and knowledge within MOA was to be followed up with a round of pilot projects to test and refine methodology that would be evaluated at Mid-Term Review (MTR) before being scaled up. This was sensible and pragmatic. However, by project completion it became clear that project design did not bridge the barrier between central agencies and the communities (paras 73 to 75). **The relevance of project design to improve the capacity of the population to manage its resources is rated as modest.**

59. **GEF.** The design adopted was appropriate as it identified local capacity-building, support for local employment generation and knowledge dissemination as the key factor to the success of wetland management. However, the design was not effective in delivering results to communities because it did not address institutional failings (see paras 76 to 89). **The overall relevance of GEF's project design is modest.**

60. **NRMP Design.** **The overall relevance of NRMP's design is rated modest.** The APL was an appropriate instrument given past problems – it potentially avoided continued support of investment when the reform process failed. However, the comprehensive and cross-sectoral design needed to redress the partial approach in earlier projects proved to be overly ambitious in the two years allocated for the first phase of the APL. More time should have been allowed to build government commitment. The attention given to designing the APL and getting it approved appears to have reduced the attention to the managerial practicalities of the first phase. This was a notable failing given the difficulties with the implementation of ERMP.

61. The focus of the NRMP project on forests, wildlife and biodiversity was necessary but not sufficient to ensure sound management. The omission of reform of land institutions, including land rights in project design to achieve the sustainable use of land was a notable omission leading to a negligible rating of design relevance. In contrast the relevance of the design of the component to support the forest objective was highly relevant. Design of wildlife components were modestly relevant as it only partially targeted the key stakeholders (para 115). Design relevance of the biodiversity component is rated modest as it did not adjust to the decentralization process and reform of the FC.

62. Table 4 summarizes the ratings for the relevance of each project. Equal weight is given to the relevance of objectives and project design.

Table 4: Relevance - Summary ratings for each project

<i>Project</i>	<i>Objective Weight 0.5</i>	<i>Design Weight 0.5</i>	<i>Overall</i>
<i>Environmental Resources Management Project</i>			
1 (a) Improve the capacity of the borrower to manage environmental resources	High	Modest	Substantial
1 (b) Improve the capacity of the population to manage its environmental resources	High	Modest	Substantial
2. GEF: Improve the management of Ghana's coastal wetlands	High	Modest	Substantial
ERMP Overall Outcome rating	High	Modest	Substantial
<i>Natural Resources Management Project</i>			
1 (a) Promote sustainable use of national land	High	Negligible	Modest
1 (b) Promote sustainable use of forests	High	High	High
1 (c) Promote sustainable use of wildlife	High	Modest	Substantial
2. Better conserve the rich biodiversity of Ghana's forests	High	Modest	Substantial
NRMP Overall Outcome rating	High	Modest	Substantial

Efficacy

ENVIRONMENTAL RESOURCES MANAGEMENT PROJECT

63. **Overall efficacy is rated as modest with some shortcomings.** The objective to improve the capacity of the Borrower and its population to manage environmental resources depended on development of an environmental resources management system and introduction of land and water management with a focus on community-based approaches. The efficacy of these components to achieve the objectives is discussed in detail below.

Objective 1 (a): Improvement to the national capacity for environmental management and coordination was substantially achieved with some shortcomings. Efficacy is rated substantial.

64. The EPA is now a more effective environmental management agency than it was before the project with improved and better qualified staff. It graduated from a policy making and advisory function when it was recast as the EPA in 1994. It is now a regulatory body with a mandate to advise on and initiate environmental legislation, facilitate cross-sectoral cooperation on environmental concerns and programs, ensure enforcement of environmental laws and regulations, issue permits and implement programs to maintain and improve the environmental integrity of Ghana. A governing Board of 12 members is drawn from the heads of the major ministries, the private sector and has one representative of parliament. Internally it is managed by the Executive Director assisted by 7 Directors. In accordance with government decentralization policy, EPA has established offices in all 10 regions to provide support for groups of District Environmental Management Committees – a challenging task given the number of DEMCs involved and logistics.³³ The successful reform of EPA is the result of continued donor technical and financial support for reform – particularly DFID and EU partners – and the synergy this generated can only be attributed partially to the Bank's work.

65. From an organization of only 74 staff in 1991 EPA now has about 260 staff of which 60 percent are administrative and support staff. While EPA benefited greatly from the DFID support that provided technical and managerial training until 1996, it took several years to reorientate most senior staff from their academic outlook to be effective EPA managers and coordinators. Even so, the 105 professional staff are considerably fewer than the 232 that were considered necessary to discharge its responsibilities following the Price Waterhouse management review that provided the basis of the EPA organization. Main reasons for the staff shortfall are the low level of job satisfaction, low salaries, non-existent incentive packages, high staff turnover and the lack of political will to acknowledge the importance of environmental stewardship.³⁴ More recent and rapid growth of the private sector has also posed a serious challenge to civil service employment generally and for the environment in particular. And despite considerable pressure from its development partners an adequately resourced long-term human

33. In the Ashanti Region, for example, the Kumasi office has 4 professional and 3 support staff to service eighteen DEMCs.

34. EPA. Annual Report 2001.

resource development plan remains elusive primarily because of uncertain and inadequate financing – a symptom of continued low government ownership.

66. As a result of budget and staffing shortfalls EPA has experienced considerable difficulty in balancing the increasing demand for its services, the main casualties being inadequate resources for coordination and outreach activities and for liaison with the regions and districts. The need to generate income from fees and permits override strategic staffing considerations related to non-remunerative activities.³⁵ These include more costly biodiversity conservation and grass roots awareness-raising - costly because of logistics and time needed to develop partnerships. In addition, most of the permit and regulatory procedures are for highly visible activities, 80 percent or more of which are in the Greater Accra area. Politically, EPA effectiveness is judged by the priority given to servicing these demands on its doorstep. In that sense EPA's role reflects the priority given it by government. While the visibility of the EPA shows Ghana to be a progressive nation, budget problems lowers its effectiveness at regulating natural resource exploitation.

67. Despite these problems EPA is now nationally recognized as the apex institution providing environmental leadership and cross-sectoral coordination on the environment. Achievements continued to grow after those reported at project completion in 1999 as exemplified in its Annual Reports published from 2001. In part this is the result of the successful implementation of a co-management approach to environmental regulation and enforcement (Box 1).

Box 1: Successfully Implementing Environmental Stewardship

All new developments have to register with the EPA including submission of an environmental assessment which is the basis for an operating permit. Existing industries are expected to produce Environmental Management Plans every three years to minimize environmental impacts and submit returns of agreed indicators of environmental performance monthly. As other state agencies in Ghana also have regulatory powers affecting the environment, the EPA has worked in partnership with them to harmonize criteria and enforcement. Thus, for example the Energy Commission now ensures that all investments it licenses have prior environmental clearance and permits from the EPA. In recognition of these and similar practices, UNEP gave Ghana an award for its exemplary efforts to implement the Montreal Protocol in 1997. To further the partnership approach, the EPA organized orientation workshops for environmental compliance staff, police officers and state lawyers of to raise awareness of issues and provide guidance on evidentiary procures and protocols. In addition, in 1999 EPA initiated a national environmental awards program that recognized good environmental practice by industry, typically three awards are given each year.

Source: Tamakloe, Wilson. 2003. State of Ghana's Environment – Challenges of Compliance and Enforcement in Measuring What Matters - Proceedings from the INECE-OECD Workshop on Environmental Compliance and Enforcement Indicators 3-4 November 2003, OECD, Paris.

35. The National Environment Fund was established under Part II of Section 16(1) of the Environmental Protection Agency Act, 1994 Act 490. Under this Act the EPA is authorized to collect permit fees and processing charges for clearance of chemicals and meat/fish; EIA permitting; mining exploration; small-scale mining permits and tree cutting permits. Fees are paid into the National Environment Fund (NEF) while charges are retained to meet the EPA's functional expenditure outlay (e.g. monitoring and inspection, screening, adverts, printing etc). In the period 1995-2001 the NEF collected Cedi 2.31 billion (US\$ 320,000). Of this US\$213,000 slightly under 1% was disbursed for environmental education, studies and investigation; 45% was for human resource development and the balance of 54% was for a staff incentive package approved by the Board in 1988. Processing charges over the period 199-2001 amounted to Cedi 1.4 billion or about US\$ 200,000.

68. The EPA received over 200 permit applications in 1996 and about 36 Environmental Impact Statements (EISs) for review; by 2002 the number of EISs had risen to about 220 a year and 240 EIA public notices had been circulated in the national newspapers as part of its public dissemination activities. But as with other activities, official guidance manuals for environmental management were not completed due to budget shortfalls. Despite this, the EPA is tough on proposals that do not meet their environmental design standards as the dispute over the gold mine at Akyem illustrates.³⁶

69. EPA's environmental coordination, awareness and outreach efforts have also steadily grown but slower than planned due to insufficient budget from government. These have ranged, for example, from development of the National Action Program to Combat Drought and Desertification, Ghana's State of the Environment Report, publication of guidelines on the development and management of landfills, the sound management of health care and veterinary waste, and pesticides to hosting the terminal meeting of the FAO-sponsored project on waterweed management in West African water bodies. In addition to awareness-raising in the regions and districts and educational establishments at all levels, the EPA also broadcasts weekly one hour discussions on FM Radio in Accra covering topics such as ozone layer depletion, air pollution and vehicles, persistent organic pollutants and water pollution.

70. **Environmental Information Systems (EIS) were initiated but problems remain.** Overall the land, water and soil databases and mapping capabilities were improved by the project through inter-agency agreements on standards and data protocols. This was facilitated by the multi-agency Land Information Project Operation Committee (LIPOC) that has its secretariat in the EPA. A more difficult issue that remains to be resolved is universal access to these primary environmental data and their use to improve planning and natural resources management. This is for several reasons. Within the LIPOC network of six partners there is a fairly high exchange of data but among those outside it most were unaware of what was available.³⁷ There is no national meta-database that informs agencies and NGOs what is available and access arrangements; and there are very few incentives for collaborative arrangements among agencies unless catalyzed by externally funded sources that rise above the parochial interest of the agencies "owning" the data.³⁸ Ownership represents an effective monopoly on information and is an important source of both revenues and power – while mitigated by LIPOC for beneficiaries of ERMP it remains a problem in the absence of an independent champion. As data banking continues it also increasingly relies on higher

36. The Newmont Ghana Gold Company wishes to construct an open pit gold mine in the Ajennua Bepo Forest Reserve in Ghana's Eastern Region. The EPA, after review of the EIA, called for a redesign and this is subject to ongoing dispute. www.theminingnews.org/news.cfm?newsID=2330 dated 10/17/2006.

37. Best Practices of Environmental Information systems in Ghana. Program on Environmental Systems in Sub-Saharan Africa 1999. Produced by the Center for Environmental Information and Knowledge in Africa (CIKA) from material provided by UNEP.

38. *Ibid.*, para 3.5.2. "About 70% of Ghanaian agencies have a policy for data exchange and release to the public. It is however not always an easy task to obtain data. For most of these there must be a formal application for approval from top management... In some instances however, access is unlimited, and at no cost. For those few intuitions demanding fees, these may be waived in respect of education, research and EIS institutions. Some of the organizations have the data in their custody classified and thus unavailable to the public without a high level of authorization."

specification computers and languages that are expensive to acquire and maintain, and there is a shortage of specialist staff and experienced managers to service external demand. In many respects these findings reflect the fact that two-thirds of the organizations use most of the data they produce in-house and data management is seen as a low-level function. The major problem identified by EIS specialists was inadequate training (60 percent) and uncertain or inadequate funding (40 percent).³⁹

71. It was intended that the databases should be utilized to improve planning. While this has occurred at the macro-level in central institutions, decentralization has raised a number of new problems unforeseen at appraisal. Specifically the 110 district assemblies have the mandate to develop their own plans involving, among other things, agriculture and natural resources management. The crux of the problem is that these assemblies have too few resources to support sophisticated database management/analysis and needed equipment, and that many agencies assisting them on technical issues have overlapping responsibilities – for example, there are 22 institutions concerned with land management. And while public financing and access remain constraints the private sector is unwilling to meet the demand for data processing and analysis at the local level.

72. The most successful application of EIS data in Ghana is its use for geographic information systems (GIS) that allows integration of multiple and overlapping layers of information. The Survey Department established a viable Cartographic School under the project and GIS is the cross-cutting tool they use to train and develop outputs relevant to planning. The most notable success is the Remote Sensing Applications Unit within the University of Ghana. This is a dynamic, commercially-orientated organization that offers services on contractual and cost-recovery basis. Currently it is aiming to achieve complete financial and managerial autonomy by 2011 – perhaps an ambitious goal given the much reduced donor commitment to projects and individual institutions with the introduction of budget support lending modalities.⁴⁰

Objective 1 (b): Improvement of the capacity of the population to manage environmental resources was partially achieved. Efficacy is rated modest.

73. ***Achievements in land and water management were modest*** The main issue is that this became an enclave activity divorced from the mainstream of EPA's coordination and the goal of integrated environmental management. While the Land and Water Management Unit was created under the Ministry of Food and Agriculture, albeit with considerable delay, it did not streamline operations as the Agro-forestry Unit continued to function independently and duplicated many of its functions. Understaffing, poor cross-support from the agricultural extension units, lack of a rural sociologist and soil and water specialist forced an over-reliance on lower-level field extension staff that were ill-trained for the integrated and participative approach envisaged at design, and this led to mixed success in the field. And because of these problems the Land Management Fund (US\$4,000 per community) proved difficult to operate and manage. Interviews in the field about this component can be summarized as "lack of a shared vision."

39. *Ibid.* para 4.10.6.

40. Centre for Remote Sensing and Geographic Information Services, University of Ghana. CERGIS' Five-Year Strategic Plan (2003-07). Accra. June 2003.

74. The delayed start and institutional problems caused a reduction in the number of targeted communities from 68 and only 42 were reached. Even then, it was found that because community land use coverage differed from ecological/hydrological units that the area impact was too small (and sometime negated by surrounding communities' activities⁴¹) to be effective in changing entrenched and traditional ways of managing local resources. The top-down 'blueprint' approach adopted was also found to be insensitive to widely differing cultural practices and norms that required a deeper understanding of local attitudes and problems. Indeed, as has been concluded often in other countries, the final Bank supervision mission recommended that a change to a watershed management involving all communities in an integrated approach should be adopted. Apart from a few pilots independently initiated by NGOs, none are implemented under government projects or programs.

75. At the time of this assessment the Land and Water Unit was active with three senior staff at the center with about 250 staff based in the districts providing mostly technical assistance on an as-needed basis. DANIDA assistance continued until 2003 and subsequently there have been sufficient project-related budgets from donors and NGOs – but not systematic central or local budget support – to sustain operations. This, and the localized and *ad hoc* nature of the unit's activities, demonstrates that land and water management activities are not yet part of a comprehensive and mainstreamed management approach to sustainable land development. Environmental management remains fragmented.

GEF COASTAL WETLANDS MANAGEMENT COMPONENT

Objective 2: Improved coastal wetlands management was partially achieved. Efficacy is rated modest.

76. A national strategy for the management of Ghana's wetlands was approved in 2000.⁴² The strategy emphasizes a participatory approach in wetland management, wise use to enhance sustainability and minimize conversion to other uses, application of strict rules and protection to maintain the sites and their biodiversity, and the harmonization of traditional use rights with international best practice and government policy. This built upon 1999 Wetland Management Regulations that define the six Ramsar sites as protected areas that are now surveyed, demarcated by pillars and signposted.⁴³ Within these Ramsar areas District Assemblies, in close consultation with traditional clan and community leaders, have passed local by-laws regulating use of these areas. Even so, many communities complained that the Ramsar areas were imposed upon them with almost no consultation or compensation.

77. In practice, in the non-urban wetlands, Ramsar listing only codified

41. For example some communities continued to set fire to the savanna following traditional management practice; better land tillage practices covered only parts of watersheds and thus the adverse impacts of erosion were not stopped.

42. Managing Ghana's Wetlands: A National Wetlands Conservation Strategy. Ministry of Lands and Forests. 1999.

43. Wetlands Management (Ramsar Sites) Regulations, 1999. L.I 1659 issued under section 11 of the Wild Animals Preservation Act 1961 (Act 43.) The total area protected is 170,164.48 ha. One of the Ramsar sites existed as the Owabi Wildlife Sanctuary before the ERMP.

environmentally conservative traditional management practices that maintain communities' management of natural resources on which they rely for livelihoods. Possibly the biggest impact has been to legalize communities' traditional authority over access to local resources by outsiders. Insufficient attention was given to identifying economic development opportunities and implementing planned socio-economic baseline studies and their subsequent monitoring and evaluation. The incentive structure for communities to actively co-manage the wetlands remains elusive.

78. The achievement of the principal management objective to maintain or restore the ecological integrity of these wetland ecosystems while enhancing their productivity is moderately satisfactory at best – the rate of decline has on average been slowed and public awareness increased. The integrity of these wetlands remains under threat despite the project. Most of the wetlands are dependent on upstream catchments for their water supplies. Continued degradation of these hinterlands either by expansion of agriculture, logging and/or urbanization upsets the natural hydrological and nutrient balance of the wetlands with potentially adverse consequences for their productivity. While a considerable body of baseline research and studies was financed early in the project it tended to be academically-oriented and gave less attention to laying the foundation, principles and criteria for a sound ecological monitoring and evaluation system.⁴⁴ The subsequent health of the wetlands ecosystems cannot be determined due to the paucity of more recent monitoring and evaluation to discern cause and effect.

79. While the Ghana Wildlife Society and Birdlife International have undertaken surveys of species for more than 10 years at all the sites independently of the project (Table 5) and results look very favorable, there are considerable technical difficulties in relating these data to the health of the wetlands and inferring impact. This is because the avian populations of Ghana Ramsar sites are transient and their numbers depend on the integrity of the West African flyway as a whole, seasonal changes induced by climatic variability and the integrity of breeding and wintering areas at the flyway's termini.

Table 5: Autumn peak counts of waders and terns at Ghana's Ramsar sites

<i>Class of Birds</i>	<i>1986</i>	<i>1987</i>	<i>1992</i>	<i>1997</i>	<i>1998</i>
Waders	46,319	37,581	39,235	71,551	124,505
Terns	96,030	82,046	64,480	146,428	202,445

Source: Ghana Wildlife Society. 1999.

80. Systematic monitoring and evaluation of non-avian biodiversity (apart from small-scale academic research) is not available. Field interviews revealed, for example, that despite significant information campaigns by Ghana Wildlife and the Wildlife Department under the project, that killing of sea turtles – a major problem highlighted at appraisal – and manatees continues because of inadequate official policing, local culture (Box 2), poverty and damage done to fishing nets.⁴⁵ Over-fishing, including poisoning,

44. Additionally only 9 of the 17 studies and investigations planned were completed because of funding and human resource constraints.

45. Sea turtles derivatives feature prominently in most West African traditional medicines. Fretey, J., Segniagbeto, G.H, and Soumah, M. 2007. *Presence Of Sea Turtles In Traditional Pharmacopoeia And Beliefs In*

was reported also by several community leaders due to increased demand. Erosion of dune protection and the sedimentation from upstream has reportedly had an adverse effect on the productivity and biodiversity of the Keta lagoon.

Management of protected areas is weak

81. The WLD is under-equipped and under-funded for the task, again reflecting low government ownership. Thus, for example, the most important wetland area, the Keta Lagoon Complex covering 101,023 ha located in the delta of the River Volta, has only 2 officers and 4 field staff to manage the area. In addition, the Keta Ramsar sites cover four administrative districts and site management committees thus increasing the transaction costs. Of the 51 staff posted to the Ramsar sites during the project budget cuts have reduced these to 25 and four of those were on extended study leave during IEG's field visit. Field work is handicapped also by old and unreliable vehicles and lack of boats and, given the circuitous routes for the larger wetland areas; this lowers the operational effectiveness of the few staff on duty.

82. Generally, field staff of the WLD enjoy a good working relationship with the district authorities who are mostly very supportive. However, WLD has no jurisdiction over land as this is the prerogative of clan elders; WLD's role is applying the law regarding wildlife. Accordingly, their primary tools for wetlands management are visits aimed at persuading communities that environmental conservation is beneficial. In several areas WLD has worked with the NGOs Green Earth and Ghana Wildlife on small-scale projects, such as mangrove regeneration, improvement of drainage, and apiary. Overall success in co-management, however, is constrained by the monetary poverty of many communities - their low levels of education preclude self-help and forces a heavy reliance on harvesting local resources.

Box 2: Traditional hunting of sea turtles occurs in the Central and Western regions of Ghana

Organized groups of people go out to sea purposely to hunt for turtles from about 80 percent of coastal communities. It is also estimated that about two-thirds of all turtles that come ashore to nest are slaughtered. An interview by GWS and the BBC with a turtle hunter at Senya Breku in the Central region of Ghana indicated that many people are involved in this business. He had hunted turtles since age 16 and was 73 years old at present. He kills an average of 8 turtles every nesting season or about one turtle each month. Asked if he was aware of having killed an estimated 400 turtles through his operations, he indicated he was not conscious of this fact as turtles keep coming to the beach to nest. He was then asked to compare the populations of turtles 30 years ago and that of the past few years. He admitted a gradual decline in the turtle populations but attributed it to the belief that the turtles have gotten clever and are more cautious when coming to the beach to nest. After collecting eggs from the nest he usually sells whole mature leatherback turtles to market women who pay about ₵10,000.00 (US\$2). Cutting and smoking the turtle increases the retail price to ₵120,000.00 (US\$24.)

Source: Adjei, R, G. Boakye and S. Adu. 2001. Organizational profile: Ghana Wildlife Society. *Marine Turtle Newsletter* 93:11-12. 2001.

West Africa. Marine Turtle Newsletter. 116: 23-25. 2007. Although five clans in the Songor Ramsar site, Ghana, revere them as a fetish objects, poaching by outsiders is the major threat.

Community development was generally unsatisfactory

83. Community development activities under WLD's management tended to be implemented with only modest participation of communities and local ownership is weak. In the several communities visited by IEG village elders stated that even though Site Management Committees were created, the responsibility for infrastructure built by the project (primarily sanitation units) lay with WLD and that community leaders cooperated with them on periodic waste disposal and clean-up exercises when asked to do so. The main problem is that WLD are neither trained nor orientated towards community development and have a limited understanding of the trade-offs these communities have to make to survive in the Ramsar sites.

84. The experience of the Community Investment Support Fund (CISF) clearly shows the mismatch of project expectations for community development and the WLD's ability to carry out the task. The project supervision reports reveal that little attention was given to the CISF until the mid-term review in late 1996, a year before the project was to end, and there were few criteria or procedures to identify financially-viable activities or the demand for them. Even so, \$400,000 was disbursed to 72 groups representing 1,706 people (including 1,001 women) over the period September 1998-December 1999. As a result of the "use it or lose it" approach adopted, and poor selection criteria, there is little to show for it. A major factor driving disbursement was that officials thought that CISF would generate local employment. Most groups questioned by IEG saw the CSIF as a government hand-out to alleviate their poverty and immediate needs and saw few links with environmental conservation activities (Box 3).

85. From IEG's small panel of interviews there appears to be a high correlation between the level of social capital and scheme success. At completion of the project any CISF repayments were to be administered by the District Infrastructure Fund of the Bank's Village Infrastructure Project.⁴⁶ As far as IEG could determine no repayments have been made.

Substantial public awareness and education outreach had low sustainability

86. In terms of helping a key national NGO to become established and well known the project was quite effective. It certainly raised the profile and knowledge of environmental issues throughout Ghana. The Ghana Wildlife Society was very active in the creation of public awareness and education over the period 1994-1998 when their contract with WLD ended. After GWS's departure from the project educational outreach activities in the field by WLD have been limited by staff mobility and their low numbers.

87. During the project the GWS registered 2,798 Wildlife Clubs in schools and communities nationwide, building on the 586 they had established since 1987. These outreach efforts continued until 2002 by which time the total number reached more than 7,000. Activities included public events to raise awareness. In the more affluent areas, field trips and camps focused on conservation, tree planting, drama and the like.

46. Ghana Village Infrastructure Project. 1997-2004. IDA Credit N020. ICR No. 31016, 12/29/04. There is no record of this arrangement in the ICR of this project.

Box 3: Investment in community support had mixed results

Hope and Trust Cooperative Farmers' Association, Keta Lagoon. They received Cedi 7 million (about US\$1,000) from the CISF to rent 3 acres for upland farming using irrigation. After receiving some basic training on accounting and bookkeeping they planted their first crop of beans in the anticipation that the profits they would make plus the CISF money would enable them to install and operate a well. Due to drought the crop failed. After discussion within the association the farming idea was dropped and the remaining funds distributed equally among the 12 members. While the CISF was supposed to be repaid after two years (by 1999) only half had been repaid by mid-2006.

Obenbu Village, Songor Lagoon. Sixteen communities received CISF money and 7 were successful and these tended to be to women for fish smoking; all the loans to men for farming activities failed due to drought, unreal expectations about income that would be generated, and lack of technical support. The most successful ventures have repaid 95 percent of the loan, the unsuccessful ones have paid nothing.

Ada Foah Village, Songor Lagoon. Under WLD's leadership the community cleared 7 km of a creek connecting the Volta River to the wetlands thus reestablishing a supply of fresh water. This has increased fish yields in the lagoon and enhanced cattle farming along the creek. While a village group received CISF both farming and fish frying ventures were unsuccessful. The amount of CISF was not known.

Unity and Strength Farmers' Association, Whuti Village. The group of 24 farmers (including 14 women) applied for CISF but was refused. After coming up with a plan to plant mangrove to produce timber and improve local fisheries, the WLD freely provided mangrove seedlings sufficient to plant 3 acres in 1999. They received extension advice from the Ministry of Agriculture and also have some profitable irrigated land following the initiative of the Deputy Chief Executive of the District in 1995. Since then they have planted another 5 acres to mangrove. MOA's agricultural extension support finished in 2001. It has been agreed that profits be split: two-thirds to the group and one-third to the clan that owns the land. The farmers' biggest problem is getting micro-credit - local moneylenders charge 50% interest for 3 months while the local Bank charges 30% per year.

Overall, the CISF invested 40 percent in farming, 37 percent in food processing (mainly fish) and 7 percent in fishing (nets, boat repair). The balance went to a wide range of other activities.

Source: IEG Interviews July 2006.

88. Sustainability of these efforts by GWS, however, has been poor without sufficient external funding to keep community/school organizers active. A major trade-off for GWS is obtaining sufficient income to maintain its offices, staff and conservation activities while subsidizing its schools program and activities of its volunteers. For example, project funding provides up to two-thirds of GWS's current income while there is almost no steady income from its schools' Wildlife Club activities. As a result, once formed Wildlife Clubs were expected to be mostly self-sustaining with periodic visits from GWS. Surveys by GWS of the wetland Wildlife Clubs in 2000, and a follow-up national survey in 2002, found most of them dormant and those that were active had few members.

89. IEG's field visits found few active clubs outside externally-funded projects or even community awareness that they had been formed a decade earlier. As a result of the second survey GWS suspended club formation and concentrated instead on consolidating existing ones—an ongoing effort involving about 1,000 clubs. In contrast to the earlier efforts, full club membership now requires a year's commitment that includes completion of training and with GWS and fund-raising events. Corporate sponsorship to cover the costs of GWS's outreach and education events raised about \$18,000 in 2003 to which government contributed about \$500.

NATIONAL RESOURCE MANAGEMENT PROJECT

90. **The overall efficacy of this project is rated modest.** The institutional and policy framework for implementing ecologically and socio-economically sustainable development was partially achieved. While substantial progress was made on policy and legislation, translating this into sustainable management practices for land, forests and wildlife has proved to be challenging because of overlapping responsibilities, distorted incentive structures, lack of transparency, poor governance and the declining importance of ‘non-productive’ environmental concerns to government.

Objective 1(a): Sustainable use of national land resources was partially achieved with notable shortcomings. Efficacy is rated modest.

91. **Environmental management coordination was partially successful.** Continuing the work of the ERMP, the project assisted consolidation of the EPA through development of a human resource development plan that upgraded staff skills and experience according to long-term strategic priorities. Environmental information systems and networks were further strengthened and extended to 10 regions. The reaction of the EPA to its exclusion from the first round of the Ghana PRSP, and the production of Ghana’s first Strategic Environmental Assessment that mainstreamed environmental considerations into national planning and debate, illustrates the maturity of the organization and its effectiveness on policy issues (Box 4).

92. Notwithstanding the strengthening of EPA, fragmentation of environmental responsibilities greatly weakens a coherent and comprehensive approach to the overall management of Ghana’s natural resources that includes forestry. The MLFM is primarily concerned with the commercial aspects of natural resource management and has “a lack of capacity for evidence-based policy.”⁴⁷ The ineffective Ministry of Environment and Science was abolished in April 2006 and the environment portfolio was transferred to the new Ministry of Local Government, Rural Development and Environment. MLGRDE’s primary environmental concerns and budget are with issues such as provision of water supply, pollution control and other “brown” issues. As a result of these successive reorganizations overall environmental policy coordination is lacking. This lacuna is exacerbated by the high dependence on donor support and their propensity to focus on specific sectors such as forestry instead of cross-cutting themes. Additionally they tend to directly interact with the respective line agencies where the environmental knowledge and interest reside rather than apex ministries that remain weak on these aspects.⁴⁸ And within EPA insufficient staffing and budget continues to jeopardize adequate monitoring and enforcement of development affecting the environment.

Objective 1(b): Sustainable use of forests was only partially achieved with notable shortcomings. Efficacy is rated modest.

47. World Bank. 2007. *Ghana Country Environmental Analysis*. Report No. 3695-GH. This comprehensive and highly critical report was prepared by the consortium of donors that have been Ghana’s long-term partners on environmental and forest sector issues. The partners are: Agence Française de Développement, Royal Netherlands Embassy, Department of International Development and the World Bank.

48. Observations by the MLGRDE in a meeting with IEG on 27 June, 2006.

93. **The Forest Service was reorganized but remains ineffective.** Legislation introduced or amended to improve the management and commercial viability of Ghana's forests is only modestly effective. The 1999 Forestry Commission Act authorized implementation of forestry policies and resource management according to the 1996 Forest Development Master Plan. Enabling acts and regulations for the Master Plan (that aimed to clarify accountability for resource exploitation, community consultation and compensation, and resource rents introduced by the Timber Resources Act of 1997) were delayed until 2002 because of strong opposition from the timber lobby.⁴⁹ Implementation of the new governance structure has proved to be very difficult.

Box 4: EPA's role in making the Ghana Poverty Reduction Strategy Environmentally Sensitive

Ghana's decision to apply for Heavily Indebted Poor Country (HIPC) debt relief in February 2001 and its need to submit this by May 2001 left insufficient time for consultations with the EPA in the production of the prerequisite Ghana Poverty Reduction Strategy Paper—a major issue given that 60 percent of the population rely on the land and natural resources use for their livelihoods. Although the National Development Planning Commission had included some environmental considerations based on inputs by the Ministry of Lands and Forests, UNDP and the World Bank, treatment was cursory and limited to "Production and Gainful Employment" thematic pillar of the GPRSP. Following pressure from the World Bank and other donors that the PRSP should include environmental concerns as a cross-cutting issue, the EPA led the production of a Strategic Environmental Assessment of the GPRSP in 2004 – an international precedent.

Source: Gadsekpos, A and L. Waldman. 2005. "I have heard about it, but have never seen it." *Environmental Considerations in the Ghana Poverty Reduction Strategy*. Study initiated under the Poverty and Environmental Partnership jointly funded and managed by CIDA, DFID and GTZ.

94. Following rationalization of sector institutions the Forestry Commission (FC) became the apex agency under the Ministry of Lands, Forests and Mines in 1999. Apart from consolidating functional responsibilities, part of the rationale of this reorganization was to reduce the cost of the civil service in line with agreed macroeconomic reforms. Accordingly, five organizations with about 6,000 staff – the Forestry Commission, the Forest Department of the Ministry of Lands and Forestry, the Timber Export Development Board, the Forest Products Inspection Bureau and the Department of Game and Wildlife – were merged and downsized under the FC that now has about 3,700 staff. Under the new FC almost three-quarters of its staff are engaged on forest-related activities in the Forest Service Division (that focuses on the high forest only) and the Timber Industry Development Division. Some 960 staff work for the new Wildlife Division. Most redundancy was among unskilled staff and many technical staff were moved into middle management positions. Management of forests in savannah zones has been transferred to the new multidisciplinary Savannah Resource Management Center in Tamale. Finally, the FC's over-reliance on expatriate consultants (that were provided freely under bilateral technical assistance) has left it technically weak now that direct project support has almost ceased. This is exacerbated by the FC's difficulty in attracting highly qualified staff on government salaries and a dynamic and growing private sector.

49. The Amendments to the Timber Resources management Act (Act 547) of 2002 and the Timber Resources Management Act Regulations of 2002.

95. The downsizing of FC staff was to be offset by passing much of the responsibility for securing reserve forest boundaries, wildlife conservation and access to local communities. While several NGOs undertake collaborative management in some wildlife reserves, for forests the response has only been partial and reserves are now generally less secure and subject to illegal logging and poaching. This is because of the lack of FC budget allocation for this work, the cessation of donor-supported projects that would have enabled this to happen, and inadequate funding from District assemblies, Stool Holders and Traditional Councils due to higher priorities (e.g. municipal development, health and water supplies etc.).⁵⁰ None of these institutions accounts to forest-using and owning communities for the royalties they receive and none of them deploys resources in development projects that could compensate communities for resource destruction.⁵¹

96. **Collection of economic rents failed and revenues suffered.** A goal of sector reform was to increase transparency and revenues for forest resources. According to the ICR, the new legislation was successful in raising the timber stumpage rate from US\$2.0/m³ to US\$11.0/ m³. Subsequent reports by the FC indicate that actual rates in 2003 were US\$2.9/ m³ or less than a third of the approved rate and even then only 90 percent of this was collected. To redress shortfalls in revenue the Annual Allowable Cut (AAC) was increased by MLF to 2 million m³ in 2002, the additional timber coming primarily from off-reserve forests and savannah that have an estimated economic life of 55 years. An additional reason for the increase in the AAC in off-reserve areas was to enable salvage of timber that might otherwise be destroyed by farmers (para 17). At the same time, responsibility for off-reserve forests was transferred from District Assemblies to the FC undermining local stewardship. Even with these changes revenue generation improved only modestly - over the period 2000-2003, for example, the FC was only able to collect revenues on half the national timber harvest because of illegal logging (Box 5).

97. **Good governance remains a problem.** Measures to introduce better governance have proved to be ineffective. The failure of the FC to properly regulate the sector reduced their internal revenues derived from fees and charges. This caused the Ministry of Finance to cut their budget because of the allegations of corruption and lack of financial transparency. In turn, this reduced FC's ability to provide support for field logistics and staff and initiated a vicious circle of mistrust that continues today and undermines sustainable forest management.⁵² This pressure from the Ministry of Finance has produced some improvements: the FC and the Office of the Administrator of Stool Lands have published six-monthly reports of the stumpage and rent reports on the FC website since 2004. Reports on the amount collected and disbursed are detailed for on- and off-reserve forests for each region. But problems remain.

50. The FC collects fees and levies from forest regulation and management. In July-December 2006 the total collected was Cedi 40 billion or about US\$ 5 million. After the FC retains 10 percent as an administration charge the remainder is split 40 percent to the FC and 60 percent to other stakeholders. Among the stakeholders the District Assembly receives 55 percent, Stool Holder 25 percent and the Traditional Council 20 percent.

51. Forest Watch Ghana. 2006. Forest Governance in Ghana – an NGO Perspective – Recommendations for a Voluntary Partnership Agreement with the EU. March 2006. Financed by DFID and the Dutch Ministry of the Environment (VROM).

52. IEG meeting with Ministry of Finance June 29, 2006.

98. **FC's responsibilities create conflicts of interest.** The FC is the regulator of the forestry sector yet it still engages in commercial activities. While the most obvious is the collection of taxes – much of which it retains – the FC also owns three timber mills and directly manages forests and plantations. Privatization and commercialization of these plantations was halted after inventories showed them to be of low value and they continue to be important sources of income for the FC. More recently, new plantations established 2003-2004 by the MLF using HIPIC funds (see para 12) were transferred to the FC's control rather than the private sector. While logging permits require EIAs issued by the EPA, the FC is a member of one of the EPA technical committees that has never enforced EIA requirements on logging concessionaires.⁵³

Box 5: Illegal logging remains a major problem

Official FC records show that in 2003 the industry consumed 1.2 million m³ and this declined to 0.9 million m³ in 2004. Independent export data collected by customs and excise revealed, however, that exports in these two years were 1.8 million and 1.2 million m³ respectively – a 30 percent difference worth about US\$ 3 million in lost stumpage in 2004. The authors state that “the industry presumably distributes such retained revenues informally among itself, FC staff and the financing of its patronage.”

Bribes continue to define how business works. Illegal chainsaw milling in the informal sector is estimated to have distributed some US\$4.5 million in 1999. Illegal felling by the formal sector in 2004 evaded US\$7 million of tax, at an estimated stumpage rate of US\$9 per m³ of roundwood. In forest fiscal reform dialogue, in 2005, one large-scale logger-produced indicated a cost of US\$8 per m³ in “informal social commitments” in order to retain traditional authority and local support for harvest operations. This does not include the bribes paid to the forest institutions and the established bureaucracy. It has been estimated that the bribes ‘to get things done’ amount to over US\$ 1 million a year.

Source: Bird and others, 2006 (op cit)

99. **Reform of the timber concession system proceeds very slowly.** The Timber Resources management Act that came into force in 1998 specified that existing concessions and leases (awarded for 30 to 40 years from the late 1980s or before) were to be converted to Timber Utilization Contracts (TUCs) within six months. The objective was to increase transparency and revenue collection against a defined harvesting ceiling for each contract and make the stumpage collection system redundant. None of the timber companies complied within the six-month period although by 2000 parliament had ratified 42 TUCs. Even so, these were cancelled by the new government on the grounds on non-transparency in 2002.

100. After amendment of the enabling legislation⁵⁴ to provide for competitive bidding and Timber Rights Fees payable by the bid winners, the new government proposed that the cancelled TUCs be returned to the bidding pool. However, the FC repackaged these TUC areas and reallocated them to the previous concessionaires in 2003-2004 on the grounds that they replaced concessions lost after some forest areas were declared protected areas or that their concessions had been so denuded of timber that they had to be retired to allow rejuvenation. These decisions are challenged in the courts by the first round TUC awardees and Forest Watch Ghana and remain *sub judice*. Since 2003, the FC conducted a further four competitive biddings. But similar to the earlier round, these

53. Bird and others. 2006. op cit. page 6. New Timber Utilization Contracts are required to have EIAs.

54. Regulation L.I. 1721 of February 2001.

became mired in legal challenges – this time brought by the timber lobby over eligibility of applicants and the transparency of the process – and this caused the four auctions for 2005 to be postponed. Another round of bidding was concluded in early 2006. The expectation that TUCs would be an effective instrument to reduce illegal logging activities is premature and reveals the tension between the MLFN and the FC (Box 6).

Box 6: TUCs were expected to reduce illegal logging

“The Minister [of MLFM] strongly condemned the unpatriotic individual Ghanaians whose activities undermine the government’s determination to replenish the stock of timber, wood fuel and protect water bodies. The Ministry is particularly concerned that chainsaw operators who are supported by some big time financiers and in some cases collude with some forest officials to plunder the forests with impunity. The Ministry is seriously working out plans to wean young chainsaw operators from the clutches of financiers who mostly cheat them. These financiers will soon be chased out of business once the competitive bidding process firmly gain root and successful bidders of the forest resources started mounting security surveillance over their lease concessions.”

Source: Ghana’s Daily Graphic. Monday, August 23, 2004.

Participatory forest management is proving difficult

101. **Inequitable distribution of benefits weakens stewardship of forests.** The fraught progress towards universal TUCs means a continued reliance on the faulty stumpage system. Because the distribution of forest revenues by the FC is contrary to the specified distribution in the constitution it is widely viewed as unfair by stool holders as subverting traditional rights.⁵⁵ The FC’s off-the-top charge accounts for 60 percent of revenues from reserves and 40 percent from off-reserves. This lowers the incentive of local government and institutions to value forests. Additionally, the FC’s right to award timber harvesting contracts to outside commercial interests without local consultation undermines local stewardship of forests. While the project helped to define the longer term forest management objectives and implementation plans in pilot subprojects for 12 reserves in line with the National Forest Plan, consultation with communities was only partially completed by project closing when funding dried-up. Follow-up and technical support now depends primarily on NGOs and very small amounts of bilateral funding.

102. Attempts to enable communities to legally harvest non-commercial timber through Timber Utilization Permits (TUPs) since 1998 have been generally ineffective. The rules governing the TUPs were to enable community representatives to participate in forest inventory before contracts are awarded and have the right of determination over who can fell trees on their farms. This is backed up by Social Responsibility Agreements under which timber companies pay 5 percent of stumpage to support local social development projects. Inventories are incomplete. Many TUPs were awarded to commercial loggers and commercial interests encouraged by lax local regulation and lack

55. Article 267 (6) of Ghana’s Constitution states that revenues accruing from stool lands should be split four ways: 10% to the administrator of stool lands; 25% to the stool for stool maintenance; 25% to the traditional authority and 55% to the District Assembly within which the stool lies. Currently the FC appropriates 60% of revenue for forest reserves and 40% or revenues derived from “off-reserves.”

of taxes for timber so derived.⁵⁶ Stumpage fees are generally less than the timber actually felled and raise local resentment. Farmers are still not recognized as owners of land and trees (para 12) and “the Forest Service Division is not complying with farmers’ demands to provide certification of ownership of timber they are planting.”⁵⁷

103. Even though the project encouraged village-level Community Forest Commissions to mobilize support for forest policy goals and to represent community interests, this remains generally ineffective because of the perceived injustice associated with the capture of major benefits by outside commercial interests with negligible local compensation. And increased conflict between commercial and local interests encourages a “race to the bottom” for scarce forest resources – thus further undermining sustainability (Box 7). This is in marked contrast to community participation successfully fostered under the savanna resources management component (para 113).

Box 7: Continued alienation of forest assets and rights from local communities undermines good forest governance and threatens resource conservation

Forest communities are confronting timber companies in an organized manner and demanding rent illegally. For example many Community Forest Committees around the Desiri Reserve in the Nkawie Forest District have set up illegal road-blocks and forcibly demanded “tolls” from passing timber trucks. Communities are also tacitly supporting raids on company concessions by chainsaw operators – who at least pay rent up front. Most significantly, however, both gangs of illegal loggers and forest-dependent communities are now willing to confront the state over resources in an increasingly violent manner. There have been repeated reports by District Forest Managers that gangs of illegal chain saw operators are prepared to resist state interference with their operations. In 2004 four timber companies in the Twifo Hemand-Lower Denkyira District of the Central Region appealed for FC and police support to halt illegal chainsaw operators. In 2005 the national media reported a three-day shoot-out between the Enchi community in the Western Region and FC officials backed up by police.

Source: Forest Watch Ghana. 2006. *Forest Governance in Ghana – An NGO Perspective*, page 17 and Sarfo-Mensah (2005 op cit) page 13.

104. To control illegal logging the project argued for a policy to regulate local level chainsaw operations through a series of permits issued by the District Assemblies and to reserve 20 percent of milled timber for local markets. Both measures failed. Permits for Chainsaw operators were ineffective because the lack of local cash resources created conflicts of interests for District Councils. And the allocation of milled timber failed because local willingness to pay was below alternative market prices open to millers – in Kumasi, for example, it was estimated that only 10 percent of timber sold locally came from the 88 local milling companies, the balance from illegal suppliers.⁵⁸

High forest management remains unsustainable

105. Despite reorganization and institutional strengthening and new or modified legislation under the project, Ghana’s high forest reserves continue to deteriorate and the government does not maximize its income from timber and forest products. The Ghana

56. TUPs were established under the Timber Resources Management Regulations of 1998. Since then the FC has awarded 125 TUPs to commercial logging companies. World Bank (2007) states (page 44) that a quarter of logs harvested by large logging companies came from TUPs.

57. Boni, S. 2006. Op cit. page 8.

58. Sarfo-Mensah, P. 2005. op cit. page 9.

wood industry and log ban export study estimated that in 1999 of the 3.7 million m³ of timber harvested, 70 percent of it was not officially sanctioned: 46 percent was done by illegal chainsaw activities and 24 percent by illegal industrial logging.⁵⁹

106. Comprehensive and up-to-date forest resource inventories remain incomplete. The exact volume of timber available for sustainable harvesting remains uncertain. It was planned that the 2001-02 inventories by the FC would update the baseline established 1987-92. However, delayed support under the project and reduced budgets led to a contracted effort that did not complete the job given its increased complexity because of the increased number of commercial species.⁶⁰ In all, inventories of only 86 of the 266 designated forest reserves were complete; the results are not yet reported.

107. Growing demand for timber and timber products continues to exceed sustainable supplies. As earlier, this is driven by continued over-capacity of forest mills, their low conversion efficiency and the need to meet domestic demand, coupled with non-compliance with laws and regulations. In 1995 the annual allowable cut (AAC) of timber was reduced from 1.2 million cubic meters to 1.0 million cubic meters, half from on-reserve forests and the balance from off-reserve forests.⁶¹ While on-reserve is managed by the Forestry Commission, the off-reserve remains (theoretically) under the jurisdiction of Stool Holders. One estimate of actual annual wood harvest based upon consumption in 2000 was calculated between three to four times the AAC or about 4.1 million m³ (Table 6). This is similar to earlier estimates (para 105).

Table 6: Ghana: Felling of industrial roundwood based upon consumption and sales

<i>Market</i>	<i>Volume of wood products (m³)</i>	<i>Conversion rate</i>	<i>Estimated volume felled (m³)</i>
Extra-regional exports	433,000	35%	1,237,000
Regional Exports	300,000	35%	857,000
Domestic market	600,000	30%	2,000,000
Total Volume	1,333,000	31%	4,094,000

Source: Ministry of Lands and Forest and the EU. 2000. Mid-Term Review of the Woodworking Sector Development Program.

108. While estimates of annual domestic demand vary, most lie between 0.3 and 0.6 million m³. Regional and extra-regional exports data are fairly reliable. Similarly the most efficient sawmills have a conversion rate of 70 percent whilst illegal chain-saw derived timber is estimated to be 20 percent giving an overall weighted average of 36

59. Bird, N. T., Fomete and G. Birikorang. 2006. *Ghana's Experience In Timber Verification System Design*. VERIFOR Case Study 1. May 2006.

60. In 1987 only 14 species were inventoried, mainly high value exportable timber (e.g. mahogany, teak). The over-felling of these species led to an expansion of the number of commercial species to 82 by year 2000. The inventory period was reduced from 18 to 12 months and was done without fully trained staff.

61. Exploitation of timber from Ghana's forest is based on the Annual Allowable Cut (AAC) which is currently fixed at one million cubic meters per year. The AAC is based on forest inventories conducted between 1985 and 1995 which established the total standing volume of timber in Ghana's forest, and hence the sustainable harvesting limit.

percent.⁶² Notwithstanding these uncertainties, even at 50 percent efficiency the volume of roundwood felled would be more than twice the AAC. In addition, Ghana has a high and growing demand for fuelwood – estimates have increased from 230 million m³ in 1995 to 320 million m³ in 2001 – and much of this is obtained illegally.

109. Independent verification of national deforestation indicated that the most recent rates are 65,000 ha a year and only 16 of the 266 designated forest reserves are in sustainable production.⁶³ Remote-sensing data using satellite imagery support these reports as a small sample shows (Table 7). While more recent remote sensing imagery is available, lack of budget and local demand has precluded ERGIS from updating these data (see para 72).

Table 7: Rapidly Dwindling Forest Area (km²)

<i>Forest Reserve/Area</i>	<i>Forest area 1932 -34</i>	<i>Forest Area 1990</i>	<i>Forest Area 2000</i>	<i>Reduction 1990-2000</i>
Skwesen 001, Sekyere District	-	56	42	25%
Tain II	509	451	108	76%
Pamu Berekram	189	91	1	99%

Source: World Bank (Ghana) and ERGIS. 2006. Personal communication

Forest Certification was introduced

110. Forest certification protocols, initiated in 1996, were field tested in 2000 supported by DFID technical assistance from the UK's Natural Resources Institute. The objective was to fully track timber from source to sales, eliminate illegal timber or timber products from entering the export system, and address concerns about sustainable harvesting practices. A secondary benefit would be increased revenues as all timber from concessions would be tracked.

111. The draft field standard and checklist for forest certification was complex as it contained over a hundred indicators of good forest practices that are generally in-line with the Bank's own recommendations.^{64, 65} Some of its complexity is caused by the need to make it compatible with the guidelines of the intergovernmental International Tropical Timber Organization and other international and regional initiatives such as the African Timber Organization. And it is this complexity that has slowed development of a practical and economically viable system.

Private sector plantation development was unsuccessful

112. Plantations were intended to relieve the pressure on natural forests. FAO reports that plantations currently provide 20 percent of exports and predict that this will rise to 50

62. Birikorang, G. 2001. *Ghana Wood Industry and Log Export Ban Study*. Forest Sector Development Project. Forestry Commission, Accra, Ghana.

63. World Bank. 2007. Ghana Country Environmental Analysis.

64. Ghana Gazette 2000b. Certification workshop. Newsletter about Ghana's timber industry, No. 19, August/September 2000, p.1

65. WWF and World Bank. 2006. Forest Certification Assessment Guide (FCAG). July 2006.

percent by 2020 as natural resources are denuded. At initiation of the plantation component in 1999 there was considerable expression of local interest that, if sustained, may have led to about 3,000 ha of plantations. It was quickly realized, however, that the proposed approach by the FC favored a top-down approach that targeted the better-off farmers and commercial interests to the detriment of the poorer and marginal farmers: the minimum qualifying plot size was five ha and there was no consideration of social forestry or integrating plantations with agriculture.⁶⁶ As a result, the Bank's two cofinancing partners (EU and AfDB) withdrew their support and this subcomponent was informally suspended.⁶⁷

Savannah resources management was successfully initiated

113. The Savannah Resource Management Center was established and fully staffed, albeit with a three-year delay due to procurement problems. At the time of IEG's visit to Tamale, staff demonstrated a thorough understanding of their mission, were multi-disciplinary and there was ample proof that they were functioning as a cross-sectoral natural resources management center. Most importantly there is substantial community involvement in small-scale subproject areas that piloted natural resource management planning and activities. Achievements under the assessed project have been substantially expanded under the follow-up Northern Savanna Biodiversity Conservation Project that started in 2003.⁶⁸

Objective 1 (c): Sustainable use of wildlife was not achieved. Efficacy is rated negligible.

114. **Wildlife management – dedicated staff but few resources.** There is institutional tension about the role of the Wildlife Department that weakens its ability to perform even though staff are highly motivated and skilled. This was not helped by the long delay in project support for this component that only started in 2002. Central budget constraints have been temporarily relieved by donor-funding but this is likely to decline as budget support replaces project funding.⁶⁹ It remains understaffed despite its increased responsibilities – as noted earlier in the Ramsar sites (para 81).⁷⁰ As a result, WLD staff feel marginalized in the new organizational set-up. Many senior FC officials see it as

66. Integrated farming and plantations are successful in Sefwi Wiawso District (Boni, 2006, op cit., page 5.)

67. Despite this set-back, a national Forest Plantation Programme was created by the President in 2002 to plant 20,000 ha per year. There is strong evidence that plantations could be financially successful as well as mitigating loss of natural forest resources and unemployment. Subsequently, the MLFN received US\$ 18.35 million from the Heavily Indebted Poor Countries (HIPC) debt relief program over the period 2003-2005 to fund plantation development under the public sector. In 2006 the plantations created were handed over to FC management.

68. The original 23 community-based subprojects created under NRMP have now expanded to 86: 36 for forestry management, 27 to game park management and 20 covering 170 communities in the wildlife east-west corridors traversing the northern savanna. The fate of 9 original projects is unknown as they were not continued under the follow-on project.

69. While salaries of WLD staff are being paid, there are few funds for fieldwork. At Mole National Wildlife Park FC budget for operational activities stopped in 2003 and bridging finance was provided by Dutch aid until November 2005. Subsequently the NSBCP provide basic overheads and fuel for operational vehicles. While considerable income is generated by park fees and the game lodge this is sent to the central treasury in Accra.

70. For example, Mole National Wildlife Park had 200 staff – 4 professionals and 196 field staff. Under plans it was agreed that a minimum staffing of 96 was needed to maintain the park and control poaching. Current staff are about 100, of whom about 40 are ineffective due to chronic illness or unsuitability.

irrelevant to their mission and a drain on scarce financial resources even though park fees and paying visitors have greatly increased. Senior MLFN official stated it should be financially self-sufficient; this tension remains unresolved.

115. In many areas there are tensions with the local communities too – particularly where newly established protected areas in former forests lead to exclusion of communities that relied heavily on non-timber forest products (NTFPs.) Even with these drawbacks, the formal wildlife reserves are generally well managed, in many cases assisted by NGOs or from small bi-lateral grants for specific community-based conservation activities (Box 5). Project support for communities near reserve boundaries focused on awareness-raising, education and development of small-scale enterprises. Most of those visited by IEG were involved in rearing giant snails, giant bush-rats (called grasscutters) for local consumption, apiary, herbs and fruit plantations to mitigate loss of NTFPs. Failure rates were relatively high because those that needed the work had inadequate resources to bridge the gestation period to sustainable production; while other entrepreneurs (mainly middle-class spouses or retired officials) generally lacked the experience to nurture these hands-on agribusinesses. Most importantly, most of those engaged were not the experienced bushmeat hunters or chainsaw operators who could make far more money following their old occupations. Thus the project made a token effort at employment generation but had little effect on poaching.

Objective 2: Efforts to promote biodiversity conservation achieved very little. Efficacy is rated negligible.

116. **Biodiversity conservation remains an uphill task.** Deforestation and loss of habitat caused by agricultural extensification, is the biggest threat to wildlife and biodiversity. The perverse incentives created by the supremacy of centralized top-down resource allocation, and the customary requirement that land has to be continually used to gain individual rights of tenure, were not addressed by the project. Instead, this GEF-supported component focused on establishing 30 globally significant biodiversity areas (GSBAs) within the high forest zone and building local support and capacity for community resource management areas (CREMAs.)⁷¹ At the time of IEG's visit only one CREMA had been created. Within the GSBAs there is considerable progress on cataloguing resources because of the interest of local NGOs many of whom are supported by external funding. However, biodiversity conservation is not always supported by local communities (Box 8).

117. The third biggest threat to biodiversity continues to grow: the bushmeat trade. This is estimated to be worth US\$200 to US\$300 million a year, and from studies in one protected area, to be worth about US\$ 4,700 a square km. Research reveals that hunters can generate incomes similar to a wildlife officer.⁷² High urban demand enables them to capture about 70 percent of the retail chopbar price that average about US\$3 per kg.

71. Wildlife Divisions, Forestry Commission. *Policy for Collaborative Community-Based Wildlife Management*, September 2000; and *A Briefing Document On Collaborative Resources Management In Ghana*, January 2004.

72. Cowlshaw, G., S. Mendelson and J. M. Rowcliffe. 2005. *Structure and Operation of Bushmeat Commodity Chain in Southwestern Ghana. Conservation Biology*. V 19, No 1, February 2005.

Licensing of chopbars⁷³ to regulate the trade have proved to be unsuccessful: the large number of actors in the trade make regulation and control very expensive. The annual four-month closed season is limited to a few species and enforcement is lax.⁷⁴ The only way to regulate demand may be to increase hunters' costs by penalties. Yet the ways to achieve this remain elusive, not least because of differing views about conserving Ghana's wildlife and the unwillingness of government to invest in non-commercial activities.

Box 8: Balancing biodiversity conservation and rural livelihoods is difficult

Farming, the major means of livelihood in forest-fringe communities, is viewed by the young men as not lucrative. Illegal chainsaw operations are considered a much quicker way of getting rich and collaboration within communities is common due to a lack of alternative livelihoods. In a recent study at Sagyimase, a community which fringes the GBSA known as the Atewa Range, some local people believe that chainsaw operations in the area sustain the local economy. Ironically, recently improved protection due to the formation of Community Biodiversity Advisory Groups in the Range's fringe communities adversely affects business in non-forest products and other socio-economic activities, further encouraging illegal poaching of forest resources. Tolerance of illegal activities has its negative side too. A common practice is that chainsaw operators also hunt for game by setting fire to fallow land and thickets thus devastating local vegetation, crops and wildlife. And because these operators are usually armed, local people can do very little to stop them, especially in the small and remote communities where they are common.

Source: Sarfo-Mensah. 2005. op cit. pages 12-15.

118. **Overall summary of findings on efficacy.** Table 8 summarizes this assessments rating of efficacy for each project's objectives and overall.

Table 8: Efficacy- Summary ratings for each project

<i>Project</i>	<i>Rating of Efficacy</i>
<i>Environmental Resources Management Project</i>	
1 (a) Improve the capacity of the borrower to manage environmental resources	Substantial
1 (b) Improve the capacity of the population to manage its environmental resources	Modest
2 GEF: Improve the management of Ghana's coastal wetlands	Modest
ERMP Overall Outcome rating	<i>Modest</i>
<i>Natural Resources Management Project</i>	
1 (a) Promote sustainable use of national land	Modest
1 (b) Promote sustainable use of forests	Modest
1 (c) Promote sustainable use of wildlife	Negligible
2 Better conserve the rich biodiversity of Ghana's forests	Negligible
NRMP Overall Outcome rating	<i>Modest</i>

73. Chopbars are small retailers of bushmeat – a place where the meat is chopped up.

74. Conservation International Ghana. 2002. Assessment of Bushmeat trade During the Annual Closed Season on Hunting in Ghana. (in collaboration with FAO Regional Office for Africa.) February, 2002.

Efficiency

ENVIRONMENTAL RESOURCES MANAGEMENT PROJECT

119. No attempt was made at appraisal to estimate potential economic benefits or efficiency, a position sustained in the ICR. This was because neither the development of environmental information systems, nor pilot projects for land and water management, nor coastal wetlands interventions, could be regarded as economically quantifiable.

120. In the absence of formal measures of efficiency, and the institutional and capacity-building nature of the project, efficiency is judged on institutional outcomes related to inputs. The efforts to strengthen the EPA suffered from delays in inputs that slowed its reorganization and ability to improve environmental regulation. Coordination and establishment of environmental information systems by concerned organizations was efficiently carried out in Accra but faltered in dissemination to Districts apart from those linked to academic organizations. The Land and Water component suffered from delays, did not eliminate organizational duplication, and only achieved two-thirds of its target, and that poorly although it ran slightly over-budget. **Overall efficiency of these three components is rated as modest.**

GEF COASTAL WETLANDS MANAGEMENT COMPONENT

121. Legislation was efficiently conducted to establish the Ramsar sites but, as with other aspects of the project, substantial delays and procurement problems delayed and undercut effectiveness even though most of the budget was spent. The efficiency of the important community development investment fund (para 83-85) is rated as negligible – but this has a minor effect on the overall rating for this component as it represents less than a tenth of the costs. **Overall efficiency of the GEF component and grant is rated modest.**

NATURAL RESOURCES MANAGEMENT PROJECT

122. The economic rate of return (ERR) was estimated at appraisal for some of the components: savannah at 13 percent and wildlife management between 19 and 31 percent depending on the relative growth of tourism and decline in bushmeat trade. No estimates were given for biodiversity. Progress under the savannah component was far less than anticipated and, again, reliable data are absent. While tourist revenues from protected areas have increased, the evidence is anecdotal and not systematically collated. No progress was made on reducing the bushmeat trade. In view of these lacuna an ex-post ERR cannot be calculated for these components. **Efficiency of these is rated modest for the land objective and negligible for wildlife and biodiversity in terms of results for the money invested.**

123. The efficiency of the high forest component was to be measured by the increase in royalties (stumpage), elimination of the export ban and the income generated by an export tax – a net present value of US\$28 to US\$78 million was projected. At the end of the project few, if any, of the predicted timber reforms were in place and data are lacking. While the allocation of FC's stumpage fees is published, there is no matching information showing the rate of collection or the volume of timber actually logged. About half the arrears of stumpage fees remain uncollected. Limited progress on TUCs led to bids of

only US \$6 million in 2006. Since 2004 there has been no export duty on lumber, veneer, and plywood and the export ban remains in effect. On the other hand, the timber industry pays zero import duties, receives rebates for operating in rural areas, and many companies involved in sale of processed wood products have set up in Tax Free Zones originally created as an incentive for new manufactures. Revenue losses to these timber companies are estimated at US\$ 4 million a year.⁷⁵ The ICR states (but does not support it with data) that the incremental benefits were US\$13.2 million over the five-year period 1999-2003 or US\$2.6 million a year. This is a tenth of the lowest expected value. Therefore, the efficiency of the high forest component is rated negligible. **In view of the dominance of the high forest and related policy reforms in terms of project costs (65 percent of total costs), the catalogue of delayed implementation, inefficient procurement, and poor quality contracting, overall efficiency of the NRMP is rated as negligible.**

124. **Summary of rating on efficiency.** Table 9 summarizes the ratings and weights used to rate efficiency in achieving project objectives.

Table 9: Efficiency - Summary ratings for each project

<i>Project</i>	<i>Weight</i>	<i>Efficiency Rating</i>
<i>Environmental Resources Management Project</i>		
1(a). Improve the capacity of the borrower to manage environmental resources	0.4	Modest
1(b). Improve the capacity of the population to manage its environmental resources	0.4	Modest
2. GEF: Improve the management of Ghana's coastal wetlands	0.2	Modest
ERMP Overall Outcome rating	1.0	Modest
<i>Natural Resources Management Project</i>		
1(a). Promote sustainable use of national land	0.2	Modest
1(b). Promote sustainable use of forests	0.6	Negligible
1(c). Promote sustainable use of wildlife	0.1	Negligible
2. Better conserve the rich biodiversity of Ghana's forests	0.1	Negligible
NRMP Overall Outcome rating	1.0	Negligible

Outcomes

125. Outcome ratings are based on the foregoing discussion that evaluated relevance of the projects' objectives and design, the efficacy and efficiency of efforts to achieve them. Table 10 summarizes the conclusions. The unsatisfactory outcome of the NRMP is the

75. Birikorang, G and M. Rhein. 2005. *Ghana Wood Industry and Log Ban Export Study*. Forest Sector Development Project (DFID).

result of the greater weight that was given to sustainable forest management – this is a precondition for achievement of most wildlife and biodiversity conservation objectives.

Table 10: Project Outcomes Rated on Achievement of Project Objectives

<i>Objectives</i>	<i>Overall Relevance*</i>	<i>Efficacy</i>	<i>Efficiency</i>	<i>OUTCOME</i>
<i>Environmental Resources Management Project</i>				
1 (a) Improve the capacity of the borrower to manage environmental resources	Substantial	Substantial	Modest	Moderately Satisfactory
1 (b) Improve the capacity of the population to manage its environmental resources	Substantial	Modest	Modest	Moderately Unsatisfactory
<i>GEF Wetlands Management</i>				
2 Improve the management of Ghana's coastal wetlands	Substantial	Modest	Modest	Moderately Unsatisfactory
<i>ERMP Overall Outcome rating</i>	Substantial	Modest	Modest	Moderately Unsatisfactory
<i>Natural Resources Management Project</i>				
1 (a) Promote sustainable use of national land	Modest	Modest	Modest	Unsatisfactory
1 (b) Promote sustainable use of forests	High	Modest	Negligible	Unsatisfactory
1 (c) Promote sustainable use of wildlife	Substantial	Negligible	Negligible	Highly Unsatisfactory
2 Better conserve the rich biodiversity of Ghana's forests	Substantial	Negligible	Negligible	Highly Unsatisfactory
<i>NRMP Overall Outcome rating</i>	Substantial	Modest	Negligible	Unsatisfactory

* Relevance given in this column is the weighted rating for each objective and design of the project to achieve it (Table 4).

Risks to Development Outcomes

126. Both projects and the GEF wetlands grant component have significant and common risks to their development outcomes.

Land management carries a high risk of not being sustainable

127. The bulk of the rural population remains dependent on agriculture and natural resources for their livelihoods and most lack secure ownership or tenure over land or associated natural resources. At the same time efforts to improve the productivity of farmers in both forest and savanna areas are targeted at the larger tenured and politically connected landowners leaving the majority that comprise the smaller farmers and tenants in subsistence. The productivity gains from increased land security are estimated to cover

13 to 19 percent of the national poverty gap.⁷⁶ Conversely, farmers with insecure land tenure have little choice but to extend their area of cultivation, mine soil fertility and illegally utilize forests for resources and farming. They have very few incentives or access to other means or credit to invest. This conflict over land rights and utilization was not addressed by the project and remains a high risk to development outcomes.

Sustainable management of environmental resources is at substantial risk

128. Much of the rural population is aggrieved at what they perceive as inequitable allocation of forest and mineral resources to commercial and other interests that have been able to secure centrally-awarded long-term leases that bypass local communities and farmers and wildlife resources. This sets local communities and farmers in conflict with government and commercial agencies and both tend to engage in resources grab that results in a “race to the bottom.”

129. Natural forests are being rapidly depleted at rates far in excess of natural regeneration. New institutions to address this remain partial and the reforms for the transparent award of TUCs remain hotly contested by commercial interests. The inability of the government agencies to effectively regulate forest resource extraction and secure economic rents has led to reduced operational budgets. And this vicious cycle further jeopardizes their field presence and effectiveness in stopping illegal timber felling and chainsaw operations.

130. Mineral extraction and new roads are a growing threat to forests and landscapes.⁷⁷ The principle risk arises from gold mining within forest reserve areas by commercial companies and illegal artisan gold miners.⁷⁸ Gold mining remains attractive to government as royalties and corporate taxes yield almost US\$90 million a year and it provides greatly needed work in rural areas. In 2003 the government announced it would open forest reserves to gold mining. Currently five gold-mining concessions within protected forest reserves are being considered.⁷⁹ In addition there are substantial reserves of bauxite within forest reserves and government is discussing long-term concessions with overseas corporations to extract them. The dilemma of how to derive economic benefits from rich natural resources with destroying the environment is not yet resolved. Risks to the natural environment from mineral extraction are locally high.

131. As a result of land clearance, unsustainable forestry practices, and the poor regulatory regime, wildlife and biodiversity are under growing threat primarily due to loss of habitat and poaching. Risks to wildlife and biodiversity are substantial.

76. Goldstein, M and C. Udry. 2005. *The profits of Power: Land Rights and Agricultural Investment in Ghana*. Yale University Working Paper. November 2005. Fertilizer use in Ghana is about 6 kg/ha, one of the lowest in Africa.

77. Under the medium-term road infrastructure program Ghana plans to construct about 2,000 km of roads.

78. The number of commercial gold mining operations is relatively small (11 major companies account for 83 percent of the gold output) there may be as many as 300,000 illegal artisanal and small-scale gold mining ventures. Source: Hilson, g. and F. Nyame. 2006. *Gold Mining in Ghana's Forest Reserves: a report on the current debate*. AREA. 38.2, 175-185.

79. Kubi Concession Ashanti Region; Ntronang Concession Eastern Region ; and the Subi, Mampon and Chirano Concessions in the Western Region.

Ghana's capacity to manage environmental resources carries a substantial risk for development outcome

132. Notwithstanding the substantial gains on environmental policy under the projects the capacity to implement it is weakened by low levels of government ownership. This has been a long term phenomena illustrated by the government's willingness to allow donor grant aid to substitute for its own resources. Recent reorganization of environmental agencies and management and its downgrading as a "non-productive" sector indicates government's waning interest in the environment despite high level rhetoric (e.g. Boxes 5 and 6). The ability for day-to-day management is further weakened by reducing agency budgets, inability to retain or attract qualified professional staff, poor regulation and corruption. The phasing-out of project support in favor of budget support, and the loss of substantial external technical support, has left technical weaknesses that are unresolved.

Bank Performance

133. **ERMP.** Quality at entry was moderately satisfactory. Appraisal covered the important issues affecting environmental resources management in Ghana but its preference for technological support and capacity-building overlooked the weaknesses in environmental policy. In particular, it did not pay sufficient attention to building financial support systems for project activities within the government – the preference being to do this through the consortium of donors. This slowed development of local capacity and maintained the over-reliance on external support.

134. Supervision was not particularly balanced or proactive when the project activities departed from the timetable. Thus the difficulties of coordinating donor financing was not addressed and each partner was allowed to proceed independently while at the same time the supervision was ineffective in bolstering government ownership. Even when it was apparent that many of the original targets would not be met, there was no attempt to restructure the program. The files indicate that this was partly due to weak managerial oversight. Initially this was because supervision was managed from headquarters, but even when the Accra office took responsibility, there was little change. **In summary, while Bank performance at appraisal was moderately satisfactory, supervision was unsatisfactory. Overall Bank performance is rated as moderately unsatisfactory.**

135. **GEF.** Quality at entry was moderately unsatisfactory. Appraisal of this separate grant component made too many assumptions about the viability of user participation despite the recognized difficulties of land tenure arrangements and traditional management practices. It failed to notice that government's proposals were at odds with traditional practice. Supervision was generally quite good, but as with other aspects of ERMP, it paid insufficient attention to needed higher level inputs to secure project funds and maintain the project timetable. The very poor performance of the community investment support fund was caused by the Bank's rushed approach to identifying sub-projects to ensure quick disbursement that wasted most of the funds. While the pollution management plant was successfully constructed on the Sakumo Lagoon, this has to be attributed to the World Bank's Urban II Project. **Supervision is rated unsatisfactory. Overall Bank performance is rated unsatisfactory.**

136. **NRMP.** Quality at entry was moderately unsatisfactory. Project appraisal was weak in that staff overly focused on the APL and paid insufficient attention to the first phase – the NRMP. While the APL was appropriate given the institutional risks, the first phase was far too complex and short given the challenges, and poor Bank management handicapped its effectiveness. Expectations were unrealistic and overly ambitious as they took little account of the earlier difficulties with capacity building, donor coordination and government's lackluster support for environmental programs. As in ERMP, insufficient attention was given to the inequitable distribution of resources and the constraining effects of faulty land tenure policies that weakened communities' participation in the wildlife and biodiversity activities. As a result, the project suffered considerable delays and had to be extended. Even so, the Bank's focus on critical environmental policy reform particularly for the forestry sector, was correct.

137. Supervision is rated unsatisfactory. Supervision was stretched between ensuring adequate attention to national policy issues on the one hand and detailed implementation in the field on the other because of the large scope and number of activities. Approving the substantial project extension when triggers were not met passed the wrong signal to government causing the project to lose its momentum. In retrospect, the Bank should have halted disbursement or restructured the project. This became particularly important once the co-financiers' support weakened and they departed from the project. As a result, while many of the important policy issues were eventually passed into legislation, their enforcement is fraught with difficulty and remains contentious. **Overall Bank performance is rated unsatisfactory.**

Borrower Performance

138. **ERMP.** Government ownership was weak throughout the project as evidenced by the totally inadequate counterpart funding and their over-reliance on donors' willingness to support project activities. While the implementing agencies made progress, for example, strengthening of the EPA after much delay, much of this was directed towards central institutions to the detriment of essential initiatives at the district level that would have supported better environmental management and peoples' participation in the field. **Borrower's performance is thus rated as unsatisfactory.**

139. **GEF.** Government ownership and performance was unsatisfactory. The appraisal team misread the environmental stakeholders' support for coastal wetlands management as strong government endorsement of the project. In retrospect the endorsement was for the grant, not for the global commons the wetlands represented. The evidence is the chronic funding shortage that reflects low government commitment, weak support for timely project execution and post-project experience. Implementing agency performance was moderately satisfactory. The coordination between the central environmental agencies and the WLD's implementation unit that resulted in procurement problems and led to extensive delays was unsatisfactory. In contrast, and within the constraints imposed upon it, the WLD performed satisfactorily. The GWS was an effective partner in raising awareness and facilitating local participation but this waned after donor funding ceased. Subsequently GWS only supports those activities that fit its agenda. Overall, despite the good performance of the implementing agencies, the lack of central government support

severely weakens project sustainability. **Overall Borrower performance is rated unsatisfactory.**

140. **NRMP.** Government performance was unsatisfactory. This project suffered from the same problems as the earlier projects. Donor-driven support for the concept overrode recognition of weak government commitment to project objectives. Government support during implementation was weak and uneven and inadequate counterpart funding led to extensive delays. Overall coordination was poor, particularly of the donor inputs. Government still does not have a coherent environmental policy and the means to provide effective environmental regulation. Implementing agencies' staff were generally highly motivated and their performance is rated moderately satisfactory despite mixed signals from the MLFN and inadequate numbers that reduced their effectiveness. Poor governance frustrated achievement of forest-sector reforms. On the whole, government's approach was centrist and top-down in resource allocation that marginalized rural people, thus increasing the risks to sound environmental management. **Overall borrower performance is rated as unsatisfactory.**

5. Looking Forward and Lessons

141. Environmental management in Ghana is at a cross roads. While the assessed projects helped Ghana to modestly build capacity to manage its natural resources and brought about reform and rationalization of sector institutions, government's demand for greater profits from the sector - particularly from forest and treecrop resources - has caused it to focus on short term gains to the detriment of long term sustainable management. Forest and wildlife management are now hostage to an acrimonious debate between the Ministry of Finance and the Forestry Commission about the inadequate revenues generated and alleged corruption that has caused Finance to freeze budgetary allocations to the Commission. This situation has been exacerbated by the 2004 reduction of royalties and fees by the Minister of Lands, Forest and Mines to placate the strong forest extraction industry.⁸⁰ Radical restructuring and downsizing of the Commission's forest management staff (in response to financial pressures) has undercut sound regulation and reduced funding for its Wildlife Division that is responsible for park and wildlife management. Poaching of timber and for bushmeat remains high with consequent adverse impacts on wildlife and biodiversity. Continued neglect of agricultural development outside the treecrop subsector has done little to raise farmers out of poverty and intensify land use, and increased agricultural production is mostly by extensification into forested and reserve areas and mining of the soil's mineral resources.

142. There is clearly a need for the integrated development of land, agriculture and

80. The Ghana Timber Association (GTA) took the FC to court on 27 April 2004 in an attempt to stop the FC from collection arrears of stumpage, public exposure of defaulting companies, and cancellation of forestry permits. On 24 June, the Chief Executive who was behind the FC clamp-down on defaulters was forced into early retirement. Shortly thereafter, the Minister adjourned the court proceedings against the Judge's protest and set himself up as a mediator between the FC and GTA. The settlement agreement effectively surrendered to the GTA's pressure by allowing harvesting of undersized timber, and delay in the payment of arrears (estimated to be at least 30 billion Cedis or about US\$ 4 million) and naming defaulting companies for 12 months.

natural resources to maintain the system in balance and develop poverty-reducing synergism. In that respect the Bank's NRM and agricultural development strategy for Ghana has been deficient. Several studies clearly illustrate the interdependence of policies affecting land, crops, fuelwood and forests and likely trade-offs.⁸¹ Yet in Ghana none of this is mainstreamed into the Bank's analytical and advisory work.

143. Despite the progress on environmental policy, almost no attention has been given by government or development partners to the problems created by insecure land tenure and the lack of incentives to conserve land, soils and biodiversity. Customary land ownership and tenure worked well in the past to conserve local environments but has proved outmoded under increasing population pressure and mobility. At the same time, government has increased its central authority to allocate natural resources and mineral rights with minimal local consultation. It has also captured most of the economic rents for the central treasury and little flows back to the communities that "own" the resource.⁸² This has marginalized local participation over natural resource management – notwithstanding the small pilot projects promoted by the NGOs and donors – and in many areas commercial interests and rural populations are engaged in conflicts over natural resources use and a "race to the bottom."

144. Ghana's environmental management, despite the earlier improvements, was recently fragmented across two ministries and one line agency. Although a sophisticated Strategic Environmental Assessment was developed (with Dutch support) in 2005 as part of Ghana's Poverty Reduction Strategy, resources to implement it are limited because of the low national priority accorded to the environment by the government. One direct result is that M&E of natural and forestry resources has languished - the last credible data being from 2000. While most believe that environmental degradation had accelerated in the last five years - particularly of reserve forests in response to agriculture, mining and illegal chain saw activities - there is little evidence on the magnitude and location of these changes. Corruption threatens the sustainable management of forest resources. Environmental management appears to be window dressing that placates the international community and hides weak government commitment.

145. The 1997 statement that "Ghana's capacity to handle various technical and managerial activities in most sectors of the economy has worsened in the last two decades, and efforts to rebuild these have not been successful" (para 52) remains true ten years later for those agencies responsible for managing the environment. Responsibility is fragmented across several agencies and regulation is lax on those natural resources that produce substantial revenue. The failure to recognize the public goods element of environmental management means that insufficient resources are directed at building

81. Nanang, D.M., and E. K. Yiridoe. 2003. An Econometric Analysis of the Causes of Deforestation in Ghana. Working Paper. Nova Scotia Agricultural College, Canada. February 2003.

82. A similar observation was made in the PPAR of the moderately unsatisfactory Mining Sector Rehabilitation Project and the Mining Sector Development and Environment Projects in 2003. A major lesson drawn was that "Effective, transparent, and equitable mechanisms for transferring resources back to communities affected by large-scale mining are essential sociopolitical tools to ensure that tangible economic benefits are felt by local people and that mining has legitimacy in the eyes of the public." In addition legalization of artisanal mining is desirable but needs to be accompanied by measures to tax and control the environmental damage caused by such mining.

staff capacity and retaining them. This is a serious constraint to sound management, more so as donors have now moved to budget support mechanisms that implicitly assume adequate institutions and capacity to derive and implement policy.

146. The Bank ceased to be a major player (with DFID and DANIDA) in Ghana's environmental management on closure of NRMP. The current and downsized Bank-GEF NRM portfolio is focused primarily on biodiversity conservation (small pilots of alternative employment generation and micro-conservation), and there is little attention to overall policy, strategic and cross-sectoral issues. The Bank's departure after 2002 from sector-wide policy-rich programs (as for example in the Forestry and NRM sectors) was judged as precipitous by DFID, the Bank's main development partner in these sectors, and had a domino-effect on overall external assistance for NRM and forestry, a trend hastened by a growing preference for budgetary support instruments among all donors. This, allied with DANIDA's departure from environmental assistance slightly earlier due to changed political and development priorities in Denmark, has greatly reduced the pressure for continued reform, institutional strengthening and capacity-building.

147. Recently renewed Bank and donor interest in the costs of environmental mismanagement may lead to reengagement. A major piece of ESW (developed collaboratively by the Bank with the French, British and Dutch) released in June 2006 at the Ghana Aid Group Meeting revealed that poor environmental resources management seriously undermines national growth. It is estimated that degradation of Ghana's renewable natural resources is equal to 5.5 percent of about US\$500 million of its annual GDP or a third of its ODA - similar to the proportion found in several MENA countries (e.g. Morocco, Syria, Egypt). Budget support could leverage development partners' environmental concerns providing they are included in the performance indicators – Ghana's Ministry of Finance and Planning, however, considers this very risky in the light of past sector performance

148. International trade may also catalyze systemic reform. Stemming from the initiatives promoted by the project, and its participation in the Yaounde ministerial meeting on African Forest law Enforcement and Governance in 2003, the government made a commitment to negotiate a Voluntary Partnership Agreement (VPA) with the EU to start a "Validation of Legal Timber Program" in 2005. Much of this new enthusiasm was driven by the fact that over half of Ghana's timber exports go to the EU and that the EU offered generous technical assistance to help build local technical capacity to monitor and enforce the VPA. Following considerable national and international discussion (assisted by EU technical support facilitated by DFID), Ghana formalized the negotiation process with the EU to enter into a VPA in December 2006 with a view to signing by the end of 2007.⁸³ This is probably a very optimistic target given that the preconditions for signature are exactly those issues that have stalled reform for the last 15 years: definition of legal timber and agreement on system for verification of legality; chain of custody; licensing; and independent monitoring. At the end of the day sound environmental resource management in Ghana will depend on commitment adequate capacity, good

83. Ministry of Lands, Forest and Mines. 2007. Ghana's Entry into a Voluntary Partnership Agreement with the EU. VPA Briefing Paper 1. February 2007.

governance and establishment of independent regulators with enough support to ensure a level playing field.

Lessons

149. Experience with this project confirms eight IEG lessons:

- **Borrower ownership is key to achieving project objectives.** It is essential to gauge support at higher levels of government than the concerned environmental agencies. Care has to be taken that international environmental pressure, vested interests and the understandable enthusiasm of the Bank's own appraisal process does not lead to financing of worthy causes that governments are unwilling to support.
- **Sound environment policy and management require inclusion of all stakeholders and incentives to keep them engaged.** Care has to be taken that individuals and community stakeholders are empowered in the decision-making process, particularly over allocation of rights to utilize natural resources. The assessed projects clearly show that insecure property rights allied with centralized, top-down award of concessions to commercial operations and capture of economic rents creates conflict and promotes non-sustainable natural resource utilization.
- **Agriculture and environment are different sides of the same coin and should not be considered in isolation.** Insufficient attention to addressing the causes of rural poverty drives people to live off the environmental commons where short-term survival interests typically outweigh consideration of longer-term stability.
- **Lack of good governance and high poverty are frequently the main risks to environmental sustainability.** Without addressing these two inter-linked issues good environmental policy, programs and projects remain a partial solution. All too often the enthusiasm for environmental rescue and 'doing something rather than nothing' outweighs the commitment to the more mundane and focused attention needed for systemic reforms and the incentive structures in other areas of the economy.
- **Capacity building can be a two-edged sword.** Poorly targeted environmental TA may be a substitute for inadequate local resources and this is potentially a serious problem when government has low project ownership. Dependence on external funding, advisory and analytical work enabled by TA, while ensuring project objectives are achieved in the short term, poses high risks to longer-term sustainability.
- **Adjustable Program Loans need to have clear objectives and performance indicators that are realistic and achievable for each phase.** The lesson of the NRMP was that the APL did not work because of highly complex and overlapping objectives, too many actors, unresolved financing problems and poor managerial oversight. A comprehensive approach to reforming environmental management need not be complex.
- **International conventions and trade agreements may provide powerful levers for reform of timber harvesting.** The key challenge is identification of the suite of minimum enabling actions and incentives to achieve reform, and agreeing to benchmarks triggering outcome-based financial aid according to negotiated

international agreements. A key requirement would be the establishment of independent regulators to ensure transparency.

- **Donor cofinancing and parallel financing to achieve a common goal coordination in projects and the rules of partnership have to be clear.** When partners operate on differing schedules and priorities there is a danger that mixed signals will be passed to the in-country stakeholders. In that respect common pool budget support mechanisms have a strategic advantage in bringing coherence to reform agendas.

Annex A. Basic Data Sheet

GHANA ENVIRONMENTAL RESOURCE MANAGEMENT PROJECT (CREDIT 2426-GH)

Key Project Data (amounts in US\$ million)

	<i>Appraisal estimate</i>	<i>Actual or current estimate</i>	<i>Actual as % of appraisal estimate</i>
Total project costs	35.9	31.4	87
Loan amount	18.1	18.5	102
Cofinancing	5.2	5.3	101
Cancellation	-	-	-

Cumulative Estimated and Actual Disbursements

	<i>FY93</i>	<i>FY94</i>	<i>FY95</i>	<i>FY96</i>	<i>FY97</i>	<i>FY98</i>	<i>FY99</i>	<i>FY00</i>
Appraisal estimate (US\$M)	2.4	7.3	11.6	14.7	17.0	18.1	-	-
Actual (US\$M)	0.8	2.1	5.1	8.8	11.2	15.7	17.9	18.1
Actual as % of appraisal	33	28	44	60	66	87	99	100

Date of final disbursement: May 12, 1999

Project Dates

	<i>Original</i>	<i>Actual</i>
Identification	04/23/1991	04/23/1991
Preparation	05/11/1991	05/27/1991
Appraisal	02/29/1992	02/29/1992
Negotiations	-	08/11/1992
Board approval	-	10/15/1992
Signing	-	12/21/1992
Effectiveness	-	03/12/1993
Closing date	12/31/1997	12/31/1998

Staff Inputs (staff weeks)

	<i>Actual weeks</i>	<i>Actual US\$</i>
Preappraisal	137.6	234.5
Appraisal	35.8	94.1
Negotiations	4.8	14.9
Supervision/Completion	173.5	380.1
Total	351.7	723.6

Mission Data

	<i>Date (month/year)</i>	<i>No. of persons</i>	<i>Staff days in field</i>	<i>Specializations represented</i>	<i>Implem. Status</i>	<i>Devel. objectives</i>	<i>Types of problems</i>
Identification/ Preparation							
	10/90	6	22	O, E, EC	n.r.	n.r.	n.r.
	11/91	8		E, DM, SP, EG, LWM, EC	n.r.	n.r.	n.r.
Appraisal							
	3/92	10	20	EC, E, DM, G, O	n.r.	n.r.	n.r.
Supervision							
	2/93	3	7	E, D, TM	S	S	P,AM,D
	5/93	2	18	E, EC, G	S	S	P,AM
	6/93	2	8	E, G, A	S	S	AS,CF
	2/94	7	24	E, EC, G, FO, B, AG	S	S	AS,CF
	5/95	4	15	FO, E, B, O	S	S	CF,D
	4/96	5	7	G, E, B	S	S	CF
	10/96	3	11	G, G, O	S	S	CF
	10-11/97	7	15	G, F, P, E, O	S	S	CF,AM
Completion							
	10/98	12	23	, E, EC	S	S	CF

AG=agriculturalist, agronomist; B=biologist; D=disbursements; DM=data/info management specialist; E=environmental specialist; EC=economist; EG=engineer; F=financial specialist; FO=forestry specialist; G=general TTL (project officer); LW=land and water mgt. specialist; P=procurement specialist; SP=survey specialist; O=other; soil specialist, human resources, sociologist, communication specialist

S=satisfactory

AM=implementing agency administrative/management; AS=implementing agency staffing; CF=availability of counterpart funds; D=donor technical assistance delays; ST=staff turnover; FM=financial management; P=procurement; n.r.=not rated

Other Project Data

Borrower/Executing Agency:

FOLLOW-ON OPERATIONS

<i>Operation</i>	<i>Credit no.</i>	<i>Amount (US\$ million)</i>	<i>Board date</i>
GEF Costal Wetlands Management	GETF 28619	8.3	8/28/92
Nature Resource Management	C3091	10.11	6/04/98
GEF Forest Biodiversity	GETF 20412	8.70	6/04/98

GHANA GEF COASTAL WETLANDS MANAGEMENT PROJECT (WBTF 28619)

Key Project Data *(amounts in US\$ million)*

	<i>Appraisal estimate</i>	<i>Actual or current estimate</i>	<i>Actual as % of appraisal estimate</i>
Total project costs	8.3	6.9	83
Loan amount	7.2	6.1	84
Cancellation	-	0.85	-

Cumulative Estimated and Actual Disbursements

	<i>FY93</i>	<i>FY94</i>	<i>FY95</i>	<i>FY96</i>	<i>FY97</i>	<i>FY98</i>	<i>FY99</i>	<i>FY00</i>
Appraisal estimate (US\$M)	0.5	2.0	4.1	5.9	6.8	7.3	7.3	7.3
Actual (US\$M)	0.2	0.3	1.1	1.5	1.9	2.9	5.1	6.1
Actual as % of appraisal	40	15	27	25	28	40	70	84

Date of final disbursement: May 18, 2000

Project Dates

	<i>Original</i>	<i>Actual</i>
PCD	-	4/15/91
Appraisal	-	2/29/92
Board approval	-	8/28/92
Effectiveness	3/12/93	3/12/93
Closing date	12/31/97	12/31/99

Staff Inputs (staff weeks)

	<i>Actual staff weeks</i>	<i>Actual US\$ ('000)</i>
Identification/preparation	23.9	59.9
Appraisal/negotiations	23.6	65.6
Supervision	114.7	205.0
ICR	14.2	35.4
Total	177.7	365.9

Mission Data

<i>Date (month/year)</i>	<i>No. of persons</i>	<i>Specializations represented</i>	<i>Implemen. status</i>	<i>Devel. objectives</i>
Identification/Preparation	6	1ML, 1SOC, 1ECN, 2ENV, 1DM		
10/90				
05/91	6	1ML, 1ECN, 1ENV (pollution specialist), 1 ENV, 2DM		
	4	1ML, 1SOC, 1ECN, 1ECL		
Appraisal/Negotiation				
03/92				
08/92	3	1ENB, AE, 1COF(ODA)		
Supervision	8	1AE, 1PO, 1EN, 1ENL, 1FO, 1AG, 1AN	S	S
05/93				
01/94	3	1ENB, 1AE, 1PO	S	S
11/94	2	1ENB, 1PO		
06/95	3	1PO, 1AE, 1ENB	S	S
04/96	3	1ENB, 1CD, 1PO	S	S
10/96 (MTR)	5	1PO, 1PROC, 1FA, 1ENB, 1RF	S	S
05/97	5	1PO, 1PROC, 1FA, 1ENB, 1RD	S	S
11/97	6	1PO, 1PROC, 1FA, 1RF, 1ENB, 1EN	S	S
05/98	6	1PO, 1PROC, 1FA, 1RF, 1ENB, 1EC	U	S

<i>Date (month/year)</i>	<i>No. of persons</i>	<i>Specializations represented</i>	<i>Implemen. status</i>	<i>Devel. objectives</i>
10/98	5	1AE, 1PO, 1FA, 1PROC, 1RF	U	S
01/99	5	1NRM, 1SOP, 1PROC, 1FA, 1RF	U	S
03/99	6	1AE, 1SOP, 1FA, 1PROC, 1RF, 1OA	U	S
ICR				
10/99	6	1AE, 1SOP, 1FA, 1PROC, 1RF, 1OA	U	S

AE	Agricultural Economist Specialist	A	Financial Analyst/Financial Management
AG	Agriculturalist	FO	Forestry Specialist
AN	Agronomist	ML	Mission Leader
COF	Cofinancier Representative (organization)	OA	Operations Analyst
CD	Community Development Specialist	PO	Projects Officer
DM	Data Management Specialist	PROC	Procurement Specialist
ECL	Ecologist	RD	Rural Development Specialist
ECN	Economist	RF	Community/Rural Finance Specialist
ENB	Environmental Biodiversity Specialist	SOC	Sociologist
ENL	Environmental Specialist (land & water management)	SOP	Senior Operations Officer
ENV	Environmentalists		

Other Project Data

Borrower/Executing Agency:

FOLLOW-ON OPERATIONS

<i>Operation</i>	<i>Credit no.</i>	<i>Amount (US\$ million)</i>	<i>Board date</i>
Natural Resources Management	C3091	10.11	6/04/98
GEF Forest Biodiversity	GETF 20412	8.70	6/04/98

**GHANA NATURAL RESOURCES MANAGEMENT PROJECT
(CREDIT 3091-GH)**

Key Project Data (*amounts in US\$ million*)

	Appraisal estimate	Actual or current estimate	Actual as % of appraisal estimate
Total project costs	29.33	22.55	77
Loan amount	10.11	9.02	89
Cofinancing	14.8	-	-
Cancellation	-	-	-

Cumulative Estimated and Actual Disbursements

	FY99	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08
Appraisal estimate (US\$M)	4.0	8.2	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3
Actual (US\$M)	0	1.6	4.6	5.7	8.7	9.0	9.0	9.0	9.0	9.0
Actual as % of appraisal	-	19	50	61	94	97	97	97	97	97

Date of final disbursement: November 23, 2003

Project Dates

	Original	Actual
PCD	-	01/31/1996
Appraisal	-	05/12/1998
Board approval	-	06/04/1998
Effectiveness	-	06/09/1999
Closing date	09/30/2000	06/30/2003

Staff Inputs (*staff weeks*)

	Actual staff weeks	Actual US\$ ('000)
Identification/preparation	115.2	399.8
Appraisal/negotiations	68.2	187.9
Supervision	162.8	487.8
ICR	13.1	41.9
Total	359.3	1,117.4

Mission Data

<i>Date (month/year)</i>	<i>No. of persons</i>	<i>Specializations represented</i>	<i>Implemen. status</i>	<i>Devel. objectives</i>
Identification/Preparation 5/3/1997	4	NAT RES. MGMT (1); AGRIC. ECON. (1); PROCUREMENT SP (1); FINAN. MGMT (1)		
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		
5/12/1998				
Supervision				
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); FIN.MGMT.SPEC. (1); PROC. SPEC. (1); PROC. OFFICER (1); LEAD FORESTRY SPEC. (1); LEAD ENV. SPEC. (1); FORESTRY SPEC. (1); PROGRAM OFFICER (1)	S	U
02/07/2003	1	FORESTER (1)	S	S
ICR				
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

Other Project Data

Borrower/Executing Agency:

FOLLOW-ON OPERATIONS

<i>Operation</i>	<i>Credit no.</i>	<i>Amount (US\$ million)</i>	<i>Board date</i>
GEF Northern Savanna Biodiversity Conservation	WBTF 5073	7.42	3/12/2002