



Report Number : ICRR0021358

1. Project Data

Project ID
P132431

Project Name
BJ-Forest & Adjacent Land Mgmt Addit Fin

Country
Benin

Practice Area(Lead)
Environment & Natural Resources

L/C/TF Number(s)
IDA-52060

Closing Date (Original)
31-May-2016

Total Project Cost (USD)
7,599,787.99

Bank Approval Date
14-Mar-2013

Closing Date (Actual)
31-Jan-2018

	IBRD/IDA (USD)	Grants (USD)
Original Commitment	2,000,000.00	0.00
Revised Commitment	1,990,102.25	0.00
Actual	2,044,231.99	0.00

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Project ID
P131051

Project Name
AF-Forest and Adjacent Land MGMT (PSG) (P131051)

L/C/TF Number(s)

Closing Date (Original)

Total Project Cost (USD)
5,555,556.00



Bank Approval Date	Closing Date (Actual)	
14-Mar-2013		
	IBRD/IDA (USD)	Grants (USD)
Original Commitment	0.00	5,555,556.00
Revised Commitment	0.00	5,555,556.00
Actual	0.00	5,555,556.00

2. Project Objectives and Components

a. Objectives

According to the GEF Financial Agreement, the objective of the Benin Forest and Adjacent Land Management project was “to assist the Recipient in its efforts to lay down the foundation for a collective integrated ecosystem management system of its forest and adjacent lands” (GEF Trust Fund Grant Agreement 2006, pg. 20).

This objective remained constant throughout the life of the project, even when a follow-up project (with a different identification number- P131051/P132431) provided additional financing (Financing Agreement 2013, pg. 5).

The objective in the PAD was different from the legal agreement. The PAD’s project objectives were “(i) to increase and enhance the carbon storage capacity by enriching degraded gazetted forests and planting trees in forest adjacent lands, (ii) to enhance protection of biological diversity within sustainable multiple-use production forests and explore suitable areas and/or species for ecotourism, (iii) to prevent land and water degradation in forests and adjacent lands, (iv) to preserve genetic diversity within forest species that are collected by rural populations for medicinal and consumptive uses, (v) to improve the use and efficiency of traditional energy by developing and implementing national fuel-wood master plan, (vi) to develop a communication and education strategy in rural and urban areas to raise awareness on integrated ecosystem approaches and also to reduce national demand for forest-based resources, (vii) to develop innovative monitoring and evaluation methods and systems for future use by local communities and national authorities demonstrating changes in ecosystem management patterns” (PAD, pg. vii).

While the PAD’s objectives are more detailed and nuanced, in accordance with OPCS and IEG guidelines this review will use the objective in the Grant Agreement against which to assess the project’s achievements.



b. Were the project objectives/key associated outcome targets revised during implementation?

No

c. Will a split evaluation be undertaken?

No

d. Components

Component 1: Institutional Support and Capacity Building (Original Estimated Cost: US\$0.04 million from GEF Financing. Actual Cost: US\$1.59 million). This component sought to strengthen the institutional, technical and financial capacity of the forestry administration, private operations, and NGOs intervening in the project. The aim was to improve their overall performance and achieve an integrated ecosystem management of natural resources. Key activities included training to improve community partnership and performance, essential equipment, public awareness campaign, and reinforcing the monitoring and evaluation unit within the Directorate of Forestry and Natural Resources (DFNR) (PAD, para. 23).

Component 2: Community-Based Management of Forest Resources (Original Estimated Cost: US\$5.87 million (US\$4.52 million from GEF Financing, US\$1 million from Government of Benin, and US\$0.35 million from local communities). Actual Cost: US\$4.26 million). This component aimed at ensuring viable long-term management of forest resources through participatory management plans drawn and implemented by adjacent village communities. Key activities supported the preparation, implementation, and management of forest adjacent lands. They also included income generation activities compatible with forest management plans (PAD, para 24-28).

Component 3: Sustainable Fuel Wood Production and Marketing (Original Estimated Cost: US\$500,000 from GEF Financing. Actual Cost: US\$210,000). This component sought to reduce forest degradation caused by unsustainable exploitation for firewood and charcoal production. It aimed at piloting an approach to promote the production and utilization of wood fuel from the sustainably managed forests. Key activities in this component included: increasing demand and supply for wood-fueled from sustainably managed forests, travel to learn from Senegal, shift fiscal and regulatory policies, and create rural fuelwood marketing. This component aimed at also supporting the development and promotion of energy efficient technologies (PAD, para 29).

Component 4: Project Management (Original Estimated Cost: US\$940,000 GEF Financing. Actual Cost: US\$560,000). This component aimed at strengthening the effectiveness and quality of project operations. The project was managed by the Directorate of Forests and Natural Resources (DFRN) (PAD, para. 30).

The project experienced one restructuring and received additional financing. The following modifications were made to the components during the restructuring of May 9, 2011:

Under Component 2: Community-Based Management of Forest Resources. The extension of the closing date to May 2013 enabled the preparation of nine additional Participatory Forest Management



Plans and the implementation of five additional Plans. No new micro-projects were funded under the restructured project, instead focus shifted to the implementation of existing micro-projects (ICR, para. 17).

Component 3: Sustainable Fuel Wood Production and Marketing. The component activities were refocused to promote better use of existing tools and techniques, and to improve the distribution chain of fuelwood in project areas (ICR, para. 17).

Component 4: Project Management. Funds were increased slightly to support the PIU. Technical advisory services activities were removed (ICR, para. 17).

When additional financing of a US\$2 million credit and a US\$5.56 million GEF grant were provided in March 2013, existing components were augmented and a new component was added. The following changes were made to the components and their costs:

Component 1: Institutional Support and Capacity Building (Revised estimated cost US\$1.46 million). Additional financing sought to support the construction and rehabilitation of forest department infrastructure. It also sought to procure equipment and vehicles essential for forest surveillance and patrolling by decentralized foresters. Other key activities included: training in integrated ecosystem management for key stakeholders (ICR, para. 17).

Component 2: Community-Based Management of Forest Resources (Revised estimated cost US\$4.45 million). Additional resources were allocated to demarcate forest boundaries, restoring degraded surfaces, rehabilitating old plantations, enhancing agroforestry, and managing rangelands and protected zones for long-term conservation of forests. These activities were part of the forest management plans, which were developed in a participatory manner (ICR, para. 17).

Component 3: Sustainable Fuel Wood Production and Marketing (Revised estimated cost US\$0.17 million). Resources were provided to create additional rural wood markets and fuelwood plantations to cover the entire project invested area (ICR, para. 17).

Component 4: Project Management (Revised estimated cost US\$0.55 million). This component continued to support the project management unit through the technical capacity building and monitoring and evaluation of the project activities (ICR, para. 17).

New Component 5: Endowment of Conservation Trust Fund (Estimated Cost: US\$930,000, Actual Cost: US\$930,000). This component sought to support the endowment of a conservation trust fund under the West African Savannah Association (FSOA.) The Fund would provide long-term financing to the core recovery costs of the Northern Savannah National Park (ICR, para. 17).

e. Comments on Project Cost, Financing, Borrower Contribution, and Dates



Project Cost. At appraisal, the total cost of the project was estimated at US\$7.35 million (PAD, pg. vi and ICR, para. 44). The actual disbursement at the end of the project, including additional financing, was US\$13,589,788 (ICR, pg. 5).

Financing. The appraised amount of finance needed for this project at appraisal was US\$6 million (PAD, pg. vi). The original GEF fund was in the amount of US\$5,990,000 (TF-57165). Funds distributed were US\$ 5,990,000 (ICR, pg. 5).

Two additional funds provided finances to the project as part of the additional financing:

- Global Environment Facility Trust Fund Grant in the amount of US\$6 million (Global Environment Facility Trust Fund Grant No. TF-14109). Funds distributed: US\$5,555,556 (ICR, pg. 5).
- International Development Association a credit in the amount of Special Drawing Rights 1,400,000 (approximately US\$2 million) (IDA-52060) Funds distributed: US\$2,044,232 (ICR, pg. 6).

A total of US\$13,589,788 were provided for this project.

Borrower Contribution. The legal agreements do not stipulate that the borrower had to make a financial contribution. According to the PAD, the Government of Benin would contribute US\$15 million through the Poverty Reduction Strategy Credit and an additional \$1 million through counterpart funds for the GEF project (PAD, pg. vi). Local communities would contribute in cash, labor, or in-kind an equivalent of US\$350,000 as co-financing for the micro-projects (PAD, pg. vi and GEF Financing Agreement).

According to additional information provided by World Bank staff, the Government of Benin provided US\$18 million during the first phase of the project (P069896) and US\$9 million in the second phase of the project (P132431/P131051) (World Bank Staff Interview, October 2018).

Dates. The original project (P069896) was approved on August 24, 2006, and became effective on March 27th, 2007. It underwent a midterm review on November 9th, 2009. The original closing date was November 30th, 2011.

A level 2 restructuring of the original project was approved on May 2011. This restructuring extended the closing date to May 2013. Additional financing was approved in March 2013 (P132431/P131051).

The additional financing was effective on October 28th, 2013 with an original closing date of May 31, 2016.



In October 2015, the project was extended from May 31, 2016, to January 31, 2018 and the project finally closed on this date.

3. Relevance of Objectives

Rationale

In brief, the objective was to assist the government to lay down the foundation for a collective integrated ecosystem management for its forests and adjacent lands

Country Context: The country of Benin, located in West Africa, relies heavily on the agriculture sector with a little less than half of its populations employed in this sector. At appraisal, the country had 2.6 m ha of forests classified as following (i) gazetted forests (1.3 m ha), (ii) national parks (750,000 ha), (iii) hunting zones (580,000 ha), and (iv) reforestation areas (4,000 ha) (PAD, para 4). The country's strong reliance on agriculture has led to as much as 70,000 ha of forest cover disappearing each year (PAD, para 5). Other causes of forest degradation include increased population pressure, inefficiency, unsustainable agricultural practices, poverty, bushfires, firewood and charcoal production, animal husbandry practices, and non-recognition of potential for multiple global benefits (PAD, para. 5). As a result, this project sought to address the technical, social and economic constraints related to deforestation in Benin. The project aimed at addressing these systemic issues by laying the foundation for a collective integrated ecosystem management approach to reforestation.

The objective at appraisal aligned with the Government of Benin's Forestry Strategy (November 2002), which emphasized the need for empowering local communities to take greater responsibility for the protection of forest assets. The Strategy also supported promoting alternative income-generating activities that do not degrade the forests. The Government of Benin had also drafted a National Biodiversity Protection Strategy and Action Plan (March 2012) and the National Action Plan against Desertification (adopted November 1999) (PAD, para 6).

Alignment with Country Strategy: The project's objectives aligned with Benin's First Poverty Reduction Support Credit (Poverty Reduction Support Credit, 2005). This report states that the funds would be used to support three sectors (health, basic education, and rural and semi-urban water), and support the continuation of the Environment and Urban Development and Forest Management Programs (Poverty Reduction Support Credit 2005, pg. 2). Key outputs of this credit were to be used to create 6 participatory forest management plans.

In the Country Assistance Strategy (2009-2012), the Government of Benin strategic objectives included (i) accelerating the private sector (ii) improving access to basic services and (iii) promoting better governance and strengthening institutional capacities (CAS 2009, para.50-63). The project contributed to the CAS's second strategic objective, in particular, the outcome "improve the environment and urban sanitation improvement." While the project may have contributed to this outcome, the project's objective was not the



main priority of the outcome. The key indicators and milestones for the CAS outcome were not related to the project's indicators on forest management and reforestation. Instead, the CAS indicators sought to achieve changes in paved roads, access to basic services, and increase use of waste-water management system. When analyzing the CAS indicators and the project objective, it is clear that this project did not fully align with the outcome area.

In the current Country Partnership Strategy (2013-2017), the project contributes to the third pillar of "increasing Sustainable Growth, Competitiveness and Employment" and the outcome "improved natural resource management." There is stronger alignment between the project's objective and the CPS outcome in the CPS FY2013-2017 than in CAS FY2009-2012.

Previous Experience: The project's design drew from lessons learned and experiences in the Natural Resources Management Project (PGRN) which was closed in 1999. This project tested a number of inter-related pilot activities related to community-based management of watersheds, wildlife reserves and gazetted forests (PAD, para. 8). The Bank also had similar experiences integrating ecosystem management in forestry projects in other African countries such as Senegal, Kenya, and Chad.

Although there is not full alignment, the project's objective contributed to and supported the Government of Benin's development policies and the Bank's country partnership strategy. The relevance of the project's objective was therefore rated substantial.

Rating

Substantial

4. Achievement of Objectives (Efficacy)

Objective 1

Objective

To assist the Recipient in its efforts to lay down the foundation for a collective integrated ecosystem management system of its forest and adjacent lands.

Rationale

The project sought to establish the foundation for a collective integrated ecosystem management system of its forests and adjacent lands. The underlying theory of change called for the implementation of a multi-dimensional holistic approach that aimed at addressing systemic challenges that placed pressure on forest and adjacent lands, while simultaneously creating an institutional and cultural environment that would support a multi-dimensional (technical, social and economic) holistic approach to a collective ecosystem management.

The assessment of results of the project in this review are organized by outcome dimensions listed below:



Technical Dimensions - Strengthen the institutional, technical, and financial capacity of forest administrations, the private operators, and NGOs intervening in the project in order to improve their performance and achieve an integrated ecosystem management of natural resources (PAD, para 23).

Outputs:

- 16 Technical Forest Management Units were organized and functional to cover 19 gazetted forests (Target Met, Target: 12, ICR, pg. 20).
- 1,823 community representatives were trained in integrated ecosystem management (Target Met, Target: 1,700, ICR, pg. 20). Trainings included : Enhanced Production Systems (SAP), the Conversation management of water and soil (GCES), and GDRN.
- 829 forestry personnel were trained in integrated ecosystem management (Target Met, Target: 800, ICR, pg. 20).
- 112 foresters in technical units for forest management (CTAFs) were trained in improved agricultural techniques (Target met, Target: 100, ICR, pg. 49).
- 120 forestry staff were trained in management based results (Target Met, Target: 120, ICR, pg. 45).
- 735 agricultural producers were trained in improved agricultural techniques (Target Met, Target: 600, ICR, pg. 49).
- Reference study on the biological diversity of 19 gazetted forests completed.
- An ethnobotanical study of Djidja territory was completed.
- An inventory of the Ouémé-Okpara confluence was completed.
- An inventory and ethnobotanical atlas of the garden of medicinal plants of Djidja was completed.
- Identification of Elephant Circuits in the Goungoun and Sota Forests.
- Two databases were created: (i) Ecological, Evaluation and Environmental Monitoring database, and (ii) Database for monitoring of the biodiversity of the project.
- Construction of 5 CTAF buildings, 13 forester posts, and forestry seed laboratory at DGEFC (ICR, pg. 84)
- Rehabilitated 4 forestry inspections buildings and 2 forestry inspector chief residencies. Repaired 24 km of access roads.
- Drilling of 2 out of 5 planned wells at forest outposts (ICR, pg. 84)
- Acquisition of equipment included: satellite images of orthophoto plans, 75 GPS acquired, 100 clinometers, 100 forest compasses, and 16 pickups cars, 5 station wagons, and 150 motorcycles, 14 generators.

Outcomes:

As a result of the technical support, 16 Technical Units were functioning. Each unit had the equipment necessary for effective surveillance. In addition, each technical unit was responsible for implementing activities per the forest management plan (ICR, pg. 48). They were tasked with submitting periodic reports to the Government of Benin (ICR, pg. 48).



Newly formed community-based organizations (CBOs) had the skills to manage contracts, budgets, collect fees, project manage re-forestation and other activities. The CBOs received financial management, account principles, and participatory methods training. These skills were used to determine the use of community funds collected through the rural charcoal markets fee system and distribution (World Bank Staff Interview, October 2018). According to the ICR, the project supported the creation of an increased and strong civil society through the establishment of the CBOs (ICR, para. 53).

Forest agents, including gazetted forest management units (called CTAF) and other staff, developed technical capacities in forest management skills, tree planting, start-up and maintenance of tree nurseries (ICR, para. 54). They conducted forest inventories and were responsible for the management and drafting of forest management plans (ICR, para. 54). The creation of gazetted forest management units (CTAF) enabled the decentralization of forest sustainability management (World Bank Staff Interview, October 2018).

According to a source quoted in the ICR the strengthening of technical capacity in forest management institutions in Benin has been associated with a decreasing deforestation rate in the project area between 2007 and 2016 of 2.83 percent which was slower than the deforestation rate at the national level of 3.73 percent (paragraph 37).

Social Dimensions - Ensure long-term management of forest resources through contractual participatory management plans in order to guarantee the long-term protection of forests and improve the income and livelihood of people (PAD, para. 24)

Outputs:

- 19 Participatory Forest Management Plans under implementation (Target Met, Target: 19, ICR, pg. 20).
- 193 community-based organizations (CBO) were created and operational (Target Met, Target: 70, ICR, pg. 20).
- All 19 gazetted forests were initially demarcated (World Bank Staff Interview, October 2018).
- 328 income-generating activities developed and implemented, of which 60% included women beneficiaries (Target Met, Target: 169, ICR, pg. 20 and pg. 50).

Outcomes:

The project supported the implementation of 19 Participatory Forest Management Plans (PFMPs) compared with a baseline of 5, which were possible due to the creation and strengthening of the technical capacity of CBOs (ICR, para. 35). The majority of the forest management activities planned under the PFMP are currently being implemented within the forest areas concerned (ICR, pg. 47). Some of the activities that are currently being carried out are: forest enrichment, production of seedlings, creation and protection of forest



plantation, forest boundary demarcation, establishment and monitoring of fuelwood and rural charcoal markets, alternative income generating activities, conservation of some of the threatened species, and training for communities and CBOs (World Bank Staff Interview, October 2018). The government provided additional resources over the 5 years that it took to develop the plans.

As a result of the project, there has been an increase in collaboration between several players. For example, CBOs and the General Directorate of Forest and Natural Resource Management have collaborated in the yearly renewal and implementation of contracts for forest management in all 19 gazetted forests (ICR, para. 35). CBOs have continued to participate in post-project activities, including the development of updates for PFMP (2019-2020) and next management period (2020-2030).

Collaboration between forest agents and community members in lands adjacent to the forests improved. Forests agents provided technical assistance for participants in income-generating activities (ICR, para. 36). Community members participated in a range of forest management activities including the design, and implementation of plantation. They also participated in reforestation and surveillance missions and community reporting of violations to commune authorities (ICR, para. 35). This collaboration was formalized through the forest policy and forest management plans. Activities have become institutionalized, such as regular planning and evaluation of annual work plans at the administration and forest level and the co-management of the forest based on the forest management plans (World Bank Staff Interview, October 2018).

Overall there has been a lack of conflict during and after the participatory boundary marking exercise (for all gazetted forests), which delineated forest boundaries.

The project has helped the facilitation of common understanding on the departure of farmer's fields from gazetted forests with respect for harvest times (ICR, para. 35). While no formal agreements have been signed, there was a consensus that formed between farmers and forest administrations on an appropriate timeline for the departure of farmers from the gazette forests (World Bank Staff Interview, October 2018). For example, in the Trois Rivières gazetted forests 200 farmers stopped planting in 2017 within the forests, and an additional 200 farmers are expected to stop planting in 2018 (World Bank Staff Interview, October 2018).

The income-generating activities (IGA) involved over 4,000 direct beneficiaries and played an important role in shifting behavior away from unregulated activities within the gazetted forests. Participating in income-generating activities, enabled participants to move away from activities related to unsustainable extraction of forest resources (ICR, para. 36). An evaluation of the income-generating activities revealed that 85% of respondents stated that prior to the project they had taken part in charcoal making or farming within forest boundaries, but after participating in the micro-projects they stopped these activities. In addition, 15% of respondents stated they had significantly reduced conducted unregulated activities in gazetted forests (ICR, para. 36). In addition, the number of individuals entering the forest from unregulated extraction's dropped significantly with reported reasons ranging from new knowledge of forest value to improved economic outlook due to income-generating activities, and reduced time to conduct extraction activities (ICR, para. 36).



Income also increased for IGA participants (or promoters). For example, an analysis of 14 beneficiaries working on livestock raising showed an average increase of 16 animals per promoter to 63 animals per promoter. The additional income over a 4 to 8 months period ranged from FCFA 20,000 to 330,000 with an approximate average of FCFA 88,400 per promoter (ICR, para. 55). A Commercial Fair was also organized, in Cotonou in November 2017, to provide products access to a larger market. According to the ICR, the fair attracted 4,500 visitors with all products sold and making over US\$40,000 in sales (ICR, para. 56). About eighty-six individuals who “on the basis of seeing these successful enterprises made personal investments in new IGAs” (ICR, para. 56).

The income-generating activities supported by the project also had a positive effect on women participants. Women participants were able to expand their businesses and earn income to cover household costs, such as additional food, school fees, and health costs (ICR, para 52). Women entrepreneurs started or expanded businesses related to raising chickens, goats, pigs, sheep, processing of cassava (gari) and shea butter (karate). In some cases, women participated in the Commercial Fair held in Cotonou in November 2017 and they signed contracts for supplying gari, rabbits, and honey on a regular basis to Cotonou supermarkets (ICR, para. 52).

Moreover, 2,000 individuals were beneficiaries of contracts with the forestry administration for producing seedlings for plantations, tree planting, plantation maintenance, and plantation surveillance (ICR, para. 57). Roughly 80% of GEF funds were allocated to these contracts, constituting a significant income generation for local communities (ICR, para. 57).

Economic Dimension – Promote production and utilization of wood fuel from sustainably managed forests (PAD, para. 29).

Output:

- Guidelines on sustainable production of forest wood developed.
- 530 charcoal producers trained on improved production techniques (Target met, Baseline: 60, Target: 160, ICR, para. 36).
- 25 rural fuelwood markets developed with 3 additional markets currently under development in the former project zone (Target not met, Target: 30, ICR para. 36).
- 20 rural fuelwood markets under the participatory forest management plan guidelines created (Target met, Target: 10, ICR pg. 45).
- 165 ha of surface area with community fuelwood plantations established in lands adjacent to the forests (Target met, Target: 150, ICR para. 36).
- Developed and aired in 12 local radio documentary on reforestation efforts (ICR, pg. 85).

Sustainable charcoal production led to an increased effectiveness and efficiency of the market, with fewer losses through theft, consistency of supply for buyers, and easier access to buyers for producers with the cut in the middle-men (ICR, paras. 36 and 37). Due to a change in the taxation system, there has also been an



increased income for local communities' authorities and the government. The fuelwood markets have remained operational signaling efficiency for buyers, suppliers, and producers (ICR, para. 37).

The project also supported the establishment of the Conservation Trust Fund, which provided long-term sustainable financing for conservation and biological diversity of Benin's Northern Savannah ecosystem. The Trust Fund was fully capitalized and operational. The initial capital disbursement was of US\$ 930,000 (ICR, pg. 52).

Outcomes

The project's activities restored 8,059 ha of degraded forests in 19 forest ecosystems (Target Met, Original target 7,700 ha, ICR, para 36). According to independent study, the rates of deforestation and degradation within the gazetted forests in the project zone were lower (2.83% forest loss) than in the rest of the country (3.373% forest loss) (ICR, para. 37). In addition, 713 ha have been enriched, a process by which degraded areas are replanted with species particularly adapted to the ecology of that specific forest (Target Met, Baseline 500 ha, Target: 600 ha ICR, para 36). This restoration method had the benefit of "closing" the existing empty spaces within a forest (ICR, pg. 51). At least 3,189 ha were reforested with a range of forest tree species within the 19 gazetted forests (Target Met, Baseline 1000, Target: 1900, ICR, pg. 50). Moreover, 35 plant species in these forests were identified in the baseline study of biodiversity and these species benefited from conservation measures that were implemented (Target Met, Target 20, ICR, pg. 50).

Rating

Substantial

Rationale

This review rates the project's efficacy as substantial. Overall the project assisted the government in laying the foundation for a collective integrated ecosystem management system of its forests and adjacent lands. It achieved this by increasing the capacity of forest agents and supporting the flourishing of civil society through the strengthening capacities of CBOs to develop participatory forest management plans. As a result, collaboration improved between different partners, including forest agents and the community in the project area. This partnership laid the foundation for potential conflict resolution of future disagreements. Moreover, income-generational activities, production of fuel from sustainably managed forests provided alternatives to deforestation and changed destructive behavior in forests in the short to medium-term to some extent. While the national deforestation rates continue to be extremely high, the project's holistic approach led to the restoration of degraded forests, and reforestation in the project area.

Overall Efficacy Rating



Substantial

5. Efficiency

Analysis in the PAD: At appraisal, it was determined that the project was not amenable for the usual cost-benefit analysis because many activities produced benefits that were difficult to quantify in economic terms (PAD, pg. 49, para. 1). Instead, efficiency was assessed through an incremental cost analysis. The PAD estimated the incremental cost of implementing the GEF grant and achieving global and local environmental benefits and compared these to a baseline scenario of implementing forestry interventions as designed in the project. The incremental cost was the difference between the cost of the baseline scenario (US\$15.00 million) and the cost including the GEF financing (US\$22.35 million). Therefore, the total incremental cost of the project was estimated at US\$7.35 million (ICR, para. 44). The PAD asserted that “experience from other decentralized projects, efficiency gains are expected by devolving management to local communities” and that these “experiences indicate that the increased costs associated with decentralization would be offset by increased benefits in terms of conservation of forest resources and the adoption of more sustainable management practices” (Annex 9, pg. 49). Annex 15 in the PAD lists local, national and global environmental benefits (pg. 60).

Analysis in Additional Financing: The assertion that environmental benefits would exceed the project’s incremental costs was supplemented by economic and financial analysis which was also conducted, utilizing a similar methodology to the original PAD, when additional financing was provided to the project (ICR, para. 44). The economic analysis in the additional financing project paper examined the economic viability of the project at the national level, estimating quantifiable direct and indirect benefits of the additional financing, with the annual contribution from the Government estimated at US\$3 million (Project Paper February 2013, para. 47). The analysis confirmed the projects’ overall economic and financial viability with an Internal Rate of Return (IRR) at 14%, an Economic Rate of Return (ERR) at 17% with a positive Net Present Value (NPV) estimated at US\$ 11.75 million (ICR, para. 44 and Project Paper February 2013, para. 48).

Analysis in the ICR: The project generated a diverse set of economic benefits including income-generating subprojects, regulated and functioning wood fuel markets, and other intangible benefits. Only benefits based on the estimated ex-post economic assessments, mostly the income-generating activities and the wood fuel markets, were included in the analysis for the ICR. It is also noted in the ICR that “Data were on revenue, operational costs and profits for individual IGAs was not collected systematically”. The ICR also noted that the information collected covered mainly social aspects, information from interviews with participants, and assessments of the environmental impact and sustainability, and presenting a partial economic assessment of the sample of IGAs (ICR, Annex 4, pg. 71). On average, net income generated by most of the IGAs of second set varies from low to average (between approximately US\$192 – 385/yr (110,000 – 210,000 FCFA/year), while income of the third IGA generation in average shows slight increase to high average level. Among those who benefitted from IGAs the benefit/cost ratio was above 1 and an IRR of 8-12% (ICR, para. 46 and Annex 4, Table 4.4). This result, however, reflected the higher end of all the results reported for the IGAs. For income levels at the lower level of the distribution the B/C ratios were below unity. The ICR also stated that the analysis of wood fuel markets “demonstrated financial viability ... during the third year of the project implementation with a positive overall NPV and a higher than 18 benefit-cost ratio” (ICR, para. 48)



but without data to back up this assertion. Since data for an NPV estimate for the fuel wood markets was apparently available, there was also no reason given for the absence of a rate of return estimate for fuel wood markets in the ICR.

Project Management: The project management costs were approximately 7% of total costs, in line with the original budget in the PAD (ICR, para 49). While there was a two-year project extension and the project was restructured, the restructured indicators were met within the budget, demonstrating greater efficiency (ICR, para. 49). There were low staff turn-over and no significant procurement issues.

Given the unsystematic manner in which the information on the results of IGAs was collected, the acknowledgement in the case of the fuel wood market that “some key elements of the data are missing” which “does not allow for the reasonable assessment” (Annex 4, pg. 74), and the fact that the estimated benefit/cost ratios greater than unity and rates of return for IGA projects between 8 to 12 percent were based on the most optimistic results during the project’s implementation with rates of return barely comparable to the opportunity cost of capital, this review has assessed the efficiency of this project as modest.

Efficiency Rating

Modest

a. If available, enter the Economic Rate of Return (ERR) and/or Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation:

	Rate Available?	Point value (%)	*Coverage/Scope (%)
Appraisal	✓	17.00	0 <input type="checkbox"/> Not Applicable
ICR Estimate		0	0 <input type="checkbox"/> Not Applicable

* Refers to percent of total project cost for which ERR/FRR was calculated.

6. Outcome

The relevance of the project's objectives was substantial. Efficacy was also rated substantial because, overall, the project contributed towards laying the foundation for a collective integrated ecosystem management system of its forest and adjacent lands. It increased the capacity of forest agents, the relevant government institutions, and supported the flourishing of civil society through the establishment of community based organizations. By developing participatory forest management plans, collaboration improved between different stakeholders, including forest agents and the communities. Moreover, income-generating activities such as production of fuel from sustainably managed forests provided alternatives to deforestation and changed behavior in the short to medium-term. Deforestation rates in the project area between 2007 (when the project started) to 2016 (two



years before the project closed) declined to 2.83 percent compared with the deforestation rate at the national level of 3.73 percent.

The efficiency of this operation was, however, rated modest due to the unsystematic manner in which the information on the results of IGAs was collected, missing data on the economics of the fuelwood market, and the fact that despite estimated benefit/cost ratios greater than unity and rates of return for IGA projects between 8 to 12 percent these measures of efficiency were based on the most optimistic results during the project's implementation and yet the estimated rates of return were barely comparable to the opportunity cost of capital.

Overall the outcome of the project has moderate shortcomings and its outcome is therefore rated moderately satisfactory.

a. Outcome Rating
Moderately Satisfactory

7. Risk to Development Outcome

There are four interrelated risks that could impact the sustainability of an adequate foundation for the collective integrated ecosystem management of forests and adjacent lands in Benin.

Financial: The General Directorate of Forest and Natural Resource Management scaled up its staffing as a result of the project. New technical forest management units in the General Directorate were established. Unfortunately, due to lack of budget hiring has been frozen since 2013 and there has been no operational budget. The lack of funds has led to problems with surveillance missions. Return on forest investments created as a result of this project (such as taxes, fees, investments in plantations) were not sufficient to cover management costs. A bridging fund, such as a Forest Trust fund, may be necessary to mitigate the risks until rents are sufficient to cover costs of operations and forest management, and fund management is simplified and improved (ICR, para. 87).

High level of deforestation and degradation rates: Despite project activities and results, deforestation and degradation rates in gazetted forests are extremely high (ICR, para. 88). Key factors include (i) lack of capacity among the forest management technical unit (CTAF) agents, (ii) the need for continuous and increased focus on surveillance, reforestation, and regeneration activities, and (iii) continuous growth of population and pressures from agriculture (ICR, para. 88). To reduce the pressure on the gazetted forests, more activities focusing on agricultural practices and provision of seeds would need to be implemented (ICR, para. 88).

Level of Community collaboration and commitment: The relatively massive size of the forests in Benin and the difficulties in surveillance by the CTAF agents has led to serious encroachments within forests. The relationships with communities will need to be carefully monitored with a continued investment in a participatory partnership approach to managing natural resources (ICR, para. 89).



Government Commitment: Changes in the political environment pose some risk as the government may in the future deprioritize the forestry sector or the co-management approach. Given the Government of Benin's dedicated and continuous efforts demonstrated throughout this project, this risk is considered low (ICR, para. 90).

8. Assessment of Bank Performance

a. Quality-at-Entry

The quality of the design of the project was mixed. On the one hand, the project introduced a participatory and multipronged approach that was holistic which integrated technical, social, and economic aspect to forest management. This design was based on lessons learned from other projects that also emphasized the need to establish co-management process and create enabling environments for reform (ICR, pg. 78). However, this review agrees with the ICR's conclusion that the project intervention area which included 94% of gazetted forest by area was an "overly broad area (which) diminished the potential impact of the project" (para. 79). In retrospect, as the ICR noted, "a more targeted approach allowing for greater surveillance over fewer gazetted forests may have had more impact on deforestation rates" (ICR, pg. 79). The ICR also reflected that if the PDO had placed a greater focus on deforestation the project would have benefitted (ICR, para. 79).

The ICR noted that the indicators in the first phase were overly ambitious and that the project either lacked or did not take into account baseline data. Eventually, the strategy and activities of the project were thoughtfully crafted. During the restructuring in 2011, many of the intermediate indicators were either revised or dropped, activities simplified and funds reallocated (ICR, para 80). Further changes to the indicators were made in 2013 when the Additional Financing (AF) was provided. After the AF and restructuring in 2013 there was adequate alignment between activities and indicators. It would, however, have been useful to retain indicators related to technical capacity.

Implementation agreements, including fiduciary management, worked well. On the other hand, the occupation of the position of project coordinator experienced turnover connected to changes in political arrangements (ICR, para. 81). Counterpart funding from the Government was stated as in-kind contributions of offices and staff. Government budgets slated to fund operating costs of field agents and CTAFs were not officially considered co-financing. This proved "to be a serious stumbling block for effective use of project-funded goods, including lack of fuel, or repairs for project-funded vehicles necessary to conduct surveillance missions" (ICR, para. 82).

Overall, the quality of entry is rated as moderately satisfactory. While there were initial project design shortcomings, these were partially addressed through restructurings.



Quality-at-Entry Rating

Moderately Satisfactory

b. Quality of supervision

The quality of supervision was satisfactory throughout the life of the project. The project benefited from having only 2 TTLs over the 12 years of the project, which enhanced supervision, implementation, and collaboration with the PIU (ICR, pg. 34).

Issues that arose during the implementation were identified and addressed with implementing partners. The team proactively addressed challenges, early in the project's implementation; "the team reinforced dialogue with authorities by increasing the number of supervision missions" (ICR, para. 83). Local participants and beneficiaries were also included in the missions, to complement the overall participatory approach of the project (ICR, para. 83).

Similarly, when poor performance of the PDO level indicators was identified, the team developed and monitored an agreed-upon action plan to be implemented by the PIU. The Plan was carefully tracked and modified. By November 2016, the ISR indicator rating was at Satisfactory performance (ICR, para. 84).

The midterm review of the original project identified shortcomings in the initial project design. These were addressed through the restructuring of the project. There was good coordination between HQ-based and country management unit throughout the project (ICR, para. 84). Reporting was timely, open, and honest. This enabled the development of action plans and effective responses to issues that arose related to safeguards, procurement plans, and M&E (ICR, pg. 34).

Overall, the quality of supervision is rated to satisfactory for effective and timely management of the project.

Quality of Supervision Rating

Satisfactory

Overall Bank Performance Rating

Moderately Satisfactory

9. M&E Design, Implementation, & Utilization

a. M&E Design

The initial design of the monitoring and evaluation system set an ambitious mandate to have a data gathering system at the forest level. The monitoring system also included a baseline, cross-department database network, and performance indicators (ICR, para. 62).



In the event, the initial baseline data was collected with uneven quality due to poor execution of the baseline data gathering (ICR, para. 62). Also, the network database system did not become operational due to software design issues, as well as insufficient server capacity within the Government of Benin (ICR, para. 62).

The ICR reflected that the PDO “could possibly be more ambitious with regards to the outcomes a ‘laying the foundations’ for collective integrated ecosystem management system” (ICR, para. 63). Moreover, the PDO could have also been more explicit in emphasizing the overall programmatic approach including key concepts such as culture change, capacity building, and economic opportunities.

The mid-term concluded that the indicators were too complex and they referenced undefined baselines with insufficient targeting. During the restructuring, the M&E design was simplified and all the intermediate indicators were dropped (ICR, para. 63). As reflected in the ICR, the results indicators “would have benefited from better baseline data and more measurable indicators that would have more clearly reflected the rate of deforestation in the gazetted forest” (ICR, para 63). The indicators could have also better defined what “laying the foundation” for the collective integrated ecosystem management meant. The results framework could have also benefited from more qualitative and activity specific indicators. For instance, an indicator that measured the increase in institutional or technical capacity of forest agents.

b. M&E Implementation

According to the ICR, the monitoring and evaluation system faced several challenges. To address an overall lack of capacity, two additional staff were brought into the M&E team. Additional training was provided and an M&E plan and data collection manual were developed.

In 2011, the Ministry created a new functional and separate Monitoring and Evaluation Unit with focal points at the individual level. This change created an improvement in data collection procedures, increased capacity, and simplified and better-targeted indicators (ICR, para 64). At this point, the implementation of M&E became satisfactory and remained for the duration of the project (ICR, para. 64).

During the additional financing, the M&E supervision was directed by the General Directorate of Forests and Natural Resource Management. Unfortunately, surveillance at the forest level remained challenging in part due to operating budgets leading to a lack of funds for fuel and vehicle repairs. The number of foresters in the field, although improved, was not sufficient for adequate surveillance. There were also few incentives to motivate the CTAF agents, as per diems were not provided for missions into the forest. While the project has considered a range of solutions and approaches, “lack of surveillance missions into the interior of the forests remained a serious issue hampering the overall management of the gazetted forests” (ICR, para. 65).



c. M&E Utilization

The ICR included several examples of how the project utilized monitoring and evaluation data for decision making. Two examples were:

- Identifying the initial approach to the enrichment of natural forest as ineffective allowing for re-design of the enrichment activities by adopting a full plantation approach.
- Identifying the need for additional technical assistance for income-generating activities, particularly with regards to livestock health and financial accounting.

Overall, the monitoring and evaluation section is rated as substantial. The monitoring and evaluation design was over-ambitious, but the restructuring provided the team an opportunity to reflect on more appropriate indicators and data processes. The PIU also worked towards addressing some of the gaps in the M&E system by establishing a specialized unit, increasing the number of staff, and developing an M&E manual. It is unfortunate that the project was unable to provide the necessary incentives to ensure successful surveillance missions into the forests. The project also utilized data throughout the project to improve program quality.

M&E Quality Rating

Substantial

10. Other Issues

a. Safeguards

The project was classified as Environmental Category “B” Partial Assessment. At appraisal, it triggered the following safeguards: Environmental Assessment (OP 4.01), Natural Habitats (OP/BP 4.04), Involuntary Resettlement (OP/BP 4.12), and Forests (OP/BP 4.36) (PAD, para 67). No changes were made to the environmental safeguards during the additional financing (ICR, para. 68). Under the additional financing, it was agreed that environmental screening would be undertaken for micro-projects and IGA applications (ICR, para. 69).

The Environmental and Social Management Framework (ESMF) and the environmental assessments were publicly disclosed (ICR para. 68). Overall, the project received predominantly Satisfactory ratings on environmental performance with some Moderately Satisfactory ratings (ICR, para. 68).

Environmental Assessment (OP 4.01). The rating for this safeguard was downgraded to moderately satisfactory (MS) in May 2015 due to a poor environmental screening of the first batch of income generating activities. The project unit conducted staff selection without recruiting an environmental and social



safeguard specialist. Issues with this safeguard continued into 2016 due to (i) poor quality of environmental screening checklists for income-generating activities; (ii) non-submission of screening sheets to the Beninese Environmental Protection Agency (ABE) for review and approval prior to implementing the IGAs; and (iii) non-compliance with environmental monitoring reporting requirement for all IGAs under implementation. (ICR, para. 69). The PIU addressed the checklist and hired a specialist. The mission shared good examples of environmental monitoring projects with the PIU (ICR, para. 69). While environmental screenings improved, challenges continued under the micro-projects and the MS ratings continued throughout the life of the project (ICR, para. 69).

Involuntary Resettlement (OP/BP 4.12) A resettlement plan and process framework were prepared under the original project and when additional financing was provided (ICR para. 70). The rating for this safeguard was also downgraded in May 2015 but later returned to Satisfactory (ICR, para. 69).

The project team received safeguard training during the initial project and renewed training for the Additional Financing portion of the project (ICR, para. 70). The Grievance Redress Mechanism (GRM) was designed in line with traditional conflict resolution models that were operationalized at village level (ICR, para. 70).

b. Fiduciary Compliance

Financial management was rated Satisfactory throughout the life of the project. Financial reports were submitted in a timely manner and were found to be satisfactory by the Bank.

Seven financial audits were completed under the original phase of the project and each was certified without reservation and the auditor's reports were unqualified. On the other hand, the audit report of 2010 was found by the Bank to be in non-compliance with the Bank's standards due to issues with terms of reference for the independent auditor. These issues were addressed and the audit report was amended to the Bank's satisfaction.

During the first few years of the project implementation, a few issues arose including: (i) the use of a network of banks to secure the transfer of funds as part of financing of activities alternative income generations and (ii) the correction of deficiencies identified fixed asset management, including systematic underwriting of insurance policies. These two issues were successfully resolved by the PIU.

The original (first phase) of the project closed in May 2013 with the Financial Monitoring Report submitted, along with a final project audit completed in December 2013 (ICR, para. 73). By all Bank financial standards, the project was rated satisfactory and deemed to have 'closed well' (ICR, para. 73).

The financial agreements for the additional financing were based on the same arrangements as the original project (ICR, para. 74). Improvements were made to existing specific procured for Income Generating Activities



and to take into account lessons learned (ICR, para. 74). Technical assistance in the form of additional financing was provided to individuals and groups participating in the income-generating activities. (ICR, para 74).

Procurement. According to the ICR, procurement during the project generally functioned well with risk to compliance with procurement process and performance of contract administered rated low to moderate (ICR, para. 75).

Within the original project, consistent issues were identified related to delays of payments and non-publication of awarded contracts (ICR, para. 75). During the implementation of additional financing, procurement rating was moderately satisfactory due to the low implementation rate of procurement plan related to the micro projects (ICR, para. 76). Overall, procurement processes were conducted in line with Bank policies and procedures (ICR, para. 76).

c. Unintended impacts (Positive or Negative)

Many of the IGA participants stated that with the additional income they were able to pay school fees. It is possible that due to the project there was an increase in school attendance in the project zone among children of parents participating in IGA. This data was not verified by the project team (ICR, para. 58).

d. Other

None

11. Ratings			
Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Satisfactory	Moderately Satisfactory	The efficiency rating of modest impacts the overall outcome rating. Efficiency is rated modest as a result of unsystematic data collection and estimates based on optimistic results which are barely comparable to the opportunity cost of capital.
Bank Performance	Satisfactory	Moderately Satisfactory	There were shortcomings with Quality at Entry



Quality of M&E	Modest	Substantial	The Monitoring and Evaluation system had some design flaws and challenges with respect to the collection of data, but the project team worked diligently to overcome the challenges.
Quality of ICR		Substantial	---

12. Lessons

The following three lessons were the most apposite among the six included in the ICR,

- 1. Invest in participatory bottom-up consultative approaches to forest management.** For example, the project invested in developing participatory community forest plants and creating a participatory boundary marking process. While these processes took additional time and required technical specialists, the extended approach improved collaboration and decreased conflict (ICR, para. 92).
- 2. Targeted and specific interventions may be more effective than broad-reaching approaches.** For example, this project sought to work on 19 gazetted forests. However, in forested areas where there was a higher level of concentration of project activities, the deforestation rates were lower (ICR, para. 93). This project experienced an over-stretched budget and was therefore unable to support all the operational costs and surveillance missions. For future projects, consider focusing implementation activities in targeted areas.
- 3. Income generating activities require technical support for effective implementation.** For example, the income-generating activities of this project were successful at increasing income, empowering women, and reducing pressure on forests. However, for these activities to be successful, technical support in the form of basic accounting, marketing, and disease prevention (agriculture and livestock raising) is required (ICR, para. 95).

13. Assessment Recommended?

No

14. Comments on Quality of ICR

While the ICR provided adequate information, certain sections were repetitive, unfocused, and contained unnecessary background information. The Efficacy section could have been better organized along technical, social, and economic dimensions. The Efficiency section also lacked clarity of where certain information was being drawn from.



Overall, the ICR included candid analysis about the areas that worked and did not work within the project. The report introduced qualitative evidence that added depth to the report. Explanations were sufficient in the area of Monitoring and Evaluation and Bank Performance. Indicator definitions, methodology, and disaggregated data were very thorough.

a. Quality of ICR Rating
Substantial