

Document of
The World Bank

Report No: ICR2376

IMPLEMENTATION COMPLETION AND RESULTS REPORT
(TF-56616)

ON A
GRANT

IN THE AMOUNT OF US\$ 10.03 MILLION

TO THE

FEDERAL GOVERNMENT OF NIGERIA

FOR A

SECOND NATIONAL FADAMA DEVELOPMENT CRITICAL ECOSYSTEM
MANAGEMENT PROJECT

July 31, 2012

Agriculture and Rural Development Department (AFTAR)
Sustainable Development Department
Country Department AFCW2
Africa Region

CURRENCY EQUIVALENTS
(Exchange Rate Effective as of May 31, 2012)

Currency Unit = Nigerian naira (₦)
US\$ 1.00 = ₦ 155

FISCAL YEAR
January 1 – December 31

ABBREVIATIONS AND ACRONYMS

BCR	Benefit-cost Ratio
CEMP	Critical Ecosystem Management Project
CPS	Country Partnership Strategy
EMP	Environmental Management Plan
FCA	Fadama Community Association
GEF	Global Environment Facility
GEO	Global Environment Objective
ha	Hectare
IBRD	International Bank for Reconstruction and Development
ICR	Implementation Completion and Results
IDA	International Development Association
IP	Implementation Progress
ISR	Implementation Status and Results
LDP	Local Development Plan
m	Million
M&E	Monitoring and evaluation
NFCO	National Fadama Coordination Office
NFDO	National Fadama Development Office
NPV	Net Present Value
PAD	Project Appraisal Document
PCU	Projects Coordinating Unit
PDO	Project Development Objective
SLM	Sustainable Land Management
SLWM	Sustainable Land and Watershed Management
SWS	State Watershed Subcommittee

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A. Basic Information			
Country:	Nigeria	Project Name:	Second National Fadama Development Critical Ecosystem Management Project
Project ID:	P073686	L/C/TF Number(s):	TF-56616
ICR Date:	07/31/2012	ICR Type:	Core ICR
Lending Instrument:	SIL	Borrower:	FEDERAL GOVERNMENT OF NIGERIA
Original Total Commitment:	US\$ 10.03 million	Disbursed Amount:	US\$ 10.01 million
Revised Amount:	US\$ 10.01 million		
Environmental Category: B		Global Focal Area: B	
Implementing Agencies: Federal Ministry of Agriculture and Rural Development National Fadama Development Office/National Fadama Coordination Office			

B. Key Dates				
Process	Date	Process	Original Date	Revised / Actual Date(s)
Concept Review:	01/11/2002	Effectiveness:	07/25/2006	07/26/2006
Appraisal:	06/02/2005	Restructuring(s):		08/16/2010
Approval:	04/11/2006	Mid-term Review:	03/12/2007	09/15/2009
		Closing:	12/31/2011	12/31/2011

C. Ratings Summary	
C.1 Performance Rating by ICR	
Outcomes:	Satisfactory
Risk to Global Environment Outcome:	Low or Negligible
Bank Performance:	Satisfactory
Borrower Performance:	Satisfactory

C.2 Detailed Ratings of Bank and Borrower Performance			
Bank	Ratings	Borrower	Ratings
Quality at Entry:	Satisfactory	Government:	Satisfactory
Quality of Supervision:	Satisfactory	Implementing Agency/Agencies:	Satisfactory
Overall Bank Performance:	Satisfactory	Overall Borrower Performance:	Satisfactory

C.3 Quality at Entry and Implementation Performance Indicators			
Implementation Performance	Indicators	QAG Assessments (if any)	Rating
Potential Problem Project at any time (Yes/No):	Yes	Quality at Entry (QEA):	Satisfactory
Problem Project at any time (Yes/No):	No	Quality of Supervision (QSA):	Satisfactory
GEO rating before Closing/Inactive status	Satisfactory		

D. Sector and Theme Codes		
	Original	Actual
Sector Code (as % of total Bank financing)		
Forestry	23	23
General agriculture, fishing, and forestry sector	24	24
General public administration sector	3	3
Irrigation and drainage	50	50
Theme Code (as % of total Bank financing)		
Biodiversity	14	14
Environmental policies and institutions	14	14
Land administration and management	29	29
Other rural development	14	14
Water resource management	29	29

E. Bank Staff		
Position	At ICR	At Approval
Vice President:	Makhtar Diop	Gobind T. Nankani
Country Director:	Marie Françoise Marie-Nelly	Hafez M. H. Ghanem
Sector Manager:	Martien Van Nieuwkoop	Joseph Baah-Dwomoh
Project Team Leader:	Africa Eshogba Olojoba	Simeon Kacou Ehui
ICR Team Leader:	Africa Eshogba Olojoba	
ICR Primary Author (s):	Kofi Amponsah/Africa Olojoba	

F. Results Framework Analysis

Global Environment Objectives (GEOs) and Key Indicators (as approved)

The Development Objective and the Global Environment Objective of the project was to enhance the productivity of Fadama areas and the livelihood systems they support through sustainable land use and water management in the six participating states.

Revised Global Environment Objectives (as approved by original approving authority) and Key Indicators and reasons/justifications: N/A

(a) GEO Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1:	At least 60% of participating states with established sustainable watershed management coordination capacity by end of project.			
Value (quantitative or qualitative)	0	60	N/A	100
Date achieved	10/31/2007	10/31/2007	N/A	11/30/2011
Comments (incl. % achievement)	All six participating states have established State Watershed Subcommittees (SWSs), and 98 SWS meetings were held. Study on the establishment of Watershed Planning and Coordination Capacity completed with training.			
Indicator 2:	At least 35% of Fadama Community Associations (FCAs) with sustainable land and water management practices mainstreamed into their Local Development Plans (LDPs).			
Value (quantitative or qualitative)	2%	35%	N/A	100%
Date achieved	10/31/2007	10/31/2007	N/A	11/30/2011
Comments (incl. % achievement)	Of participating FCAs, 38 have all LDPs fully mainstreamed with Sustainable Land and Water Management (SLWM). Full-scale sensitization and awareness creation on SLWM.			
Indicator 3:	At least 80% increase in the area under sustainable land management (SLM) practices.			
Value (quantitative or qualitative)	10% (7,421.4ha)	80%	N/A	87.1%
Date achieved	04/11/2006	12/31/2011	N/A	11/30/2011
Comments (incl. % achievement)	As a result of sensitization, awareness, and capacity building, a total of 11,635.23 ha under SLM, including 651.58 ha planted with trees for watershed protection, 1,347 ha of forest reserve, 6,424.4 ha belonging to CEMP's direct beneficiaries, and 3,212.2 ha belonging to others.			

(b) Intermediate Outcome Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1:	By end of year 1, a framework for watershed management is prepared.			
Value (quantitative or qualitative)	0	1	N/A	1
Date achieved	10/31/2007	10/31/2007	N/A	11/30/2011
Comments (incl. % achievement)	A framework for watershed management was prepared and is in place.			
Indicator 2:	By end of project, sustainable land and water use planning are adopted by at least 50% of Fadama Community Association (FCA) members implementing LDPs.			
Value (quantitative or qualitative)	0%	50%	N/A	100%
Date achieved	10/31/2007	10/31/2007	N/A	11/30/2011
Comments (incl. % achievement)	All (100%) the FCAs members implemented their LDPs.			
Indicator 3:	By end of project, a management plan for Oguta Lake is prepared and implemented.			
Value (quantitative or qualitative)	0	1	N/A	1
Date achieved	10/31/2007	10/31/2007	N/A	11/30/2011
Comments (incl. % achievement)	Study completed with stakeholder workshop; implementation of management plan commenced with riverbank stabilization (through planting teak trees).			
Indicator 4:	By end of project, 50% of LDPs implemented and use improved groundwater management strategy.			
Value (quantitative or qualitative)	0%	50%	N/A	100%
Date achieved	10/31/2007	10/31/2007	N/A	11/30/2011
Comments (incl. % achievement)	All participating FCAs (958 subprojects) have adopted an improved groundwater management strategy.			
Indicator 5:	By end of project, 3 community forest reserves have been established in the participating states.			
Value (quantitative or qualitative)	0	3	N/A	6
Date achieved	10/31/2007	10/31/2007	N/A	11/30/2011
Comments (incl. % achievement)	Six community forest reserves identified, beacons, and digitally mapped. Management committees are in place for each reserve and implementing the management plans.			

achievement)				
Indicator 6:	By end of project, 50% of FCAs have implemented alternative livelihood activities in at least 50% of the participating states.			
Value (quantitative or qualitative)	0%	50%	N/A	100%
Date achieved	10/31/2007	10/31/2007	N/A	11/30/2011
Comments (incl. % achievement)	All 489 Fadama User Groups in the 127 participating communities are implementing alternative livelihood activities.			
Indicator 7:	By end of project, 60% of management plans are prepared for highly degraded areas and are being implemented.			
Value (quantitative or qualitative)	0%	60%	N/A	92%
Date achieved	10/31/2007	10/31/2007	N/A	11/30/2011
Comments (incl. % achievement)	Of 52 LDPs prepared, 48 were approved for implementation. The scope of work in the unapproved projects (such as dredging Andiwa Lake or restocking Oguta Lake) was beyond what the project could undertake.			
Indicator 8:	By end of year 1, project implementation, coordination, and management systems are established in coordination with the Fadama II Project.			
Value (quantitative or qualitative)	-	-	N/A	Fadama Global Environment Facility (GEF) Desk Office established within the National Fadama Development Office (NFDO) under Fadama II—the National Fadama Coordination Office (NFCO) in Fadama III
Date achieved	10/31/2007	10/31/2007	N/A	11/30/2011
Comments (incl. % achievement)	The Fadama GEF Desk Office was established within NFDO/NFCO			
Indicator 9:	By end of year 1, monitoring and evaluation (M&E) manual and an M&E plan for year 1 have been established.			
Value (quantitative or qualitative)	-	Develop M&E manual and plan	N/A	M&E manual and plan developed
Date achieved	10/31/2007	10/31/2007	N/A	11/30/2011
Comments (incl. % achievement)	M&E manual and plan developed.			
Indicator 10:	By end of project, the M&E is fully implemented and sustainable.			
Value (quantitative or qualitative)	-	-	N/A	Monitoring format utilized in tracking

qualitative)				progress
Date achieved	10/31/2007	10/31/2007	N/A	11/30/2011
Comments (incl. % achievement)	Monitoring format used to track progress. Beneficiary Impact Assessment conducted; Borrower's Implementation Completion Review conducted. Received 8 joint World Bank and Federal Government of Nigeria (FGN) supervision missions. Five Annual Work Plans and Budgets prepared, approved, and implemented, with overall performance of 99.98% disbursement status.			

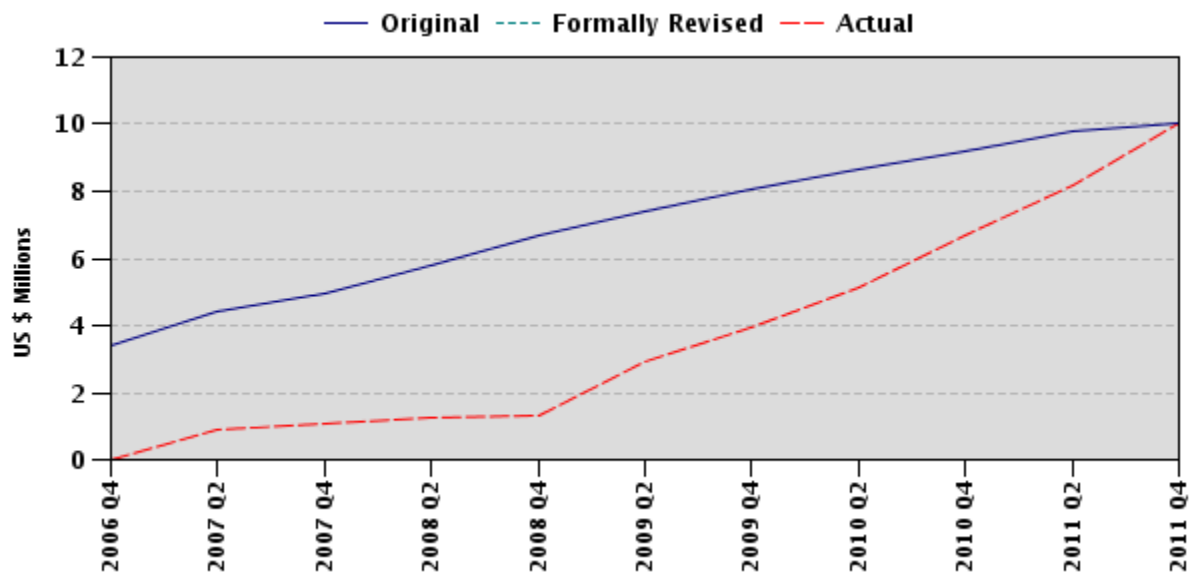
G. Ratings of Project Performance in ISRs

No.	Date ISR Archived	GEO	IP	Actual Disbursements (US\$ millions)
1	10/04/2006	Satisfactory	Satisfactory	0.85
2	05/11/2007	Satisfactory	Satisfactory	1.02
3	10/07/2007	Satisfactory	Satisfactory	1.07
11	06/14/2008	Satisfactory	Satisfactory	1.33
12	12/14/2008	Satisfactory	Satisfactory	2.80
13	06/23/2009	Satisfactory	Satisfactory	3.94
14	09/17/2009	Satisfactory	Moderately Unsatisfactory	4.37
15	01/29/2010	Satisfactory	Satisfactory	5.43
16	11/20/2010	Satisfactory	Satisfactory	7.92
17	01/16/2011	Satisfactory	Satisfactory	8.19
18	08/10/2011		Satisfactory	10.01
19	01/01/2012		Satisfactory	10.01

H. Restructuring (if any)

Restructuring Date(s)	Board Approved GEO Change	ISR Ratings at Restructuring		Amount Disbursed at Restructuring in US\$ millions	Reason for Restructuring and Key Changes Made
		GEO	IP		
08/16/2010		S	S	7.21	This restructuring (level 2) was a reallocation of funds across categories to ensure completion of groundwater studies, empower the SWS members, and increase implementation of subprojects and activities outlined in the M&E manual. The initial low level of resources was hampering implementation of time-sensitive activities.

I. Disbursement Profile



1. Project Context, Development Objective, and Design

1.1 Context at appraisal

1. At the time of project appraisal, Nigeria's institutions and governance had been weakened by prolonged political instability. Sixty percent of its rural population (about 75 million) lived in extreme poverty. Natural resources other than oil served as the main source of livelihoods for most rural people, but rural incomes and productivity had stagnated.

2. At the same time, Nigeria's natural resources suffered from overexploitation and unsustainable land use practices. Weak management of protected areas, including buffer zones, posed a serious threat to the maintenance of ecosystems and habitats as well as rural livelihoods. The natural resource sector was also beset with deforestation, large-scale land clearing, and floodplain encroachment, mainly because of efforts to expand agricultural production. Severe land erosion was the result. The loss of valuable topsoil, significant siltation of water, and flooding affected the sustainability of the Niger and Benue River systems, including the larger ecosystems depending on those rivers. Soil losses reduced the productivity of the agricultural resource base for rural communities, and floods destroyed fields and homes, leaving most of the rural poor more vulnerable than before.

3. Fadama ecosystems are found in Nigeria's wetlands and along its major river systems, including the Niger and Benue. These ecosystems support highly productive natural vegetation as well as a diversity of resident and transient wildlife. They also serve as a source of water and forage for livestock during the dry season. Despite their many advantages, Fadama ecosystems are increasingly threatened by pressure from farming and fishing, owing to a number of factors:

- A clear policy on the conversion of and open access to Fadama resources is lacking. At the productive landscape level, coherent land use and land management plans are also lacking.
- Communities have little awareness of sustainability issues related to Fadama ecosystems, and extension advisors have weak capacity to provide relevant advice.
- At all levels of government, natural resource management policy and strategy are inadequately coordinated and integrated. Gaps in technical planning are seen at the state and local government levels.
- Limited human, technical, and financial resources are available to address sustainability issues in Fadama ecosystems.
- The understanding of the interdependence between land use and water management, both within and outside Fadama areas, is weak.

4. To address these and other issues, the Federal Government of Nigeria developed a medium-term plan aimed at achieving over five percent growth, mainly in the non-oil sector. The plan was implemented through a National Economic Empowerment and Development Strategy (now known as Nigeria Vision 2020), over 2004–09. Environment was one of the four key

dimensions of this strategy, which envisioned a large, strong, diversified, sustainable, and competitive economy for Nigeria by 2020.¹

5. The Critical Ecosystem Management Project (CEMP) was closely linked to the International Development Association (IDA) Fadama II Project (Credit 3838-UNI) approved on December 16, 2003. It was intended to be fully blended and implemented simultaneously with Fadama II project. However, due to GEF processing delays, the second Quality Enhancement Review meeting of Fadama II project held on November 25, 2002 recommended the delinking of CEMP from the Fadama II operation, and it was approved two years after the “parent” Fadama II project. CEMP was fully mainstreamed into Fadama II to contribute directly to Fadama II objectives and achieve incremental regional and global environmental benefits. For this reason, CEMP’s areas of intervention and beneficiaries were the same as those of Fadama II. The same institutional arrangements were used for the two projects. Finally, as in Fadama II, communities expressed their needs through Local Development Plans (LDPs). The option for preparing a stand-alone GEF operation, which focused on sustainable land management in Fadama areas, would have led to significant inefficiencies (management, M&E, consultations, etc.). It would have also over-burden Fadama communities with separate planning processes as well as missing a major opportunity to integrate the issues of Fadama ecosystem health with those of community livelihoods and well-being into a single development program. Therefore, the need to mainstream the CEMP with Fadama II was glaring, and also meant that the stand-alone project was rejected.

6. The GEF support provided through CEMP was in the form of grant financing, using a demand-driven approach for two types of alternative land use practices: (i) land use changes in critical areas, such as riverbanks, flood-prone areas, groundwater recharge areas, and forest or natural habitats of significant biodiversity value and (ii) sustainable agricultural practices in Fadama areas added to IDA-supported LDPs. Specific sets of criteria were developed for communities to access grant support for activities that promoted sustainable land and watershed management (SLWM). Major activities supported under this component included: (i) Fadama biodiversity conservation; (ii) alternative livelihoods in highly degraded critical Fadama areas; (iii) energy-efficient use of solid fuels for watershed protection and carbon sequestration; (iv) community woodlots on riverbanks and other degraded areas, and (v) sustainable indigenous farming practices, such as reduced tillage methods, nutrient management, soil and water conservation techniques, and efficient pasture and rangeland management.

7. The project was aligned with the Bank’s Country Partnership Strategy (CPS), which focused on poverty reduction. The CPS identified three priority areas for Bank support: good governance, poverty reduction, and community empowerment and social inclusion. The CPS fully supported the government’s strategy for rural development that rests on five pillars: (a) increasing yields; (b) producing higher-value crops and livestock; (c) reducing agriculture outputs losses; (d) strengthening linkages in the rural economy and incomes in rural non-farm enterprises; and (e) reducing conflicts between various Fadama user groups. The Fadama II project supported the government strategy by empowering local communities for their own

¹ The other dimensions were social, economic, and institutional. See “Nigeria Vision 2020 Economic Transformation Blue Print” (October 2009) and “Nigeria Economic Empowerment and Development Strategy” (2004).

development by providing funds and facilitating support to help them utilize these funds in a responsible manner. Thus, while Fadama II was aimed at poverty reduction, the GEF assistance (CEMP) was instrumental in enabling the country to maintain the productivity and ecological health of the Fadama resource base, with impact on the regional and global environment, including enhanced capacity for managing Fadama resources within a river basin and watershed planning context; and support for community investments in ecological services.

1.2 Original Project Development Objectives (PDOs) and Key Indicators

8. The development objective of the project was to enhance the productivity of Fadama areas and the livelihood systems they support through sustainable land use and water management.² To achieve this objective, the following key performance indicators were agreed at appraisal:

- By the end of the project, sustainable watershed management coordination capacity is established in at least 60 percent of the participating states.
- By the end of the project, sustainable land and water management practices are mainstreamed in LDPs in at least 35 percent of the Fadama Community Associations.
- By the end of the project, the area under sustainable land and water management practices in the three pilot sites has increased by at least 80 percent.

1.3 Revised PDO (as approved by original approving authority) and Key Indicators, and reasons/justification

9. There were no revisions to the PDO and the key indicators.

1.4 Main beneficiaries

10. Fadama II, as a whole, is aimed at improving the incomes of about 2.3 million rural households whose livelihoods depended directly or indirectly on Fadama resources in 18 of Nigeria's 36 states. The GEF intervention financed the incremental costs and targeted 20 percent (about 400,000 beneficiaries³) in 6 of the 18 states covered by Fadama II. The project states (and sites) include: Imo (Oguta Lake); Kebbi (Jega and Dimbegu); Kwara (Ajassee-Ipo); Kogi (Koton Karfe); Ogun (Eriti); and Bauchi (Andiwa Lake). The project reached Fadama users, who were the same as Fadama II beneficiaries in the project's intervention areas, through Fadama

² A slight discrepancy exists between the formulation of the PDO in the Financing Agreement and the Project Appraisal Document (PAD). The PAD was specific in referring to the six participating states (Bauchi, Imo, Kebbi, Kogi, Kwara, and Ogun); the Financing Agreement was not. The ICR team noted this discrepancy and used the PDO formulation in the PAD as a reference. Project results therefore refer to achievements in the six states.

³ The choice of the 6 participating states was based on a study: "Socio-Ecological Survey of Fadama Critical Ecosystems" supported by GEF project preparation grant. The study showed Fadama areas experiencing land and water degradation. The severity of the degradation informed the selection of the intervention sites in the selected participating states.

Community Associations (entities created by the project and registered as cooperatives), relevant community groups, and NGOs to foster the adoption of sustainable land use and agricultural management practices that would improve local livelihoods and the sustainability of Fadama ecosystems at the watershed level.

1.5 Original components

11. The project comprised four components: (i) capacity building, (ii) integrated ecosystem management at the watershed level, (iii) community sustainable land management, and (iv) project management and monitoring and evaluation (M&E).

Component 1: Capacity Building

(US\$ 22.95 million, of which US\$ 1.42 million financed by GEF)

12. The objective of this component was to build capacity in sustainable land and watershed management among groups of stakeholders in the six states covered by the project. Stakeholders included relevant federal, state, and local governments; NGOs; community-based organizations; and Fadama users. Stakeholders' capacity would be strengthened through specific awareness-raising programs, workshops, and technical training. Component 1 also aimed to improve the policy and institutional framework related to Fadama ecosystems through a review of federal policies and legislation on watershed management and an ecological assessment of GEF interventions for watershed management at all levels of government in Nigeria. This component also supported development of a framework for state-level coordination and M&E of watershed management activities among key state agencies, such as environment, agriculture, forestry, and natural resources.

Component 2: Integrated Ecosystem Management at the Watershed Level

(US\$ 8.81 million, of which US\$ 4.08 million financed by GEF)

13. The objective of this component was to improve the management of critical watersheds in pilot Fadama areas to ensure their sustainability and productivity. This objective was to be achieved by implementing technical, social, and location-specific activities with high potential for scaling up and replication. The component sought to: (i) strengthen watershed planning and coordination mechanisms among state agencies; (ii) ensure sustainable management of forest resources by developing community forest reserves in highly degraded and conflict-ridden rainforest and savannah areas in Fadama ecosystems; (iii) develop a lake management plan for a Ramsar site;⁴ (iv) conduct a study to understand the impact of upstream reservoir management and river flow regime on Fadama areas; and (v) develop a monitoring plan to improve the management of groundwater and shallow aquifers in selected Fadama areas.

Component 3: Community Sustainable Land Management

(US\$ 14.05 million, of which US\$ 3.96 million financed by GEF)

⁴ A site designated as internationally important under the Convention on Wetlands, adopted in Ramsar, Iran, in 1971.

14. The objective of this component was to support a range of advisory services, training, information sharing, awareness programs, and adoption of land use practices. Through Fadama Community Associations, the component would support Fadama users to adopt sustainable land use and agricultural practices to enhance the structural and functional integrity of Fadama ecosystems and improve rural livelihoods. The component also aimed to finance two types of demand-driven alternative land use practices: (i) land use changes in critical areas (such as riverbanks, flood-prone areas, or groundwater recharge areas) and forest or natural habitats of significant biodiversity value and (ii) sustainable agricultural practices in Fadama areas.

Component 4: Project Management and Monitoring and Evaluation (M&E)

(US\$ 7.41 million, of which US\$ 0.57 million financed by GEF)

15. The objective of this component was to strengthen project management mechanisms, including implementation of a sound M&E system. The component sought to strengthen the effectiveness and quality of project operations at the federal level by establishing the National Fadama Development Office as an integral part of the Projects Coordinating Unit (PCU) of the Federal Ministry of Agriculture and Rural Development. The National Fadama Development Office would include a GEF Desk run by a GEF project officer. The component would also establish State Fadama Development Offices with environmental officers tasked with coordinating the GEF program at the state, local government, and community levels. An M&E system would be implemented to measure the project's performance at all levels and would include: (i) a Management Information System integrating efforts in the National Fadama Development Office and State Fadama Development Offices with data generated by Fadama Community Associations; (ii) impact evaluations and beneficiary assessments to enhance project implementation; (iii) monitoring the project's Environmental Management Plan, which included mitigation measures related to agricultural production, processing, and marketing for incorporation in LDPs; (iv) institutional capacity strengthening in environmental impact assessment and integrated pest management; and (v) monitoring the performance of GEF activities.

1.6 Revised components

16. The components were not revised.

1.7 Other significant changes

17. A level 2 restructuring on August 16, 2010 essentially reallocated funds among project categories to meet two needs. The first was to empower members of State Watershed Subcommittees (SWs) in participating states to follow up and provide add-on activities that could be implemented through subprojects. The second was to increase disbursement to ensure speedy completion of groundwater studies and implement activities outlined in the M&E manual. The reallocation provided additional resources in the amount of US\$ 374,000 for training/workshops and US\$ 920,000 for incremental operating cost categories to execute activities critical to successful implementation and completion. The initially low level of resources allocated to these categories hampered the implementation of time-sensitive activities.

2. Key Factors Affecting Implementation and Outcomes

2.1 Project preparation, design, and quality at entry

18. Preparation of the CEMP proceeded smoothly from identification to appraisal and board approval. As noted, the project was mainstreamed into Fadama II, so its design benefited from implementation arrangements for that project, especially arrangements for fiduciary processes and M&E. To sharpen the focus of the GEF interventions, the preparation team designed the project to include a Fadama GEF Desk Office, headed by a natural resource officer from the Federal Ministry of Environment, to oversee and supervise the implementation of GEF interventions at the national level. The team also designed CEMP to include subcommittees to coordinate watershed management at the state level (the SWSs); and established the linkages between the project and Fadama II through (i) the adoption of the same beneficiaries in the intervention areas (see section 1.4); (ii) the use of the same local development plans to express the needs of the communities; (iii) the use of the same local facilitators, and (iv) the use of the same implementation agency as in Fadama II.

19. The preparation team adequately analyzed country and sector background information to identify the key issues confronting the sector. More specifically, the team conducted a comprehensive analysis of Fadama areas, which revealed that increasing pressure from farmers and pastoralists was leading to land degradation, a major natural resource management concern. In designing the CEMP, the team also incorporated lessons from the National Fadama Development Project (Fadama I), the Local Empowerment and Environment Management Project, and successful pro-poor interventions under the main Fadama II Project. The key lessons were to: (i) empower communities with resources to improve their capacity to implement subprojects; (ii) adopt a socially inclusive approach to LDPs, which were considered very effective in managing community conflicts; and (iii) harmonize LDPs to standardize subproject documents and technical designs. Innovatively, Fadama II had increased assets held by beneficiary communities and enabled them to acquire and use additional income-generating assets. This experience helped the team to develop and incorporate innovative alternative livelihood activities into the CEMP to protect areas of critical ecological importance. The activities included the adoption of sustainable agricultural practices that would increase the incomes of Fadama users.

20. Given that stakeholder consultation and involvement are critical to the success of community-driven development projects, the team consistently ensured the involvement of all stakeholders, including the beneficiary states, at each stage of project preparation. At the Federal level, the team ensured strong collaboration with the relevant ministries, including the Federal Ministry of Environment and Federal Ministry of Agriculture and Rural Development. Key sector development partners, particularly the African Development Bank, also participated fully. The team thoroughly assessed risks that could potentially hamper smooth implementation of the project and instituted appropriate mitigation measures. Prominent risks were that Fadama users would be unwilling to practice new, more sustainable approaches to Fadama land use (including agriculture); insufficient capacity at the state level to pursue activities related to CEMP; and the government's unwillingness to create coordinating mechanisms for integrated watershed ecosystem management. The financial management assessment found that the arrangements

established under the main Fadama II Project would be satisfactory for CEMP, provided some weaknesses such as inadequate record-keeping, weak internal controls, and inadequate internal audit arrangements were corrected. However, the project design of CEMP included no specific action plan about these weaknesses, since the accounting, reporting, and auditing arrangements of CEMP resided in the financial management unit of the Fadama II project and in view of the fact that it was agreed that these weaknesses would be addressed by the Fadama II project before effectiveness of CEMP.

21. After successful negotiation in September 2005, the Board approved the project on April 11, 2006. The grant agreement was signed on April 26, 2006, and the project was declared effective on July 26, 2006.

2.2 Implementation

22. Project implementation started slowly, as reflected in the 32-month lag in disbursements as of September 2009. The Panel for Quality Assessment of Lending Portfolio (FY09) rated implementation progress as moderately satisfactory, in line with the September 2009 Implementation Status and Results (ISR) rating.⁵ Section 2.4 (fiduciary compliance) describes the key factors responsible for sluggish disbursement. The panel still rated the achievement of development objectives as likely, however.

23. Implementation performance improved significantly during and after the Mid-term Review (November 15–22, 2009). At mid-term, the project had made modest progress toward the PDO. The project had established the SWSs, which were fully operational, and had conducted awareness campaigns on integrated ecosystem management in the six participating states. The SWSs provided technical input into the various awareness campaigns and sensitization for Fadama Community Associations and Fadama User Groups to produce development plans (LDPs). Also at mid-term, the project had completed three studies on integrated ecosystem management and five of six key studies on sustainable management of forest reserves in the participating states.

24. The results and recommendations of some of the studies influenced project implementation. This includes: the study of the sustainable landuse planning at watershed level, which resulted in 100% of the FCAs adopting sustainable landuse planning practices in the implementation of their LDPs; the study on improved groundwater management in the six intervention sites recommended monitoring of groundwater in Fadama areas. To this end, in each of the six intervention sites, three monitoring wells were installed and farmers were trained on how to collect and interpret data from these wells and utilize them for Fadama activities; and the recommendations of the study on the review of policies and regulations on watershed management were implemented effectively, in particular that of defining roles and responsibilities of institutions involved in watershed management. The report after the review of the existing regulation and policies outlined a national watershed management policy and action plan that takes into account the interrelationship between natural resources within a watershed. The Federal Ministry of Environment is in the process of preparing a policy note on the action plan.

⁵ Quality Assessment of Lending Portfolio (QALP-2), Investment Lending Guidance Questionnaire, FY 09, and Implementation Status and Result Report #7, September 2009.

25. The lack of logistical support for state environmental officers had affected regular supervision. Except for Kwara State, none of the other states had vehicles to embark on effective supervision, as vehicle purchases were considered off-project expenditures. The weak capacity of personnel in M&E and financial management at the local government and community level influenced project implementation. The Mid-term Review recommended actions to improve implementation, including capacity-building activities in the three core areas: M&E, financial management, and procurement. Project staff proactively implemented those recommendations and implementation improved.

26. Linkages and coordination between various institutions at the national, state, and local levels were central to the success of the project. The Fadama GEF Desk Office, created at the national level to augment project-specific institutions, provided additional impetus to implement the project. At the state level, environmental officers in the State Fadama Coordination Office were given additional responsibilities for day-to-day implementation of project activities. At the community level, the Local Fadama Development Committee was responsible for developing subproject proposals. The State Fadama Development Office reviewed the proposals to ensure consistency with Fadama II objectives, and the Environmental Officers, with the SWSs, further reviewed the proposals to ensure consistency with GEF objectives. These linkages and close working relations among state institutions, facilitated by the SWSs, tremendously improved project implementation.

27. The participatory and socially inclusive approach used to develop LDPs positively affected implementation. Fadama Community Associations and Fadama User Groups were empowered to identify subprojects and prepare their LDPs in a participatory manner. The fully functional Local Fadama Development Committees, which received, screened, and approved proposals, ensured smooth implementation of project activities. Other factors that improved implementation included: (i) the recruitment of an operations/GIS analyst, M&E officer, and an accounts supervisor to support the Fadama GEF desk officer and (ii) the provision of equipment (such as laptop computers, mapping and survey equipment, cameras, and GIS software) to staff at all levels of project implementation.

2.3 Monitoring and evaluation design, implementation, and utilization

28. The project used the M&E framework designed for Fadama II. At the national level, a monitoring template that contained the output indicators was used to track data on a quarterly basis. At the state level, the M&E officers of Fadama II were responsible for monitoring and reporting data. A major M&E problem occurred prior to the Mid-term Review, however, when qualitative updates of ongoing activities were substituted for reporting against quantitative indicators, resulting in a moderately satisfactory rating for M&E in the September 2009 ISR. The national M&E unit resolved the problem by organizing training for state M&E staff, and the January 2010 ISR rated M&E as satisfactory.

29. It emerged at mid-term that some state M&E officers focused more of their effort on the Fadama II Project than on GEF interventions, which inhibited data collection and reporting on those interventions. The national M&E unit therefore carried out intensive sensitization efforts

for state M&E officers, in addition to developing and distributing a standardized monitoring format for all state M&E officers. This action greatly improved the collection, reporting, and use of CEMP data.

2.4 Safeguard and fiduciary compliance

Safeguards

30. The project was classified as Category “B” and complied with all safeguard requirements. The project triggered two safeguard policies: Environmental Assessment (OP 4.01) and Involuntary Resettlement (OP 4.12). Under the main Fadama II Project, an Environmental and Social Management Framework, including environmental and social checklists, was prepared, and this instrument was adopted for the CEMP. The checklist was used to screen 958 subprojects across the six intervention sites. It is important to note that no noticeable safeguard issues were identified during implementation, and none of the subprojects or other project activities led to involuntary resettlement.

31. The project developed, reviewed, and certified forest management plans in accordance with World Bank standards for forest management. These plans were developed with full participation of locally affected communities, consistent with the principles and criteria of responsible forest management. Taking cognizance of lessons from implementing Fadama I, and to guide against the recurrence of conflict between farmers and pastoralists, the project team consulted extensively with community leaders and properly documented land acquisitions to forestall future conflicts. To prevent duplication of effort and wastage of scarce resources, an environmental safeguards audit was conducted under the ongoing Fadama III Project, which covered the CEMP’s six intervention sites.

Fiduciary compliance

32. The project complied fully with the Bank’s fiduciary policy and procedural requirements. The project submitted regular Interim Financial Reports, and accounts were fully audited and up to date. The project established an innovative direct transfer mechanism, which allowed funds to be transferred directly to beneficiaries upon satisfactory completion of their respective LDPs. This approach led to the successful implementation of subprojects in all six areas.

33. Initially, project implementation was slowed because Fadama User Groups and Fadama Community Associations had limited capacity to manage the grant proceeds and states did not withdraw funds in a timely way from the imprest accounts into which funds were transferred on a quarterly basis. Because the accounts could not be replenished until the states had withdrawn the funds, disbursement was delayed considerably. At mid-term, a decision was made to stop replenishing accounts of the affected states unless they submitted retirements of previous accounts, acceptable to the national CEMP desk office, within 21 days following the end of the quarter in which the advances were made. This measure, coupled with constant follow-ups by the Bank’s Financial Management Unit, corrected this situation, and the project did not experience undue disbursement delays thereafter.

34. At mid-term it also became clear that the accountant's significant workload prevented him from dealing with critical issues (such as the preparation of annual management receipts and payment reports) and prevented the Fadama GEF Desk Office from obtaining information for decision making. The Mid-term Review strongly recommended the appointment of an accounting assistant to handle cash book preparation, analyze inflows and outflows of project funds, maintain subsidiary ledgers, prepare payment vouchers, and maintain bank statement files. This measure significantly improved the accounting and reporting of project funds and disbursement. Other issues related to financial management were the use of a manual accounting system, failure to maintain a cash book for special accounts, and the absence of bank reconciliation statements. Upon recommendations from the Bank's financial management team, the PCU made a concerted effort to build capacity at the local level and improve the overall financial management system, including computerization of the accounting system.

35. The project initially encountered problems with the payment of counterpart funds. Following intensive consultation with government, regular payments were subsequently received from the main Fadama II Project.

36. Procurement was judged satisfactory by the Bank's procurement team, and no major procurement issues arose during implementation. Most procurement was done at the federal level. At the state level, the project adopted a community-based procurement approach for subproject activities. The PCU staff of the main Fadama II Project could not cope with the volume of procurement, however. The problem was resolved by hiring more staff, but some studies were delayed initially by procurement delays.

2.5 Post-completion operation/next phase

37. Under Fadama III, GEF financing was mobilized in an amount of US\$ 6.8 million to follow up on successful experiences and lessons from the CEMP. The aim of the financing is to: (i) enable Fadama User Groups and Fadama Community Associations to identify and address sustainable land management issues and (ii) support stakeholders and subnational governments to better implement sustainable land management based on capacity development, knowledge, investments, and monitoring of results. GEF support is also incorporated into technical options for sustainable land management, including local land use planning, the community-driven development framework, and the LDP tools. The newly approved Nigeria Erosion and Watershed Management (NEWMAP), which was approved in the amount of US\$ 500 million also aims to address land degradation and in particular soil erosion in targeted sub-watersheds. NEWMAP is blended with GEF financing (in an amount of US\$ 3.96 million) and the Special Climate Change Fund (SCCF) funds (in an amount of US\$ 4.63 million). The GEF and SCCF grants are intervening to support the development of replicable local and community innovations on climate adaptation and soil, water, and biodiversity conservation that can be scaled up within the broader project. The project will deliver global environmental public goods by enhancing below and above ground biodiversity, reducing land degradation and terrestrial carbon emissions.

3. Assessment of Outcomes

3.1 Relevance of objectives, design, and implementation

Rating: High

38. The project's objectives, design, and implementation were and continue to be entirely relevant to, and consistent with, national policies and strategies, including global environment priorities and the Bank's CPS. The CPS outlines the Government of Nigeria's seven strategic priorities (critical infrastructure, the Niger Delta, food security, human capital, land tenure changes and home ownership and wealth creation), in which land degradation is identified as a major challenge confronting inhabitants of Fadama areas and the Niger Delta. The Economic Transformation Blue Print (Vision 2020) underpins the government's strategic priorities. It specifically stipulates that the government's key strategic objectives include: preventing the loss of biodiversity, restoring already degraded areas, protecting ecologically sensitive sites, harnessing and sustaining natural resource use, halting land degradation, rehabilitating degraded areas, combating desertification, and mitigating the impacts of drought. The project had strategic relevance because it complemented the larger IDA Fadama II project in six selected states (of the 18 covered by the Fadama II project) by adding sustainable land and watershed management-related interventions such as shelter belts, orchards, community woodlots, and roadside tree planting that contributed to the protection of the Fadama natural resource base.

39. The project goals in terms of enhancing the productivity of Fadama areas and the livelihood systems they support through sustainable land use and water management were clear and appropriate concerning the priorities of the main Fadama II project. The design of the components was also appropriate at that time as the project was intended to complement Fadama II project through interventions in sustainable land and water management practices in Fadama areas. The project approach is still relevant to the rural development strategy of Nigeria as reflected in the design and implementation arrangements of the GEF-SLM project (The GEF component of Fadama III project). The GEF-SLM project intends to improve the enabling environment for scaling up sustainable land management in participating communities, thereby building on the results recorded by the CEMP project. For these reasons, the overall relevance is rated high.

3.2 Achievement of Project Development Objective

Rating: Satisfactory

40. The CEMP greatly achieved its development objective. The project helped to establish SWSs in the six participating states and enabled Fadama Community Associations to mainstream sustainable land and water management practices into their LDPs with practical evidence of enhanced productivity of their livelihoods. It also increased the area under sustainable land management practices in three pilot sites: the Oguta Lake, Andiwa Lake, and Eriti Watersheds.

41. Conservation strategies and sustainable farming practices adopted includes the use of contour farming techniques to minimize soil erosion, establishment of woodlot for fire wood, use of organic manure, establishment of vegetation buffer strips along the river banks, reduction in

the use of fire during land preparation, elimination of obnoxious weeds, enlightenment campaigns on negative impacts of bush fire, prohibition of the use of herbicides and pesticides near farmlands etc. This effort led to the combined 43,568.55 ha of land put under sustainable land management in the six intervention sites, and will assist in addressing land degradation, desert encroachment and carbon sequestration. ***The 43,568.55 ha will remove about 2,904.57 tons of carbon dioxide in the atmosphere annually and help in combating desertification (IIRR, 2005: Linking People to Policy, p.48).*** This is a significant improvement from the baseline land degradation and environmental problems across the six intervention sites.

42. The productivity of Fadama areas and the livelihood systems they support also increased during the project period based on the adoption of SLM practices. For instance, trees planted in project sites via community woodlots, shelter belts, road side tree planting, orchards and wind breaks greatly reduced water and wind erosion, served as a carbon sink, stabilized soils, helped stabilize riverbanks, enhanced the river filtering system, and performed other ecological functions that reduced and reversed land degradation and improved the productivity of Fadama areas. Most of the trees planted are economic trees, which not only generate economic returns but are more likely to be maintained, thus ensuring future environmental protection and sustainability and enhancing beneficiaries' livelihoods. Over 60 participating communities implemented alternative livelihood activities. The beneficiaries implemented about 10 different alternative livelihood activities (e.g. apiary, grass cutter and rabbit rearing, fattening of ruminants, snailry), which represented 438 sub-projects. The productivity of the high value crops grown by the beneficiaries were tracked during the life of the project and the result is summarized in Table 2.6). As indicated in the table, the yield of 18 cultivated crops in the intervention sites increased significantly during the period, ranging from 0.61% to 275.52%. This is due to the land management practices as well as additional land areas put under sustainable land management practices. Tables 2.7 and 2.8 also showed the summary and disaggregation of land areas put under sustainable land management in the six intervention sites.

43. The achievement of the PDO was enhanced through the consistent focus on the three sub-objectives of the CEMP interventions as aligned with the agreed key performance indicators of the project. These are:

- ***(DO1) build capacity for sustainable Fadama natural resource management at national, state and local government levels:*** The project strengthened the capacity of stakeholders at the institutional and watershed level by equipping them with skills, knowledge, and expertise to effectively carry out their activities and by setting up a framework for watershed management. At the project's inception, no watershed management framework was in place for Fadama Community Associations to adopt. By undertaking four studies (including a baseline study), developing training tool kits, and developing farming system models, a framework for watershed management was established to ensure the sustainability of development plans at the community level. Over 100 percent of the Fadama Community Associations adopted sustainable land use planning practices in the implementation of their LDPs. About 47 LDPs were produced and implemented. The project also supported completion of a review of watershed policies and regulations, and the recommendations were implemented effectively. The project also facilitated 98 quarterly meetings, with representatives from about 12 sectors,

for SWSs in the six states. All Fadama Community Associations were sensitized to watershed management approaches. Now, they can prepare and implement their respective frameworks for watershed management. The performance indicator aligned with DO1 was specified as *“At least 60 percent of participating states with established sustainable watershed management coordination capacity”*: This indicator was fully achieved. At baseline, the sector was beset with ineffective coordination among state agencies with mandates related to land and water management. The project succeeded in establishing SWSs in all the six participating states. Members of the SWS, in all the participating states, received the following trainings: (i) sustainable land use planning at watershed level, (ii) improving the sustainability of development planning at the community level, and (iii) integrated farming and sustainable agriculture at the Songhai farms in Benin. With improved capacity, the SWSs held about 98 meetings, and completed a study on the establishment of Watershed Planning and Coordination Capacity.

- ***(DO2) integrated ecosystem management in selected watersheds through sustainable management of key forest areas, buffer zones, and wetlands and improved water management:*** CEMP financed a range of advisory services, including training, capacity building, and awareness creation campaigns on watershed management that ensured the protection of critical watersheds and improved water management. All 958 subprojects included within LDPs featured better groundwater management by planting trees and pursuing related subprojects. To ensure effective data collection, a study on improved groundwater management and the impact of reservoir management was completed. The project also supported the identification of six community forest reserves compared with its target of three; all six have been beaconed and digitally mapped. The project identified and supported the management of more than 18,800.97 hectares of forest reserves in the six intervention sites, where about 15, 853.40 hectares of beneficiaries’ farm holdings have come under sustainable land management practices. The combined area under sustainable land management in the Andiwa Lake, Lake Oguta, and Eriti Watersheds rose from a baseline of 7,421.4 hectares to 11,635.23 hectares by the end of the project. The agreed performance indicator aligned with DO2 was stated as: *“At least 35 percent of Fadama Community Associations with sustainable land and watershed management practices mainstreamed into their local development plans”*: This indicator was fully achieved. At the project’s inception, less priority was given to sustainable land and watershed management, and only 2 percent of the Fadama II LDPs in the project’s intervention sites featured sustainable land management practices in the form of advisory services. By the end of the project, 100 percent (38) of the Fadama Community Associations in participating states had fully mainstreamed sustainable land and watershed management into their LDPs.
- ***(DO3) community sustainable land use management (demand driven approach) :*** The project supported community members, including those who did not belong to Fadama Community Associations, through community groups, NGOs, and Fadama Community Associations to develop local initiatives that enhance the structural and functional integrity of ecosystems, especially sustainable land use practices that improve rural livelihoods. At the CEMP’s inception, except for around 2 percent of subprojects for

advisory services under the main Fadama II Project, no beneficiary communities had sustainable land management subprojects in their LDPs. The CEMP improved this situation tremendously, exceeding its target of 50 percent of Fadama Community Associations implementing alternative livelihood activities to achieve a remarkable 100 percent. Beneficiaries in more than 60 participating communities implemented about 10 alternative livelihood activities (such as apiaries, ruminant fattening, and grasscutter, rabbit, and snail production) through 438 subprojects. These activities generated ₦ 11.5 million as income for beneficiaries. The project therefore greatly exceeded the target of preparing and implementing 60 percent of management plans for highly degraded areas: 520 sub-projects were prepared to address water and land degradation issues. The performance indicator most closely aligned with DO3 was specified as: *“At least an 80 percent increase in the area under sustainable land management practices in the three pilot sites”*: This indicator was fully achieved and exceeded. Through intensive sensitization, awareness creation, and capacity building, the project achieved an increase of about 87 percent in the pilot area under sustainable land management practices. In absolute terms, sustainable land management improved on 11,635.23 hectares, encompassing 651.58 hectares planted with trees for watershed protection, 1,347 hectares of forest reserve, and 6,424.4 hectares of direct beneficiaries’ land (plus 3,212.2 hectares belonging to others) placed under sustainable land management. The project supported the identification of six community forest reserves compared with its target of three forest reserves. These forest reserves have been beaconed and digitally mapped. The project identified and supported the management of over 18,800.97 ha of forest reserves in the six intervention sites; and, Beneficiaries’ farm holdings amounting to about 15,853.40ha are under SLM practices. As stated earlier, the project increased the combined area under SLM: Andiwa Lake, lake Oguta and Eriti watersheds, from a baseline figure of 7,421.4 ha to 11,635.23 ha at end of project.

3.3 Efficiency

Rating: High

44. Economic and financial analysis undertaken at the end of the project clearly documented the efficiency of CEMP interventions. The analysis focused on four randomly selected alternative livelihood subprojects: apiaries for honey production, teak woodlots for pole production, establishment of a grasscutter farm with a startup size of two families, and rearing of 30 male and 10 female Belami sheep. Results of the analysis indicated that the CEMP interventions were very cost efficient, with a total economic rate of return (ERR) of 212%, net present value (NPV) of ₦ **5,367,020.42** and benefit cost ratio (BCR) of **8.43** (*see annex 3 for a detailed discussion of the analysis*)

3.4 Justification of overall outcome rating

Rating: Satisfactory

45. Taking into account the relevance of the PDO, project design and implementation, and achievement of the PDO, the overall project outcome is rated satisfactory. This rating is justified, given the overall achievement of key performance indicators, the cost-efficiency of project interventions, the relevance of the design and focus of the project, by successfully adapting to an

existing CDD project and approaches which were relevant to the rural development of the country and the satisfactory disbursement performance resulting from good fiduciary management throughout implementation. The Government of Nigeria's interest in providing support to scale up capacity-building interventions under the ongoing Fadama III Project also justifies the satisfactory outcome rating.

3.5 Overarching themes, other outcomes, and impacts

Poverty impacts, gender aspects, and social development

46. Impacts on incomes of beneficiaries: Project investments in alternative livelihood interventions improved the incomes of beneficiaries (members of the Fadama Community Associations and Fadama User Groups, which operate as cooperatives). Alternative livelihood activities generated revenues totaling about ₦ 11.3 million (US\$ 70,221) for over 7,688 beneficiary groups in all six intervention areas. States are required to monitor and report the mobilization and use of revenues in their state progress reports, and they also provide guidance to groups on how to use the revenues. Table 1 presents the breakdown of revenues generated by beneficiaries in each participating state.

Table 1: Revenues Accruing to Beneficiaries, by State

State	Beneficiaries (Fadama Community Associations/Fadama User Groups)	Amount (in ₦)	Amount (in US\$)
Bauchi	792	3,125,000	19,459
Imo	1,269	2,639,000	16,433
Kebbi	2,807	264,000	1,644
Kogi	1,207	336,350	2,094
Kwara	1,065	1,705,700	10,621
Ogun	548	3,207,000	19,669
Total	7,688	11,277,050	70,221

Source: Borrower's ICR, December 2011.

47. *Impact on deforestation and land degradation:* The project's support of alternative livelihood activities (woodlots, orchards, grasscutter rearing, and apiaries) substantially reduced bush burning and soil erosion. Some of these activities provided windbreaks, river bank stabilization, shelter belts and new sources of organic matter for the soil. Beneficiaries in the Eriti Watershed in Ogun State developed apiaries, which by the end of the project produced an average of 1,440 liters of honey, valued at about ₦ 1.44 million. This revenue improved beneficiaries' overall economic well-being. Farmers in Eriti Watershed also reported that their fruit-bearing trees, such as kola and cocoa, yielded more in 2009/10 than in the last 10 years owing to the increased activity of honeybees in the area. The bees also prevented intruders from entering beneficiaries' forests for fear of being stung, this protected flora and fauna from being harvested indiscriminately by unwanted gatherers. Finally, one of the key output of the study on the sustainable management of the six community forest reserve, was the documentation of the

actual size and extent of these forest reserves, these were also beacons and digitally mapped. A significant output of this was the preparation of management plan for each of the six forest reserves, and the formation and inauguration of forest management committees to implement the plans.

48. *Impacts on gender*⁶: Women benefited from project interventions. For example, in Ogun State, 251 (46%) of 548 beneficiaries are females. Overall, 2,276 out of the 7,688(30%) beneficiaries are female. This group of beneficiaries took the lead in alternative livelihood support including marketing of the various agricultural products. Further, out of the 38 Fadama Community Associations that participated in the project, 46 percent were female.

Institutional change/strengthening

49. In support of government efforts to combat environmental degradation, the project helped reform environmental institutions at the federal, state and community level. In particular, it:

- *Strengthened the capacity of federal institutions*: The Federal level agencies and ministries benefited from the following training workshops and seminars: (i) enhancing capacity in sustainable land-use planning at the watersheds level; (ii) development and utilization of monitoring format; (iii) review of policies and regulations at the Federal level on watershed management; and (iv) workshop on harmonization of LDP format for CEMP activities. The project also funded the participation of Federal and State government officials in two study tours: (i) project monitoring, evaluation and reporting in Accra, Ghana and (ii) integrated farming system in Porto Novo, Benin. Two trainings: (i) enhancing capacity in sustainable land-use planning at the watersheds level and (ii) harmonization of LDP format for CEMP activities were replicated at the FCA and FUG levels; as result, the beneficiaries are now applying sustainable land and water management practices in their farms, thereby increasing productivity and maintaining ecosystem integrity.
- *Built capacity in state institutions*: The project established SWSs and built their capacity in watershed management and coordination. Among the training workshops attended by the SWSs are the establishment of watershed planning and coordination capacity; and the strengthening the sustainability of local development planning at the community level. The project also strengthened the capacity of the State Fadama Coordinating Offices staffed with environmental officers to carry out the added responsibility of ensuring effective field monitoring and supervision of CEMP project activities. The environmental officers attended an international training course on community based integrated watershed management in the Philippines, a workshop on Geo-information and handling of field survey equipment, and a training seminar on the review and standardizing performance indicators format for CEMP.
- *Built the capacity of community institutions*: The project strengthened the capacity of Fadama Community Associations (which, as noted, were created by the project and

⁶ The ICR team could not do a detailed gender disaggregation as information regarding gender in the source documents, Beneficiary Assessment Survey and the Borrower's ICR, were scanty.

registered as cooperatives) to perform their duties related to sustainable watershed management. Sensitization to sustainable watershed management issues and training in aspects of land management enabled Fadama Community Associations to manage and implement their alternative livelihood activities effectively. The project also created forest management committees in each of the six intervention areas and developed their capacity to make them more functional.

Other unintended outcomes and impacts (positive or negative)

50. Not applicable.

3.6 Findings of the beneficiary assessment survey

51. At the end of the project, a beneficiary assessment survey was conducted to evaluate the project's impacts on beneficiaries. The survey showed that beneficiaries were generally satisfied with the support they received from the project, and more than 70% are ready to continue with most sub projects after the closing of CEMP. Community forest, woodlots, Grass cutter farming, Apiary and orchards ranked high in the response profile in terms of willingness to continue with after the CEMP support. The assessment also revealed three key areas in which the project had a significant impact on beneficiaries: (i) direct economic benefits to beneficiaries; (ii) improvements in beneficiaries' capacity to carry out sustainable land management activities; and (iii) environmental benefits.

Direct economic benefits

52. The survey showed that CEMP had a positive impact on beneficiaries. The estimation of the total impact of the project on beneficiaries compared with those who did not participate clearly revealed that the project had a large impact on the well-being of participants. Through capacity-building interventions, the project enhanced beneficiaries' knowledge of integrated ecosystem management and sustainable land management. That knowledge enabled beneficiaries to improve their livelihoods through larger yields and savings, good agricultural practices, afforestation, and the provision of better sources of water, which enhanced productivity.

Improved capacity to undertake sustainable land management activities

53. Through the capacity-building interventions, over 50 percent of the project's beneficiaries are now empowered, ready, and willing to continue implementing subprojects in community afforestation, the rearing of grasscutters and snails, and woodlot and orchard cultivation. The subprojects' enhanced income potential (especially from grasscutters, snails, bees, woodlots, and orchards), high productive capability, low technical requirements, and ease of management are key reasons for beneficiaries' high degree of enthusiasm.

Environmental benefits

54. The project helped reduce soil erosion and prevent bush fires. 62.82% of beneficiaries (farmers) confirmed that soil erosion was reduced because of the project. The beneficiaries testified that bush burning was reduced significantly as a result of the project's interventions. At

the Kwara State intervention site (Ajasse-Ipo), the reduction of annual bush burning was 40%, while at Eriti Watershed (Ogun State) is was 60%. This fact was supported in the beneficiary assessment; as the Chi square test on the showed significant difference in the “Yes” responses, implying that CEMP has made significant impact on CEMP beneficiaries as regards achieving significant reduction in bush burning when compared to non-CEMP beneficiaries. There has also been 100% reduction in the use of chemicals for fishing at the Ajasse-Ipo intervention site. These achievements could be attributed to the intensive sensitization campaign mounted by the project, that resulted in significant environmental benefits when compared with the non- intervention areas of the participating States. Further, three ground water monitoring wells were installed in each of the six participating States and equipment and training given to farmers to monitor and interpret water levels for efficient ground water usage.

4. Assessment of Risk to Development Outcomes

Rating: Low

55. The project’s risk to development outcome and sustainability is rated low, given the high level of ownership and empowerment at both the state and community levels, including low fiduciary risks, and low social and environmental safeguards risks. The assessment of the following specific risks to development outcomes provides enough justification for the sustainability of the project’s outcomes.

The institutional risk to development outcome is low

56. Institutional development resulting from implementation of the project was significant. The project supported capacity building and efforts to create awareness, particularly at the community level. Through training and various capacity-building interventions, the project strengthened the skills of Fadama User Groups in record-keeping, bookkeeping, and alternative livelihood activities such as grasscutter faming, bee-keeping, and the planting of economic trees. The project also established a sense of ownership among beneficiaries and empowered them to take control of their own affairs, which will ensure that development outcomes are sustained. Similarly, the trainings received by the Federal and State level agencies to strengthen their skills in sustainable land-use planning at the watershed level, monitoring and evaluation, watershed policies and regulations reviews, and development and synchronization of LDP format for CEMP activities would evidently sustain development outcomes.

The economic and financial risk to development outcome is moderate

57. At project preparation, the financial management risks identified includes funds diversion and misuse, collusion with service providers and cost escalation. These risks were appropriately mitigated by the project team. In particular, the risks were mitigated by making use of the financial mechanisms and expertise developed in the Fadama II Project (which was responsible for Financial Management of CEMP). The financial management risks were mitigated through regular auditing, FM supervision missions and establishment of Project Financial Management Units in the participating states. At the state and community levels during implementation, the project provided training in grant management, which improved beneficiaries’ understanding of basic principles of bookkeeping and thus their capacity to generate revenue. To mitigate financial

risks at the community levels, matching grants were released to the beneficiary groups in tranches, and the setting up of internal audit unit within the PIUs and by extension covering the activities of the FCAs/FUGs helped in mitigating financial risk by auditing the activities of the FCAs/FUGs. Efforts were also made to ensure full disclosure by insistence on record keeping by FUGs and FCAs; and public display of information on projects including expenditure and project funds received. The FCAs and FUGs also agreed on Operation and Maintenance arrangements, whereby 5% of subproject cost were kept aside for O&M for the investments supported under the project.

The environmental risks to development outcome are low

58. At appraisal, the project team carried out an environmental and social assessment and categorized the project as a Category B project. The fact that most project activities were environmentally friendly should make it possible to sustain the development outcomes. No safeguard issues surfaced in relation to involuntary resettlement and land acquisition problems in the intervention areas.

The social risk to development outcomes is low

59. The project enhanced the livelihoods and living standards of beneficiaries, thereby contributing to the government's poverty reduction agenda (as stated in its vision 2020 blue print) and to the Millennium Development Goals. The project's development outcomes should also be sustained through the social institutions created among beneficiaries (Fadama Community Associations and Fadama User Groups) and through the government's commitment to continue co-financing key activities through the Fadama III Project. Finally, the risk of farmers going back to their original practices is low, given the enhanced income potential of the subprojects, high productive capability of subproject, low technical requirement of subproject and easy to manage nature of the subprojects.

5. Assessment of Bank and Borrower Performance

5.1 Bank performance counterpart funding

Bank Performance in ensuring quality at entry

Rating: Satisfactory

60. The Bank's performance during project identification, preparation, and appraisal is rated satisfactory. The Bank built a strong team with diverse expertise and provided the requisite leadership. Bank staff worked closely with the government team and guided the preparation process to ensure adherence to key operational policies and procedures. Major sections of the project document, particularly the M&E framework, were strengthened. A quality assessment of the lending portfolio in FY09 emphasized key design features that would ensure the project's success, especially the design of the results framework, which panel members found realistic in selecting indicators that could be measured within the project's timeframe. The Bank also maintained effective communication with the government, which significantly improved quality at entry, as the government was very responsive in providing the need support.

Quality of supervision

Rating: Satisfactory

61. Bank performance with regard to supervision is rated satisfactory. The Bank organized eight joint supervision missions, including the Mid-term Review. During such missions, the Bank team worked closely with project staff to address key implementation issues and make recommendations to resolve them. The Bank also maintained strong working relations with the project staff and was very effective in reviewing and clearing documents, including providing no-objections from the project staff. The task team leader was very available to project staff when issues arose, even outside mission periods.

62. To improve implementation, the Bank organized a quality assessment review conducted by the Quality Assessment Group in FY09. The review responded to an earlier implementation progress rating of moderately satisfactory, arising from initial fiduciary problems (in financial management and procurement) and M&E problems encountered by the project. The quality assessment found that the Bank provided good advice and solutions to problems but recommended that subsequent supervision missions should aggressively address the weaknesses in the fiduciary system that had inhibited implementation. The Bank team and project staff implemented the recommendations of the panel, and implementation performance improved remarkably, particularly after the Mid-term Review.

Overall performance

Rating: Satisfactory

63. Taking into account the quality of project preparation and supervision, the Bank's overall performance is rated satisfactory. The Bank ensured quality in the project design and a clearly focused development objective. It made substantive contributions to address major implementation issues that arose during supervision missions. Finally, the Bank implemented the recommendations of the Quality Assessment of Lending Portfolio-2, which improved implementation performance.

5.2 Borrower performance

Government performance

Rating: Satisfactory

64. Government performance is rated satisfactory. The Government of Nigeria showed a high level of commitment: It facilitated the preparation process, put in place dedicated officers to staff the core PCU, and met all of the effectiveness conditions. Synergy between the Federal Ministry of Agriculture and Rural Development and the Federal Ministry of Environment was a key factor in the project's successful implementation. The Federal Ministry of Environment seconded a highly qualified staff, with considerable expertise in forest management, to head the Fadama GEF Desk Office and work specifically on the implementation of GEF interventions in close collaboration with the entire project staff.

65. Despite the initial challenges in the release of counterpart funds, the government met its entire counterpart fund requirement through the main Fadama II Project. After resolving initial difficulties, the government made regular and timely payments of counterpart funds. To show

commitment the beneficiaries Local Government Authorities willingly contributed a matching grant of N 1 million attesting to high level of commitment at the lowest level of government.

Implementation Agency or Agencies Performance

Rating: Satisfactory

66. The implementation agency's performance is rated satisfactory. As noted, the CEMP utilized the implementation structures and Project Management Unit (PMU) of the main Fadama II Project, integrated in the Federal Ministry of Agriculture and Rural Development. The Project Management Unit served as the lead project implementation agency, facilitated all preparatory missions from identification to appraisal, and worked in harmony with the Bank team to ensure quality of key project documents.

67. The PMU also ensured smooth implementation of day-to-day activities, discussing and resolving key implementation issues with the Bank team. The PMU complied fully with the Bank's reporting procedures, especially in the areas of procurement and financial management. The financial management team of successive Bank missions rated the financial management system operated by the PMU as satisfactory. The effects of this level of financial management on disbursement were positive: As of November 30, 2011 (financial management reporting period), the project had disbursed 99.99 percent of its funds.

Justification for Rating Overall Borrower Performance

Rating: Satisfactory

68. The borrower's overall performance is rated satisfactory. The borrower exhibited the optimum level of commitment to the project's development objectives, as manifested in the ongoing Fadama III Project, for which GEF interventions (capacity-building activities) are being implemented at the state and community levels. During the implementation of the CEMP, the borrower complied fully with all bank policies and procedures, including legal covenants and financial management and procurement rules and regulations, and it submitted audit reports to the Bank on time.

6. Lessons Learned

69. The key lessons drawn from project implementation are:

- **Community participation, ownership, and empowerment are key to the success of community-driven development projects such as the CEMP.** The CEMP ensured that communities were fully in charge of fiscal and investment decisions with respect to the implementation of subprojects. The direct transfer of funds to the Fadama Community Associations and Fadama User Groups, as well as the capacity-building programs organized for them, enhanced their ability to prepare and implement projects and instilled a real sense of ownership and empowerment. Empowering the communities also improved local monitoring, data collection, coordination, and supervision.
- **Sustainable livelihood interventions, with significant advocacy and awareness**

programs, have proven very effective in ensuring environmental sustainability. Natural resource management interventions have no benefits and impacts if they are not linked to income-generating activities that improve the living standards of the beneficiaries. The CEMP empowered communities to take the development of their own environment into their own hands by planting and cultivating economic (cash) crops. Through this approach, the communities attached greater importance to the development and sustainability of their own environments.

- **Mainstreaming a community-driven development project into another community-driven development project requires a detailed assessment of existing implementation arrangements and their capacity to cope with the anticipated workload of the two projects.** As noted, the CEMP was integrated into the Fadama II Project and used its fiduciary and M&E systems, but the volume of work relative to available staff meant that the staff could not cope with the workload. Financial management, procurement, and M&E activities were delayed. Future projects should incorporate specific measures and actions to mitigate problems that would arise from such arrangements.
- **Ensuring effective supervision and monitoring is the key to successful community-driven development projects.** The project design envisaged regular supervision of subprojects by state staff, but the lack of sufficient logistical support somewhat constrained smooth supervision of subprojects in most states. Future operations of this nature should include the procurement of logistics to support supervision.

7. Comments and Issues by Borrower/Implementation/Partners

70. The Government of Nigeria had no specific comments on the draft ICR. They corrected some acronyms and some editing mistakes, and wished that the overall project would be declared Highly Satisfactory because of the impacts in the six CEMP participating states. The borrower's ICR is summarized in Annex 7.

Annex 1. Project Costs and Financing

Component	Appraisal Estimate (US\$ m)	Actual/Latest Estimate (US\$ m)	Percentage of Appraisal
Capacity Building	1.42	1.80	126.78
Watershed Ecosystem Management	4.08	3.14	76.96
Community Sustainable Land Management Support	3.96	3.50	88.38
Project Management and Monitoring and Evaluation	0.57	1.57	275.44 ⁷
Total Baseline Cost	10.03	10.01	—
Physical Contingencies	—	—	—
Price Contingencies	—	—	—
Total Project Costs	10.0	10.01	100.10
Project Preparation Facility	—	—	—
Front-end fee (IBRD only)	—	—	—
Total Financing Required	10.0	10.01	—

⁷ The 275% of appraisal estimate for project management and M&E costs was based on the reallocation of funds during the re-structuring of the project. The restructuring was based on the findings and recommendations of various implementation support missions and the MTR. This increase results from: (i) purchase of two additional 4-WD pick up vehicles for sub project monitoring and supervision at the NFCO and Kwara State; (ii) stepping up of routine M&E and implementation support by both NFCO and the six SFCOs to FCAs and FUGs; (iii) Increase funding for SWS activities; and (iv) Purchase of 15 GPS, 6 photocopiers, 5 desktop computers, 6 multi-media projectors, 7 public address systems and production of digital maps

Annex 2. Outputs by Component

Component 1: Capacity Building

71. Component 1 built the capacity of Fadama users and other key stakeholders, including relevant federal, state and local governments, NGOs, and community-based organizations, in the six targeted states (Bauchi, Imo, Kebbi, Kogi, Kwara, and Ogun) for sustainable land and watershed management. The achievements of this component are rated satisfactory. Key intermediate performance indicators and their targets are shown in table 2.1.

Table 2.1: Key Intermediate Performance and Output Indicators for Component 1

No.	Indicator	Baseline	Target	Actual Value Achieved
1.	By end of year 1, a framework for watershed management is prepared.	0	1	1
2.	By end of project, sustainable land use planning practices are adopted by at least 50% of Fadama Community Association members implementing LDPs in GEF co-financed project areas.	0%	50%	100%

72. This component strengthened the capacity of stakeholders at the institutional and watershed level by equipping them with skills, knowledge, and expertise to effectively carry out their activities and by setting up a framework for watershed management. At the project's inception, no watershed management framework was in place for Fadama Community Associations to adopt. By undertaking four studies (including a baseline study), developing training tool kits, and developing farming system models, a framework for watershed management was established to ensure the sustainability of development plans at the community level. Over 100 percent of the Fadama Community Associations adopted sustainable land use planning practices in the implementation of their LDPs. About 47 LDPs were produced and implemented.

73. The project also conducted training for all relevant stakeholders. Members of SWSs in all participating states received training in sustainable land use planning at the watershed level, improving the sustainability of development planning at the community level, and integrated farming and sustainable agriculture at the Songhai farms in Benin. The project supported completion of a review of watershed policies and regulations, and the recommendations were implemented effectively. The project also facilitated 98 quarterly meetings, with representatives from about 12 sectors, for SWSs in the six states. All Fadama Community Associations were sensitized to watershed management approaches; now they can prepare and implement their respective frameworks for watershed management.

74. The project also built a well-equipped and functional GIS laboratory with the capacity to produce A0 maps.⁸ The lab has facilitated mapping and geo-referencing of all intervention sites and subprojects and helped identify 127 communities around project sites.

Component 2: Integrated Ecosystem Management at Watershed Level

75. Component 2 financed technical, social, and location-specific activities to improve the management of critical watersheds in ways that increased the productivity and sustainability of Fadama areas. This objective was achieved by financing a range of advisory services, including training, capacity building, and awareness creation campaigns on watershed management that ensured the protection of critical watersheds and improved water management. Achievement of this component is rated satisfactory. Table 2.2 depicts the component's key performance indicators.

Table 2.2: Key Intermediate Performance and Output Indicators for Component 2

No.	Indicator	Baseline	Target	Actual Value Achieved
1.	By end of project, a management plan for Oguta Lake is prepared and implemented.	0	1	1
2.	By end of project, 50% of LDPs have implemented and use an improved groundwater management strategy.	0%	50%	100%
3.	By end of project, 3 community forest reserves have been established in the participating states.	0	3	6

76. At baseline the targeted communities had inadequate data on community forests, lacked a management plan, lacked data for the management of Oguta Lake, lacked data on groundwater (including groundwater levels, extraction, and recharge); and had no effective and integrated coordination mechanism for managing watersheds. To improve this situation, the project conducted and completed a study on the development of a management plan for Lake Oguta and organized a stakeholders' workshop to ensure its implementation.

77. The project also targeted 50 percent of LDPs to implement an improved groundwater management strategy. The project exceeded this target: 100 percent of LDPs now use an improved groundwater management strategy. In absolute terms, this means that all 958 subprojects included within LDPs feature better groundwater management by planting trees and pursuing related subprojects. To ensure effective data collection, a study on improved groundwater management and the impact of reservoir management was completed. The participating Fadama Community Associations and Fadama User Groups received training in data collection.

78. The project supported the identification of six community forest reserves compared with its target of three; all six have been beaconed and digitally mapped. The project also identified and supported the management of more than 18,800.97 hectares of forest reserves in the six intervention sites, where about 15,853.40 hectares of beneficiaries' farm holdings have come

⁸ The A0 map, the largest map produced by the GIS Department, is 3 feet × 3 feet or 90 centimeters × 90 centimeters.

under sustainable land management practices. The combined area under sustainable land management in the Andiwa Lake, Lake Oguta, and Eriti Watersheds rose from a baseline of 7,421.4 hectares to 11,635.23 hectares by the end of the project

79. Other significant outputs under this component include: (i) studies on the sustainable management of the six community forest reserves, including the preparation of forest management plans for the six intervention sites; (ii) formation and inauguration of forest management committees at the community level to implement the plans; (iii) preparation of a management plan for Lake Oguta; (iv) studies on improved groundwater management in the six intervention sites and the impact of reservoir management on the water flow regime in Fadama areas; (v) installation of three groundwater monitoring wells; and (vi) about 205 awareness campaigns, launched by the Federal Government of Nigeria team at each of the six intervention sites.

Component 3: Community Sustainable Land Management

80. This component supported community members, including those who did not belong to Fadama Community Associations, through community groups, NGOs, and Fadama Community Associations to develop local initiatives that enhance the structural and functional integrity of ecosystems, especially sustainable land use practices that improve rural livelihoods. The achievement of this component is rated satisfactory. Table 2.3 shows the key output indicators for this component.

Table 2.3: Key Intermediate Performance and Output Indicators for Component 3

No	Indicator	Baseline	Target	Actual Value Achieved
1.	By end of project, 50% of Fadama Community Associations have implemented alternative livelihood activities in at least 50% of the participating states.	0%	50%	100%
2.	By end of project, 60% of management plans are prepared for highly degraded areas and are being implemented.	0%	60%	92%

81. At the CEMP's inception, except for around 2 percent of subprojects for advisory services under the main Fadama II Project, no beneficiary communities had sustainable land management subprojects in their LDPs. Data on participating communities were lacking; data on types of alternative livelihood activities were limited; there were no lists of agreed alternative livelihood activities; and no data were available on highly degraded areas. The CEMP improved this situation tremendously, exceeding its target of 50 percent of Fadama Community Associations implementing alternative livelihood activities to achieve a remarkable 100 percent. This result was achieved by organizing more than 205 sensitization and awareness programs. Beneficiaries in more than 60 participating communities implemented about 10 alternative livelihood activities (such as apiaries, ruminant fattening, and grasscutter, rabbit, and snail production) through 520 subprojects. These activities generated ₦ 11.5 million as income for beneficiaries. Component 3 also greatly exceeded the target of preparing and implementing 60 percent of management plans for highly degraded areas: More than 958 plans (92 percent) were prepared to address water and land degradation issues.

Component 4: Project Management and Monitoring and Evaluation

82. This component financed activities to strengthen project management mechanisms, including M&E, to make them more effective at the federal and state levels. The achievement of this component is rated satisfactory. Table 2.4 shows the key output indicators for this component.

Table 2.4: Key Intermediate Performance and Output Indicators for Component 4

No	Indicator	Baseline	Target	Actual Value Achieved
1.	By end of year 1, project implementation, coordination, and management systems are established in coordination with Fadama II Project.	–	Established coordination mechanism	Fadama GEF Desk Office established within NFCO.
2.	By the end of year 1, M&E manual and M&E plan for year 1 have been established.	–	M&E manual and plan developed	M&E manual and plan developed
3.	M&E data system being used for effective project management.	–	–	–
4.	By end of project, the M&E plan is fully implemented and sustainable.	–	M&E plan	Monitoring format used to track progress

83. Under this component, the Fadama GEF Desk Office established within the National Fadama Coordination Office managed and coordinated all consultancies, training, workshops, and project activities at the national level under the guidance and supervision of the National Project Coordinator. At baseline, no specific coordination and management system for the GEF projects, including an M&E plan, was in place. The CEMP established an M&E system for the GEF-financed projects, which was fully mainstreamed into the main Fadama II Project, and it installed a management information system format to track data on implementation more effectively and efficiently. The M&E system was also to capture the land degradation problem at baseline and the improvement in land productivity due to project intervention. While Table 2.5 summarized the prevalent land degradation and environmental problems across the six intervention sites, the productivity of the high value crops grown by the beneficiaries were tracked during the life of the project and the result is summarized in Table 2.6. Tables 2.7 and 2.8 showed the summary and disaggregation of land areas put under sustainable land management in the six intervention sites.

Table 2.5: Summary of Land Degradation/Environmental Problems across the six CEMP sites

Land Degradation and other Environmental Problems	Oguta	Jega-Dumbegu	Ajasse-Ipo	Koton karfe	Eriti	Andiwa Lake
Deforestation/Vegetation Clearance in Fadama farmland areas				√		
Sand Mining Activities	√		√		√	
Slash and Bush Burning			√	√		√
Lake Pollution, Declining lake and River utility/ Siltation						
Land Use Conflicts			√			√
Farm land Flooding and Erosion	√	√	√	√	√	√
Pests and Diseases		√	√	√		√
Wildlife Depletion				√		
Water-logging	√		√		√	
Invasion by Dangerous Animals	√					√
Soil compaction			√			

Overgrazing		√		√		
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√ - Common in the Catchments areas

Source: Field Survey, NFDO-CEMP Baseline Survey, 2008

Table 2.6: Productivity of Major Crops in CEMP intervention sites

States	Major Crops	Yield(MT)/ha (2008)	Yield(MT)/ha (2010)	% Increase	Remarks
Bauchi	Millet	0.798	0.97	21.55	Increase in productivity
	Sorghum	1.03	1.08	4.85	Increase in productivity
	Tomatoes	3.11	7.42	138.59	Increase in productivity
	Okro	1.92	7.21	275.52	Increase in productivity
Imo	Maize	1.5*	1.3	-13.33	
	Okra	NA	2.13	NA	
	Yam	12.5*	14.37	14.96	Increase in productivity
	Tomatoes	NA	1.3	NA	
Kebbi	Groundnut	0.551*	1.24	125.05	Increase in productivity
	Sorghum	1.09*	1.7	55.96	Increase in productivity
	Cowpea	1.2*	0.5	-58.33	
	Rice	1.92*	1.61	-16.15	
Kogi	Maize	1.63	1.64	0.61	Increase in productivity
	Rice	2.35	2.29	-2.55	
	Yam	12.31	12.91	4.87	Increase in productivity

	Cassava	14.84	15.37	3.57	Increase in productivity
Kwara	Rice	2.56	2.986	16.64	Increase in productivity
	Tomatoes	4.2	6.22	48.1	Increase in productivity
	Maize	1.37	2.06	50.36	Increase in productivity
	Yam	12.46	13.14	5.46	Increase in productivity
Ogun	Cassava	16.2	17.1	5.56	Increase in productivity
	Pepper	1.64	1.74	6.1	Increase in productivity
	Okra	1.28	1.43	11.72	Increase in productivity
	Leafy Vegetables	6.21	6.43	3.54	Increase in productivity

Source: 2008 and 2010 Agricultural Production Survey (APS)

**National average due to lack of data for that period in the intervention site*

Table 2.7: Area in Hectares: Sustainable Land Management Practices in the Six Sites

A	Pilot Sites	Target	Baseline (Oct 2007)	MTR (Nov, 2009)	ICR (NOV, 2011)
I	Andiwa Lake (Bauchi State)	3,170.52	1,761.40	1,909.00	2,514.59
ii	Oguta Lake (Imo State)	7,380.00	4,100.00	4,427.00	7,536.50
iii	Eriti Watershed (Ogun State)	2,808.00	1,560.00	1,054.94	1,584.14
	Sub-total (Three Pilot Sites)	13,358.52	7,421.40	7,390.94	11,635.23
B	Other sites				
I	Jega Dumbegu (Kebbi State)	6,372.00	3,540.00	14,700.32	17,144.47
ii	Koton-karfe (Kogi State)	6,741.90	3,745.50	3,700.00	12,214.70
iii	Ajase-Ipo (Kwara State)	1,672.92	929.40	365.81	2,574.15
	Sub-total(Other sites)	14,786.82	8,214.90	18,766.13	31,933.32
C: (A+B)	Grand Total (Six Intervention Sites)	28,145.34	15,636.30	26,157.07	43,568.55

Source : CEMP ICR, 2012

Table 2.8: Disaggregation of Area under Sustainable Land Management Practices at the Six Sites

Intervention site	Direct Planting (HA)	Area under Forest Mgt (HA)	Average Farm size of beneficiaries (HA)	Total no of direct CEMP beneficiaries (HH) as at ICR	Total farm size of beneficiaries under SLM in addition to project support (HA)	Total Area under SLM as at ICR (HA)
Pilot Sites						
Andiwa Lake (Bauchi State)	425.08	307.51	0.50	792	1,188.00	2,514.59
Oguta Lake (Imo State)	175.5	986.00	1.00	1,700	4,250.00	7,536.50
Eriti (Ogun State)	51	53.54	0.43	548	986.40	1,584.14
Sub-total	651.58	1,347.05	1.93	3,040.00	6,424.40	11,635.23
Other sites						
Jega Dumbegu(Kebbi State)	106	10,722.72	1.5	2,807	4,210.50	17,144.47
Koton karfe (Kogi State)	79	6,704.20	3.0	1,207	3,621.00	12,214.70
Ajase-Ipo (Kwara State)	150.9	27.00	1.5	1,065	1,597.50	2,574.15
Sub-total	335.9	17,453.92	6	5,079	9,429	31,933.32
Grand Total	987.48	18,800.97	7.93	8,119.00	15,853.40	43,568.55

Source: NFCO Compilations from State Reports, 2011

Annex 3. Economic and Financial Analysis

84. The CEMP interventions encompassed demand-driven productive environmental and livelihood investments with capacity building for Environmental Officers, Fadama Community Associations, and Fadama User Groups at the state and community level, with support for alternative livelihood activities and project management. Unlike the alternative livelihood activities, certain project activities, such as capacity building and project management, did not generate direct economic benefits. However, a quick glance at the CEMP portfolio shows that a significant proportion of investments financed alternative livelihood interventions (such as apiaries, ruminant fattening, and grass cutter rearing, rabbit, and snail production). Through these activities, implemented under four major subprojects, beneficiaries accrued substantial economic benefits. Table 3.1 provides a summary of subprojects in the six intervention areas.

Table 3.1: Summary of Sub-Projects Across the Six CEMP Intervention Sites

Sub-projects	Bauchi	Imo	Kebbi	Kogi	Kwara	Ogun	Total
Apiary	0	19	0	24	17	41	101
Orchard	23	25	40	91	35	19	233
Woodlot	13	21	3	41	8	5	91
Community Nursery	1	3	3	16	1	5	29
River Bank Stabilization	0	6	5	0	2	3	16
Wind Break	0	0	0	0	0	6	6
Shelterbelt	0	0	6	0	0	0	6
Alley Cropping	7	0	0	0	0	0	7
Border Tree Line Planting	10	8	1	0	5	2	26
Road Side Planting	5	0	6	0	0	4	15
Buffer Strip Planting	1	0	0	0	0	0	1
Composting	2	0	0	0	10	4	16
Scattered Tree Planting	8	13	0	0	30	4	52
Snailry	0	23	0	9	23	25	80
Grasscutter	0	15	0	48	29	30	122
Small Ruminant	0	0	8	0	0	0	8
Rabbitry	0	0	0	0	22	3	25
Mushroom	0	0	0	3	0	5	8
Community training on Apiary, Snailry and G/cutter	0	0	0	67	9	0	89
Wrapping leaf	0	0	0	0	0	7	7
Bamboo Roofing for snailry, gcutter	0	0	0	0	0	13	13
Other Organic farming	0	0	0	0	0	2	2
Cart and Oxen	0	0	5	0	0	0	5
Total	70	130	77	299	191	178	958

Source: M&E Unit, NFRA-NFCO.

85. To ascertain the economic viability of CEMP interventions, the evaluation team performed an economic and financial analysis for four major subprojects: (i) apiaries for honey production, (ii) teak woodlots for pole production, (iii) establishment of grass cutter farms with a startup size of two families, and (iv) rearing of small ruminants (30 male and 10 female Belami sheep).

Rationale and assumptions for selecting the four enterprises:

86. The rationale for selecting these four interventions was based on beneficiaries' interest in maintaining their operations compared to other interventions. Although they constitute a small proportion about 37% of the entire subprojects, the assessment team sought to focus on them due to the high level of interest exhibited by beneficiaries in continuing with their production after the end of the project. For apiary, beneficiaries indicated they would like to maintain its production because it has high income yielding potential and requires minimal land and capital requirement. With regard to grass cutter farming, beneficiaries showed interest in continuing with its production because it promotes reduction in bush burning, is easy to manage, is delicious, and interesting to rear. For Belami sheep, they indicated high income yielding potential as the main reason for engaging in its production. Finally, the beneficiaries cited availability of funds from subprojects, and anticipated increased income and benefits, and environmental protection as reasons for maintaining woodlot production⁹. Overall the analysis assumed (i) the four selected projects were based on the average minimum size of the enterprise that would ensure timely and sustainable profitability of the investment and; (ii) the appropriateness of the duration or cycle of the project based on the nature of the project and expected output. Specifically, the analysis assumed:

- 10 hives as sufficient size to start with apiary production for sustainable and reasonable level of profit. And a five- year production cycle for apiary as major related activities in the production process have a lifespan of about 5 years.
- An average honey yield of 7 liters per hive for the first year and average of 10 liters per hive in subsequent years harvestable two times per annum could be achieved from the nature of apicultural technology popularly used in Nigeria.
- The establishment of woodlot has multiplicity of purposes, including for providing firewood, fruits, poles and timber. Field observations showed that teak, (a fast growing species with the ability to stabilize degraded soil and used for production of firewood, poles and timber) was planted in the woodlot. The best economic output from teak within a moderate rotation period is production of pole. So the analysis was based on the establishment of teak woodlot for pole production with a rotation period of 10-12 years. This period was considered long enough to stabilize the soil and to also bring out an economic product beneficial to the individual farmers and the community at large.
- Due to difficulty in obtaining data, Belami sheep rearing was used to represent small ruminants; and 30 males and 10 females of Belami sheep were assumed to be reasonable herd size that would ensure sustainable profitability of the investment. The males were to

⁹ Oni et al. (2010) "Beneficiary Assessment/Impact Evaluation of the Fadama II Critical Ecosystem Management Project (CEMP)."

be fattened and 28 of which would be sold at the end of year two for revenue generation. The remaining two would be retained for mating with the 10 females for breeding. It was also assumed that at least 7 of the 10 female animals would give birth to 2 kids for a total of 14 kids, and 12 kids would be added to the herds after every 6 months. A provision for 20% mortality rate was made.

- The parent stock of two Families made up of 10 grass cutters were assumed to give birth once in the first year. Production of the parent stock was assumed to be once in the first year because the animals require time to acclimatize to the new environment. Besides, it was assumed that one Doe female animal would give birth to an average of four kids at a time, the eight Does in the two families of parent stock would give birth to 32 kids. Assumed a mortality rate of 20%, and 25 kids would be left out of the 32.
- A 16 percent discount rate was used as a proxy for average opportunity cost of capital, based on the average bank lending rate in Nigeria.
- A five-year horizon was assumed for apiary, grass cutter, and rearing of Belami sheep, while 12 years period was assumed for teak woodlot due to its long production period.
- The analysis used the maximum capital risk (MCR) ---the present value of investment at a point where the investor is exposed--- approach to calculating the benefit-cost ratio (BCR). The formula for calculating BCR is: $BCR = NPV/MCR + 1$

Results:

87. Upon the basis of the above rationale and assumptions, the combined benefit costs analysis of the four enterprises generated a total NPV of **₦5,367,020.42**, a BCR of **10.73**, and ERR of 212%. Table 3.2 below summarizes the results of the analysis, which clearly show that the project's beneficiaries would derive substantial benefits from continuing with the production of the activities the four enterprises.

Table 3.2: Results of Economic and Financial Analysis of Selected CEMP Interventions

Subproject	Cost (₦)	Benefits (₦)	Net Present Value (₦)	ERR (%)	Benefit Cost Ratio(NPV/MCR+1)
Apiary for honey production	475,080	1,460,000	813,327.72	39	1.44
Teak woodlot for pole production	908,600	1,955,580	1,059,843.13	58	2.19
Establishment of grass cutter farm (startup size of two families)	1,348,380	4,225,000	2,883,625.08	78	3.47

Rearing 30 male and 10 female Belami sheep	475,080	960,000	610,224.49	37	1.33
Total	3,207,140	8,600,580	5,367,020.42	212	8.43

Source: calculation based on data from Oni et al. (2010), “Beneficiary Assessment/Impact Evaluation of the Fadama II Critical Ecosystem Management Project (CEMP).”

Comparison with appraisal estimates.

88. CEMP specific economic and financial analysis was not undertaken at appraisal. However, the preparation team drew conclusions from the results of the economic and financial analysis conducted under the main Fadama II project. The analysis as contained in the PAD assumed that the demand-driven nature of the project’s activities was expected to generate economic benefits that would result in increased agriculture, livestock, and aquaculture production as well as sustainable use of Fadama land and water resources. The team estimated 22% economic rate of return (ERR), based on the results of analysis of the main Fadama II project, for the implementation of GEF interventions. As shown in the above tables, total ERR of 212% far outweigh the appraisal estimate, which indicates that the project is economically and financially viable, and very cost efficient.

Conclusion.

89. The results of the analysis show that the total ERR of the four interventions (apiary, teak woodlots, grass cutter farming, and the sheep) were estimated at **212%** with NPV of **N5,367,020.42**, and benefit-cost ratio of **8.43** of investments in the four interventions. Investments in all the four enterprises show promising and sustainable profitability.

Annex 4. Bank Lending and Project Support/Supervision Processes

(a) Task Team members

Name	Title	Unit	Responsibility
<i>Lending</i>			
Simeon Kacou Ehui	Sector Manager	SASDA	TTL, Lending
Aziz Bouzaher	Lead Environment Specialist	ECSS4	Team member
Dinesh Aryal	Senior Operations Officer	AFTEN	Team member
Christopher Crepin	Sector Leader	EASER	Team member
Lucas Kolawole Akapa	Senior Operations Officer	AFTAR	Team member
Edward Olowo-Okere	Director	AFTOS	Team member
Hisham Abdo Kahin	Senior Counsel	LEGES	Team member
Sameena Dost	Senior Counsel	LEGES	Team member
Chukwudi Hezy Okafor	Senior Social Development Specialist	ECSS4	Team member
Chau-Ching Shen	Senior Finance Officer	CTRFC	Team member
Mary Asanato	Senior Procurement Specialist	AFTPC	Team member
Bayo Awosemusi	Lead Procurement Specialist	AFTPC	Team member
Adenike Sherifat Oyeyiola	Senior Financial Management Specialist	AFTFM	Team member
Azra Lodi	Senior Program Assistant	AFTAR	Team member
Lucie Tran	Consultant	AFTAR	Team member
Africa Eshogba Olojoba	Senior Environment Specialist	AFTEN	Team member
Abigael Bunmi Ipinlaiye	Team Assistant	AFCW2	Team member
<i>Supervision/ICR</i>			
Africa Eshogba Olojoba	Senior Environmental Specialist	AFTEN	TTL, Supervision ICR
Amos Abu	Senior Environmental Specialist	AFTEN	Team member
Mary Asanato-Adiwu	Senior Procurement Specialist	AFTPC	Team member
Akinrinmola Akinyele	Senior Financial Management Specialist	AFTFM	Team member
Chita Azuanuka Oje	Program Assistant	AFCW2	Team member
Abiodun Elufioye	Program Assistant	AFCW2	Team member
Olukemi Roseline Akinsola	Team Assistant	AFCW2	Team member
Chau-Ching Shen	Senior Finance Officer	CTRFC	Team member
Kofi Amponsah	Consultant	AFTAR	Lead Author, ICR
Abimbola A. Adubi	Senior Agricultural Specialist	AFTAR	Team member
Joseph Ese Akpokodje	Senior Environmental Institutions Specialist	AFTEN	Team member
Shobha Shetty	Sector Leader	AFTAR	Team member

Bayo Awosemusi	Lead Procurement Specialist	AFTPC	Team member
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(b) Staff Time and Cost

Stage of Project Cycle	Staff Time and Cost (Bank Budget Only)	
	No. of staff weeks	US\$ thousands (including travel and consultant costs)
Lending		
FY01	5	25
FY02	3	14
FY03	4	19
FY04	12	72
FY05	28	149
FY06	29	85
FY07	11	56
Total:	92	420
Supervision/ICR		
FY08	13	73
FY09	12	63
FY10	8	40
FY11	15	62
FY12	6	58
Total:	54	296

Annex 5. Beneficiary Assessment Survey

90. To evaluate the project's impacts on beneficiaries, a beneficiary assessment survey was conducted at the end of the project. The survey used household data collected from the six participating states. Stratified sampling technique was adopted and the three groups were: (i) CEMP and Fadama II beneficiaries; (ii) Fadama II beneficiaries and (iii) respondents who did not benefit from CEMP or Fadama II project. 10 households were randomly selected from the total list of the three stratified groups in each state to arrive at a total of 180 respondents. Among other things, the survey found that about 92% of CEMP beneficiaries confirmed that capacity building impacted on their livelihood pattern, 70% of Fadama II beneficiaries felt the same, while 20% of non CEMP and Fadama II attest that capacity building had impacts on their livelihood pattern. The trend of CEMP and Fadama II seems reasonable given the fact that capacity building is well built into Fadama II and the CEMP projects. The survey also showed that beneficiaries were generally satisfied with the support they received from project interventions and that the project had three significant types of impact: direct economic benefits to beneficiaries, improvements in beneficiaries' capacity for sustainable land management, and environmental benefits.

Direct Economic Benefits

91. Estimates of the total impact of the CEMP on its beneficiaries compared with those who did not participate clearly revealed that the project had a large impact on the well-being of beneficiaries. The project's capacity-building interventions in integrated ecosystem management and sustainable land management positively influenced beneficiaries' livelihoods through higher yields and savings, good agricultural practices, afforestation, and the provision of better water sources for higher productivity. The survey showed that CEMP had a large impact on the change in the level of expenditure of the 7,688 household beneficiaries when compared to the non beneficiaries with a net impact of N8, 667. In addition, more than 50% of CEMP beneficiaries are ready to continue with all sub-projects after the support is closed, especially the implementation of Community forest, grass cutter farming, woodlots and orchards.

Improved Capacity for Sustainable Land Management

92. Through the capacity-building interventions, over 50 percent of the project's beneficiaries are now empowered, ready, and willing to continue implementing subprojects in community afforestation, grasscutter rearing, snail farming, and woodlots and orchards. The subprojects' enhanced income potential (especially for grasscutter and snail production, woodlots, orchards, and apiaries), high productive capability, low technical requirements, and ease of management are the key reasons for beneficiaries' high enthusiasm.

93. The survey shows that at baseline, the local benefiting communities had minimum or no SLM plans (approximately 2% of subproject mainly on advisory services under Fadama-II). However, at mid-term, 48 LDPs and 958 subprojects on SLM were mainstreamed into development plans by the communities and were funded by CEMP. A total land area of 600 ha was planted with different tree species across the six participating states. Up to 95% achievement was recorded across the states with Kwara state exceeding her target.

Environmental Benefits

94. 62.82% of beneficiaries (farmers) confirmed that soil erosion was considerably reduced because of the project. 77.27% of beneficiaries also testified that bush burning had decreased significantly as a result of project interventions.

Annex 6. Comments from Co-financiers and Other Partners/Stakeholders

Not applicable.

Annex 7. Summary of Borrower's ICR and/or Comments on Draft ICR

95. The CEMP is a pilot project that supports Fadama User Groups to carry out incremental activities that address regional and global environmental issues within the Fadama catchment areas. The Project was declared effective on 26th July 2006, and the implementation period was from 2006 to 2011. The four components were: (i) Capacity Building; (ii) Integrated Ecosystem Management at Watershed Level; (iii) Community Sustainable Land Management; and (iv) Project Management and Monitoring and Evaluation. The project covers one intervention site in each of the six implementing states, comprising Bauchi (Andiwa Lake Watersheds), Imo (Oguta Lake Watersheds), Kebbi (Jega-Dumbegu Watersheds), Kogi (Koton Karfe Watersheds), Kwara (Ajasse-Ipo Watersheds), and Ogun (Eriti Watersheds). The project was in the last quarter of the final year of implementation (Oct. to Dec. 2011) at the time of the review. The key PDO is to enhance the sustained productivity of Fadama areas and the livelihood systems they support through sustainable land use and water management.

96. Project implementation witnessed significant strides in the six intervention sites, especially with the achievement of the three project outcome indicators. Despite the early challenges, the second half of the project (following the Mid-term Review) saw disbursement greatly improve from about 52 percent to about 99 percent as at the end of October 2011 (including firm commitments). Subproject implementation (mostly the second batch) was almost fully completed, all statutory studies completed, and recommendations duly implemented.

This study was conducted to provide information on the status of the CEMP, a community-driven development project, at its completion. The Fadama II Critical Ecosystem Management project is a five-year project with three specific PDOs, making sure that by the end of the project: (i) sustainable watershed management coordination capacity is established in at least 60 percent of the participating states; (ii) sustainable land and water management practices are mainstreamed in LDPs in at least 35 percent of the participating communities; and (iii) area under sustainable land and water management practices in the three pilot sites has increased by at least 80 percent.

97. In relation to this, the terms of reference for the study were as follows:

- Assess project performance and implementation progress relative to plan; especially the review and documentation of the progress made towards the three outcome indicators: (i) by project end, sustainable watershed management coordination capacity established in at least 60 percent of the participating states; (ii) by project end, sustainable land and water management practices are mainstreamed into local development plans in at least 35 percent of the participating communities; and (iii) by project end, the area under sustainable land and water management practices in the three pilot sites has increased by at least 80 percent.
- Other terms of reference included: Assessing the extent of achievement of project targets with respect to the execution of component activities; assessing the performance of the participating State Governments and Local Government Councils; and assessing the level of beneficiaries' empowerment.

98. This study also assessed the project's compliance with World Bank Environmental safeguards/Nigeria Environmental Laws and clauses of the Grant Agreement, especially with

regard to financial management and disbursement-related issues. It also included procurement issues, implementation challenges, and lessons learnt that could be useful for future projects.

99. In addition to the detailed review of progress reports from the national and state offices, this study used household data collected from six CEMP beneficiary states. The sampling procedure involved selection of 30 respondents from the total list of beneficiaries in each of the six states, thereby arriving at a total of 180 respondents. The sampling frame was stratified to ensure that all the Fadama Community Associations and female respondents were represented in the study. The survey made use of two-stage sampling techniques, with the first stage of sampling carried out at the Fadama Community Association level (i.e., random selection of Fadama User Groups from Fadama Community Associations). The second involved random selection of project beneficiaries while making sure that the sampling methodology was proportionate to size. Project staff at the state and federal levels were also interviewed to access information needed (most especially through questionnaires and by collection of project progress reports) to resolve the terms of reference for the study. In all, six M&E officers, six environmental officers, and six procurement officers in all the states were interviewed, while the M&E officer and the procurement officer at the national office were also interviewed.

100. Results revealed a 100 percent “yes” answer from all states beneficiaries and SWS members regarding whether watershed management coordination capacity exists in CEMP beneficiary states. The project’s progress reports also supported this fact. As at the period of beneficiary assessment, 83 percent of the six states’ respondents attested to the fact that there exist watershed management coordination capacities in the concerned states. The 100 percent “yes” response from all the participating stakeholders in the states clearly shows that the project exceeded the minimum key performance indicator of having, at the end of the project, sustainable watershed management coordination capacity established in at least 60 percent of participating states. Since implementation of this PDO surpasses the original plan in the PAD, it is rated **Highly Satisfactory**.

101. The 100 percent “yes” response from two key participating stakeholders in the states clearly shows that the project exceeded the minimum key performance indicator, exceeding the 35 percent cutoff point that sustainable land and water management practices be mainstreamed into LDPs of participating states. Given the fact that the implementation of this PDO exceeds the original plan (using survey results and project progress reports) as stipulated in the PAD, it is rated **Highly Satisfactory**.

102. The average achievement with respect to the third PDO (i.e., area under sustainable land and water management practices in the three pilot sites to increase by at least 80 percent by project end) in the three pilot sites of Bauchi, Imo, and Ogun States stood at about 87.1 percent. Going by this result, this third PDO is as well rated **Highly Satisfactory**. When achievements recorded in the other three CEMP beneficiary states are incorporated, the achievement rate was found to be 154.8 percent.

Component-wise Ratings

103. Based on the responses of CEMP project staff at both the national and state coordination offices and project progress reports on the capacity-building component, there was little emphasis on the implementation of activities to promote sustainable harvest techniques for forest products and fishing. However, since four out of the five activities of the component can be adjudged well implemented, this component of the project is rated **Satisfactory**.

104. On the other hand, all activities of the Integrated Ecosystem Management at Watershed Level component were properly implemented. The progress report on the four activities of Integrated Ecosystem Management at Watershed Level and the responses from the respondents showed that the project achieved far above average in terms of proper implementation; hence this component of the project is rated **Highly Satisfactory**.

105. Given the fact that responses and project progress report on the performance of implementation of the two activities in the Community Sustainable Land Management component is above average, despite the challenges at the initial stage of project implementation, the component is rated **Satisfactory**.

106. The main issue under the Project Management and Monitoring and Evaluation component is that not more than half of project staff believed that regular monitoring was properly carried out. However, based on the fact that the performance of this component of the project, in terms of implementation, can be implied as substantial through respondents' responses and project progress reports, this component of the project is rated **Satisfactory**.

107. All state project staff agreed that states were providing the right support in the area of institutional arrangements and support. Findings also showed that half of state project staff agreed that local governments were providing the right support in the area of institutional arrangements, while all agreed that they provided robust institutional support for the project.

108. The CEMP, based on the findings, substantially empowered beneficiaries in the areas of decision making, funds transfer, awareness of sustainable land and water management practices, adoption of sustainable land and water management practices, and sustainability and up-scaling of sustainable land and water management practices. The project, therefore, can be said to have performed **Highly Satisfactorily** in the area of empowering beneficiary's capacity in watershed and ecosystem management. Results also revealed that most beneficiaries confirmed that CEMP activities affected the way beneficiaries and non-beneficiaries made money to pay for food, a place to live, clothing, and how much assistance they had been able to give to their children and relatives. The project is therefore rated to have performed **Satisfactorily** with respect to its impact on the livelihood of beneficiaries and non-beneficiaries.

109. Results from the analysis of responses to the sixth term of reference revealed that 75 percent of respondents agreed to the fact that the project considered environmental safeguards/laws to ensure sustainable utilization of natural resources and preservation of the ecosystem. The rest of the results also revealed that 75 percent and about 67 percent of respondent attested to the fact that the project considered environmental safeguards/laws to ensure waste management and environmental monitoring and auditing plans, respectively. Based

on the weight of “yes” responses on the part of respondents and project’s progress report, this project is scored **Satisfactory** in ensuring that World Bank environmental safeguards and Nigeria Environmental Laws were observed while implementing the project.

110. Results on the project’s compliance with the international agencies’ grant agreement revealed that more than half of state projects’ procurement staff agreed to the fact that the project followed grant agreements set out by international agencies while implementing project activities. Most of the procurement of goods and services were carried out at the national coordination office. Only community-based procurement for subproject activities was facilitated by the state coordination office. However, the federal procurement officer (where the majority of the procurement activities actually took place) affirmed that procurement guidelines were complied with while implementing the project. The project drive in complying with grant agreement of International agencies is rated **Satisfactory**.

LESSONS LEARNT AND CHALLENGES FOR IMPLEMENTING THE THREE PDOs

111. Lessons Learnt for Watershed Management and Coordination Capacity

- The establishment and inclusion of the State Watershed Subcommittee (SWS) in the project implementation led to reduction in the duplication of efforts and gaps in watershed management.
- Knowledge sharing amongst SWS members provided the needed complementarity amongst stakeholders.
- Involvement of SWS members in awareness creation/sensitization, training, and technical assistance to the Fadama User Groups and Fadama Community Associations helped in capturing and promoting the priorities of the various watershed management stakeholders.

Challenges for watershed management and coordination capacity

- Irregularity of SWS meeting.
- Members not readily available because of other state assignment (especially when they are very senior officers).

112. Lessons Learnt for Sustainable Land and Water Management Practices Mainstreamed into LDPs

- Beneficiaries are quite aware of the various forms of degradation; they have also noticed an increasing trend in land degradation but have not been able to do anything substantial because their immediate source of livelihood could not be easily traded for any future benefits.
- Adequate sensitization and provision of alternative livelihood is imperative to achieve this PDO. Also, sustainable land management practices with short- to medium-term returns to investment are more preferred.

113. Challenges for sustainable land and water management practices mainstreamed into LDPs

- Inadequate training of beneficiaries before committing resources.
- Gestation period of most sustainable land management activity is long.
- Benefit of most sustainable land management activities is of public nature.

- Land tenure system remains a big challenge.

114. Lessons Learnt on Area under Sustainable Land and Water Management Practices in the Three Pilot Sites Must Have Increased by at Least 80 Percent

- The need for recognition and documentation of indigenous sustainable land management activities.
- The need for documentation of the actual size of the intervention site in digital map with the coordinates of the communities within the area.
- The need for using GPS to get more accurate data on land size and for mapping.

115. Challenges on area under sustainable land and water management practices in the three pilot sites must have increased by at least 80 percent

- The main challenge was the more accurate estimation of land degradation, especially on individual farm holdings. Beneficiaries are not readily disposed to adopting tree planting activities but rather interested in activities with a shorter gestation period

Annex 8. List of Supporting Documents

1. Aide-Memoires of Supervision Missions from 2006 to 2011.
2. Bauchi State Internal Implementation Completion Review, December 2011.
3. Federal Government Contribution to ICR, December 2011.
4. Final Report on Beneficiary Assessment/Impact Evaluation of Fadama II Critical Ecosystem Management, December 2010.
5. Global Environment Facility Grant Agreement between The Federal Republic of Nigeria and International development Association, Country Partnership Strategy for Federal Republic of Nigeria, 2010-2013, July 2, 2009.
6. International Bank for Reconstruction and Development, Second Fadama Critical Ecosystem Management Project, September 15 2005.
7. Imo State Internal Implementation Completion Review, December, 2011.
8. Kwara State Internal Implementation Completion Review, January 2012.
9. Kogi State Internal Completion Report on the Implementation of Fadama II Critical Ecosystem Management Project, December 2011.
10. Nigeria Vision 2020, Economic Transformation Blue Print, October 2009.
11. Nigeria Poverty Reduction Strategy, National Economic Empowerment and Development Strategy, December 2005.
12. Project Appraisal Document on Proposed Credit in the Amount of US\$ 10.03 million to the Government of Nigeria for Second Fadama Development Critical Ecosystem Management Project, March 20, 2006.
13. Quality Assessment of Lending Portfolio (QALP-2), Investment Lending Guidance Questionnaire, FY 06.
14. State Internal Implementation Completion Review, Report of Ogun State Fadama Coordination office, December 2011.

