

Terminal Evaluation Review form, GEF Evaluation Office, APR 2014

1. Project Data

Summary project data			
GEF project ID		2373	
GEF Agency project ID		GEF-FSP-002-BR (IFAD Grant Agreement)	
GEF Replenishment Phase		GEF 3	
Lead GEF Agency (include all for joint projects)		IFAD	
Project name		Sustainable Land Management in the Semi-Arid Sertão	
Country/Countries		Brazil	
Region		LAC	
Focal area		Land degradation	
Operational Program or Strategic Priorities/Objectives		OP 15: Sustainable Land Management	
Executing agencies involved		Ministry of Agrarian Development	
NGOs/CBOs involvement		Were involved in the implementation of several project activities	
Private sector involvement		None involved	
CEO Endorsement (FSP) /Approval date (MSP)		December 2005	
Effectiveness date / project start		August 2007 (TE)	
Expected date of project completion (at start)		September 2013	
Actual date of project completion		September 2013	
Project Financing			
		At Endorsement (US \$M)	At Completion (US \$M)
Project Preparation Grant	GEF funding	0.3	0.045 (PIR 2014)
	Co-financing		
GEF Project Grant		5.943	5.943
Co-financing	IA own	4.7265	4.7265
	Government	4.3402	4.438435
	Other multi- /bi-laterals	0.08	
	Private sector		
	NGOs/CSOs	0.0543	0.262
Total GEF funding		6.243	5.988
Total Co-financing		9.201	9.426935
Total project funding (GEF grant(s) + co-financing)		15.444	15.414935
Terminal evaluation/review information			
TE completion date		September 2014	
TE submission date			
Author of TE			
TER completion date		February 2015	
TER prepared by		Aditi Poddar	
TER peer review by (if GEF EO review)		Shanna Edberg	

2. Summary of Project Ratings

Criteria	Final PIR	IA Terminal Evaluation	IA Evaluation Office Review	GEF EO Review
Project Outcomes	S	S	N/R	S
Sustainability of Outcomes	Low risk	L	N/R	ML
M&E Design	N/R	S	N/R	S
M&E Implementation	N/R	S	N/R	S
Quality of Implementation	N/R	HS	N/R	S
Quality of Execution	N/R	HS	N/R	S
Quality of the Terminal Evaluation Report	-	-	N/R	S

3. Project Objectives

3.1 Global Environmental Objectives of the project:

The Global Environmental Objective of the project, as stated in the Project Document (PD), was to minimize the causes of land degradation and its negative effects on the integrity of the *Caatinga* biome ecosystem in the northeast of Brazil through the implementation of sustainable land use systems. 17.8 million people live in the semi-arid *Sertão* in northeast Brazil while the predominant vegetation is the *Caatinga*, which consists of several types of tropical thorn scrub ranging from tall scrub forests to savannas. The *Caatinga* biome, found only in Brazil, has an exceptional level of plant species endemism and is rich in biological diversity. However, the natural systems of *Sertão* are being increasingly threatened by land degradation. The *Caatinga* ecoregion has a “Vulnerable” status with respect to threat to biodiversity and was classified as “Highest Priority at Regional Scale” for conservation. Desertification studies show evidence of strong links between human intervention and land degradation and desertification processes, considered more relevant than those associated with climatic factors. The following are identified as the main causes of land degradation in *Sertão*:

- **Erosion** caused mainly by deforestation for annual cropping or livestock; overgrazing (pastures and rangeland), and inappropriate agricultural practices.
- **Elevation of the groundwater table** caused by excessive irrigation from groundwater.
- **Salinization** caused by irrigation using highly saline water, the lack of a drainage system in irrigated areas, the elevation of groundwater table in soils rich in salts.
- **Loss of organic material and nutrients** caused by unsustainable cropping practices including slash and burn, leading to erosion and leaching.
- **Deforestation** caused by the increased pressure on land for pasture or subsistence agriculture, which is also leading to a reduction in the fallow periods (shifting agriculture); during this transition process from forest into agricultural land, forest biomass is removed for use as fuelwood and charcoal.

3.2 Development Objectives of the project:

As stated in the PD (pg. 20), the main Development Objective is to contribute to an increase in the sustainable development and to improve the quality of life in communities affected by land degradation

in the semi-arid northeast of Brazil, through promoting a pilot cross-sectoral approach in support of productive activities and poverty reduction.

The objectives will be achieved through the following four project components (PD, pgs. 21-26):

1. Building Capacity for Sustainable Land Management and Increasing Environmental Awareness –

This component will develop a collective vision or “culture” for the protection of natural resources and the prevention and control of land degradation in the semi-arid *Sertão*. It is to be implemented through two sub-components:

- a) Capacity building and environmental education
- b) Participatory planning and support to adaptive land management practices

2. Environmental Incentives – This component will establish and operate an incentive mechanism for environmental services provision related to sustainable land use practices (which increase the ecological integrity and productivity of the *Caatinga* system), and to develop alternative sustainable funding options for selected services. The following are the sub-components:

- a) Providing incentives for environmental services provision from sustainable land use
- b) Developing payment mechanisms for environmental services
- c) Developing commodity markets for indigenous and organic products

3. Project Monitoring and Evaluation - The component is to implement a project monitoring and evaluation system. Progress in the fulfillment of the project objectives and outcomes will be monitored in accordance with GEF procedures and will be based on the project logical framework. It consists of two sub-components:

- a) Project monitoring
- b) Project evaluation

4. Project Management and Information Dissemination - This component will ensure the politico-institutional and technical-administrative conditions for effective implementation of the project through the following sub-components:

- a) Management and institutional articulation
- b) Project information dissemination

3.3 Were there any **changes** in the Global Environmental Objectives, Development Objectives, or other activities during implementation?

No, the Global Environmental and Development Objectives were not changed. However, some there were some changes in two project activities – environmental education and payment for environmental services. Environmental education was to be taught in 120 rural schools, but during implementation it became clear that this was not possible, as it had been incorrectly assumed that a proposal for environmental education in schools already existed. Thus, target was revised and a methodological framework for the imparting of environmental education was developed for 9 schools. One of the activities planned under the development of payment mechanisms for environmental services was the development of carbon sequestration projects. The project decided to drop this activity due to the high cost of project preparation and the high degree of organization required (TE, pg. 14).

4. GEF EO assessment of Outcomes and Sustainability

Please refer to the GEF Terminal Evaluation Review Guidelines for detail on the criteria for ratings.

Relevance can receive either a Satisfactory or Unsatisfactory rating. For Effectiveness and Cost efficiency, a six point rating scale is used (Highly Satisfactory to Highly Unsatisfactory), or Unable to Assess. Sustainability ratings are assessed on a four-point scale: Likely=no or negligible risk; Moderately Likely=low risk; Moderately Unlikely=substantial risks; Unlikely=high risk. In assessing a Sustainability rating please note if, and to what degree, sustainability of project outcomes is threatened by financial, sociopolitical, institutional/governance, or environmental factors.

Please justify ratings in the space below each box.

4.1 Relevance	Rating: Satisfactory
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The project's objectives were relevant to the policy priorities of the Government of Brazil in the areas of biodiversity and agroecosystems conservation, and poverty reduction. They were consistent with the principles and guidelines contained in the National Policy to Combat Desertification, the National Biodiversity Policy, the National Policy on Agroecology and Organic Production, as well as the Brazil without Extreme Poverty Plan. The project coordinated with several federal government programs, including the National School Feeding Program and the Food Purchase Program, the National Program to Strengthen Family Agriculture, and the Citizenship Territories Program (TE, pg. 19). In addition, the project was specifically designed to complement the Brazilian government's Sustainable Development Project for Agrarian Reform Settlements in the Semiarid Northeast (Dom Helder Camara Project or PDHC), which aimed to sustainably improve the social and economic conditions of the smallholders in and around the *Sertão* (PD, pg. 10).

The project was consistent with the GEF Operational Programme 15, which focuses on sustainable land management. As the priorities of this Operational Programme are directly related to the issue of land management practices in the fields of agriculture, pasture management, and forest management, the project's objectives, aiming to encourage sustainable agricultural production practices and build the capacity of facilitators of sustainable land management, aligned well with it. The project has thus contributed to institutional and political capacity building, which falls under Strategic Priority SP1 – C. Furthermore, project activities also included initiatives to reduce carbon emissions. Therefore, the project contributes to other GEF priorities such as protecting biodiversity and preventing the destruction of the ozone layer (TE, pg. 19).

4.2 Effectiveness	Rating: Satisfactory
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The PIR from 2014 rates the overall implementation progress as 'Satisfactory' and the overall development objective as 'Highly Satisfactory' whereas the TE rates effectiveness at '5'(Satisfactory).

This TER concurs with the TE's rating as many project activities achieved or even exceeded their targets, but the project could not complete activities under the environmental education and payment for environmental services sub-components. There were a few challenges during implementation, which led to some changes in the activities and targets.

The project area covered 8 territories in the semi-arid Sertão region of Brazil. It aimed to combine the generation of sustainable production systems and Caatinga management with environmental education, environmental incentives, and access to markets. The project was successful in generating environmental gains and thus meeting its global environmental objective. The TE found that more than 10,000 ha of land were under sustainable production methods and more than 45,000 ha of Caatinga had been preserved. Reduced erosion, fire, and exposure of soils and better water use were recorded. Soil erosion reduced by 68 percent on average (when the target was only 10 percent) and there was a 37 percent increase in the species in managed areas (TE, pg. 3). Additionally, there was evidence of increased household income and food security as well. Most sub-components of the four project components either met or exceeded their targets, while 2 sub-components and a few minor activities did not meet their targets (TE, pg. 28-29).

Under component 1, "Building Capacity for Sustainable Land Management and Increasing Environmental Awareness", targets for capacity building were exceeded for all the stakeholders who had to be trained. 5646 farmers, 501 leaders, 212 young people and 130 technical professionals were trained against respective targets of 1000, 140, 150, and 60. Training materials for sustainable practices and environmental education in different media were also produced. A total of 5 books and booklets, and a document on the systemization of environmental education were produced meeting the target, but only 3 videos were produced when the target was 5. Environmental awareness activities were conducted in 250 communities exceeding the target of 200. Additionally, multiple articles and presentations were produced to disseminate information to the general public. But the target for the environmental education activity in schools was revised from 120 to 9 schools, which was met. However, the TE does not mention the effectiveness of the training and information materials in actually increasing awareness. To provide support to adaptive land management practices, 358 facilitators were trained to implement sustainable land management, 364 exchange visits were conducted, 3042 field days were held, and 388 experiments for land management practices were conducted. All of these exceeded their targets except for the exchange visits, which totaled less than the 720 that were planned. Under the participatory planning sub-component, 133 sustainable management plans were created and implemented, some of which were created using participatory methods, and 169 Environmental Incentive Fund (FIA) projects were adopted to ensure that communities receive financial support from the financial incentives mechanism. While the management plans exceeded their target, the level of achievement is unclear for the financial support to communities as the target was to support 50 communities but the indicator used is the number of projects. However, the TE (pg. 19) points out that these sustainable practices were too expensive for the households to carry out without the financial support from the project, thus, the widespread adoption of these practices is a good indicator for the effectiveness of the financial support mechanism.

For component 2, “Environmental Incentives”, as mentioned in the ‘Changes to Objectives’ section, activities related to payment mechanism for environmental services were carried out but some aspects were altered. The PD had planned to train implementing agencies and carry out a pilot for this payment mechanism in 2 watersheds; however, the project carried out exploratory research in 11 micro-watersheds and found that the targets set in the logical framework were too ambitious and could not be met. The TE recommends further work on this activity to develop a well functioning payment mechanism. The PD had also planned to train 20 NGOs and develop 2 carbon sequestration projects for potential buyers of carbon credits. The project, through research and consultations with stakeholders, concluded that within the context of this project, sufficient resources would not have been accessible through credits from carbon sequestration. Thus, this activity was dropped from the project. With regards to creating access to markets for farmers producing local and organic products, the project exceeded its target for the number of households producing and selling these products. It also established local organizations for organic producers.

Components 3 and 4, “Project Monitoring and Evaluation” and “Project Management and Information Dissemination” are not represented in the results matrix but activities for both were carried out satisfactorily. As mentioned in the section on ‘M&E Implementation’, data was recorded and progress towards project objectives was tracked regularly. A midterm review was carried out which identified challenges and suggested amendments to the project to improve implementation. Most of these recommendations were accepted and put in practice. As mentioned in the ‘Quality of Project Execution’ section, project management was carried out quite smoothly by the Dom Helder Camara Project (PDHC) under the Ministry of Agrarian Development, with a fairly complex management structure.

The project’s original objectives do not have specific goals for poverty reduction and income generation but the project was successful in increasing incomes in beneficiary households. The TE (pg. 3) found that household incomes had increased in the range of 55 percent to 205 percent of the poverty line due to activities involving vegetable gardens, agroecological consortia, and Caatinga management.

4.3 Efficiency	Rating: Satisfactory
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The TE rates project efficiency as ‘6’ (Highly Satisfactory) but this TER assesses it to be ‘Satisfactory’ as the project was efficient in its use of resources. While the TE mentions initial delays due to prolonged negotiations with chosen implementation partners, it also reports that the project was able to catch up in the early part of implementation and continue as scheduled. The capacity building component of the project was to be implemented in collaboration with universities. However, negotiations with universities dragged on for months in 2008 without coming to fruition. In 2009, it was decided to integrate the project with the Dom Helder Camara Project PDHC, which finally enabled the launch of project activities (TE, pg. 30).

The TE also provides information about economic efficiency through a comparison with other similar initiatives in the country. A 2010 study found that technical assistance provided under a land reform settlement program was only slightly cheaper than that provided by the Sertão project, and the quality of assistance was similar. The TE, in its own survey in 2013, found that while the costs per household for this project had remained the same, those of the aforementioned land reform settlement program had increased significantly. Thus, this project seems comparatively more efficient (TE, pg. 20).

4.4 Sustainability	Rating: Moderately Likely
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The PIR from 2014 gives an overall risk rating of “Low”, which corresponds to the GEF rating of ‘Likely’, while the TE rates it to be ‘5’. This TER rates overall sustainability as ‘Moderately Likely’ because there seem to be a few financial, institutional and environmental threats.

Financial sustainability (M/L) – The project does not have many foreseeable financial risks after completion, but there could be some threats to financial sustainability. The continuity of sustainable production systems installed in household units does not depend on GEF funding. Additionally, project activities produced both environmental gains and economic benefits with wider market access therefore, it can be expected that these households will continue producing using sustainable practices and conserving resources. However, they will face regular market fluctuations and risks. At the time of the TE’s writing several new projects promoting family biowater systems in Rio Grande do Norte, installation of biowater systems and biodigesters in Ceara and Pernambuco, and production and storage of fodder had either been planned or were already under way, which would continue this project’s activities. These new projects were receiving funding from the government, other multilateral organizations and the private sector. Furthermore, the second phase of the PDHC had been approved at the time of the TE’s writing, which was to build on the project’s accomplishments and reach out to new households to continue the project’s work. However, the project also did not complete the development of the mechanism for payment for environmental services. The TE finds that other investors will have to invest in this mechanism further for it to be completely functional but it is unclear who these investors will be (TE, pgs. 21-22).

Socio-political sustainability (L) – The TE finds that the beneficiary households realize that it is in their interest to continue sustainable production. Furthermore, some other government initiatives are also evolving and allocating more resources to sustainable development and production, which demonstrates support for the project’s objectives and activities. The Ministry of Environment, Water Resources and Legal Amazon, which supported the idea that a management plan for timber use is the only way to manage the Caatinga, has also shown interest in the project’s sustainable management techniques (TE, pg. 22).

Institutional sustainability (M/L) – Project activities do not face substantial institutional threats. The expansion of these sustainable practices depends on certain government initiatives such as those

supporting family agriculture, rural poverty alleviation, and agrarian reform in the semi-arid, but these do not seem to be at risk of discontinuation in the near future. However, some review of the institutional framework required for the payment for environmental services is necessary. River basin committees were supposed to support this aspect of the project, but these committees are weak and lack representativeness in the region covered (TE, pg. 23). Thus, it is important to establish a strong institutional framework for payment for environmental services.

Environmental sustainability (M/L) – There are some potential environmental threats to the project's outcomes. In Apodi, the National Department of Works against Drought (DNOCS), a federal agency, is putting in place a large irrigated perimeter. Although this initiative did not pose a threat to the households benefited by the project at the time of the TE's writing, it will compromise the expansion of sustainable systems in that territory. There will be expropriation of many farming families, and it is very likely that the production system to be installed in this perimeter will not be a sustainable one. Additionally, natural environmental hazards, such as droughts, will also have a negative impact on these benefits, even if temporary (TE, pg. 23).

5. Processes and factors affecting attainment of project outcomes

5.1 Co-financing. To what extent was the reported co-financing essential to the achievement of GEF objectives? If there was a difference in the level of expected co-financing and actual co-financing, then what were the reasons for it? Did the extent of materialization of co-financing affect project's outcomes and/or sustainability? If so, in what ways and through what causal linkages?

The implementing agency, IFAD, was to co-finance 31% of the total project funding, whereas the Government of Brazil was to provide 29% and the beneficiaries were to provide 0.3% of the funding. However, at completion the Brazilian government and the beneficiaries had provided more co-financing than they had committed at the endorsement stage. The Brazilian government actually provided USD 4.438435 million instead of USD 4.3403 million, and beneficiaries had provided USD 262,000 instead of USD 54,300 (TE, pg. 32). As co-financing was more than 60% of the total funds and was used for activities in each of the four project components, it was essential to the achievement of project objectives. It is unclear why actual co-financing was higher than committed.

5.2 Project extensions and/or delays. If there were delays in project implementation and completion, then what were the reasons for it? Did the delay affect the project's outcomes and/or sustainability? If so, in what ways and through what causal linkages?

As mentioned in the 'Efficiency' section, project implementation was delayed initially due to prolonged negotiations with potential implementing partners, but activities were able to catch up in the early part of implementation and continue as scheduled. The capacity building component of the project was to be implemented in collaboration with universities. However, negotiations with universities carried on for months in 2008 without coming to fruition. In 2009, it was decided to integrate the project with the Dom Helder Camara Project (PDHC), which finally enabled the launch of project activities. This integration led to an adjustment in the operational strategy of the project as the project now relied on

the experience gained under PDHC (TE, pg. 30). The delay does not seem to have affected the project's outcomes or sustainability negatively.

5.3 Country ownership. Assess the extent to which country ownership has affected project outcomes and sustainability? Describe the ways in which it affected outcomes and sustainability, highlighting the causal links:

The TE reports that there was a fairly high level of country ownership of the project. The Territorial Development Secretariat of the Ministry of Agrarian Development was responsible for the project but the actual management was taken over by the PDHC. The PDHC covered the costs for renting the Project Management Unit (PMU) headquarters and Local Supervision Units (LSU) in the territories; PMU Director and staff time, LSU supervisors, administrative and financial staff, and planning, monitoring, and evaluation professionals. Additionally, as mentioned in the 'Sustainability' section, several provincial governments and some national ministries have either started or have expressed an interest in starting projects that will continue the work done by this project.

6. Assessment of project's Monitoring and Evaluation system

Ratings are assessed on a six point scale: Highly Satisfactory=no shortcomings in this M&E component; Satisfactory=minor shortcomings in this M&E component; Moderately Satisfactory=moderate shortcomings in this M&E component; Moderately Unsatisfactory=significant shortcomings in this M&E component; Unsatisfactory=major shortcomings in this M&E component; Highly Unsatisfactory=there were no project M&E systems.

Please justify ratings in the space below each box.

6.1 M&E Design at entry	Rating: Satisfactory
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The TE rates M&E Design at entry as '5' (Satisfactory) and this TER concurs with it as the PD includes a sound plan for monitoring results and tracking project progress (PD, pg. 34). The project was to use participatory M&E mechanisms like the Dome Helder Camara Project (PDHC) as it was to be integrated with the PDHC M&E system. It was to have two levels – collecting data at the first level and storing and processing it at the second level. At level one, a network for performance indicators monitoring was to be maintained which would be directly linked to the beneficiaries and to the implementation of the components. At level two, the structure was to include a data bank and an information management system (MIS) to track project progress. This MIS would enable timely decision-making on local pilots, as well as on project management at the state, regional and national levels. The PD also mentions that project progress will be tracked using the logical framework presented in Annex 2, however this annex was not available to the reviewer. The TE (pg. 33) reports that indicators and targets for the objectives and expected outcomes were included in this framework and most of the indicators appear to be measurable, although there were some that faced issues related to measurability. Detailed environmental monitoring (erosion, carbon sequestration, etc.) was to be undertaken in at least two of the six project-supported territories. The PD also made provisions for undertaking a baseline study to

target land degradation (on its socio-economic and environmental dimensions) in the early state of project implementation. The evaluations were to include external assessments at baseline, mid-term and end line. The PD presents a separate budget for M&E but does not specify which units are responsible for the different parts of M&E.

6.2 M&E Implementation	Rating: Satisfactory
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The TE’s rating for M&E implementation is ‘5’ (Satisfactory) and this TER concurs with it as M&E implementation was carried out quite smoothly and the challenges that it faced were resolved during the project. The M&E Unit prepared, according to established deadlines, annual activity reports (Annual Project Implementation Reports, APIRs), which were sent to the GEF and IFAD. Data was regularly collected on project activities and progress was tracked through the established systems. The project even developed a system to track environmental gains as this did not exist in the Dom Helder Camara Project (PDHC) M&E system. The TE notes that the Mid-Term Review made several recommendations and actions were taken to address them. It recommended amending the logical framework as the assumptions for the Environmental Education and Payment for Environmental Services (PES) subcomponents failed to materialize. The midterm evaluation also pointed out that the system lacked monitoring of economic variables – such as changes in income due to the implementation of sustainable management practices. Thus, the system started tracking economic variables in 2011. Finally, the TE reports that the M&E system took some time to be completely functional – even at the time of the midterm review, it was unable to compile and present all the information -, however at the time of the final evaluation, all the issues had been resolved (TE, pgs. 34-35).

7. Assessment of project implementation and execution

Quality of Implementation includes the quality of project design, as well as the quality of supervision and assistance provided by implementing agency(s) to execution agencies throughout project implementation. Quality of Execution covers the effectiveness of the executing agency(s) in performing its roles and responsibilities. In both instances, the focus is upon factors that are largely within the control of the respective implementing and executing agency(s). A six point rating scale is used (Highly Satisfactory to Highly Unsatisfactory), or Unable to Assess.

Please justify ratings in the space below each box.

7.1 Quality of Project Implementation	Rating: Satisfactory
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The TE rates the quality of implementation as ‘6’ (Highly Satisfactory). However, this TER only rates it as ‘Satisfactory’ as IFAD did not seem to have gone beyond what was expected of it even though it carried

out its responsibilities reasonably well. There was intensive project supervision indicated by four supervision missions and several project visits, which led to identification of implementation challenges and remedial measures were taken. IFAD also provided technical support, for instance, it helped define an environmental and production planning methodology, which subsequently allowed for a small training program which trained 84 technical staff from the assistance organization teams (TE, pg. 35). Since the project was fairly successful in achieving its goals and its global environmental objective, it appears to have been designed well. However, some ambitious and unrealistic targets were also included in the PD, which upon further research were found to be impossible to carry out within the project context. For instance, the number of schools where environmental education was to be included in the curriculum was too high considering that a new proposal and framework for the curriculum had to be developed. Similarly, it was discovered that credits from carbon sequestration projects would not provide sufficient resources to the beneficiaries.

7.2 Quality of Project Execution	Rating: Satisfactory
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The TE rates the quality of project execution as ‘6’ (Highly Satisfactory) but this TER rates it as ‘Satisfactory’ because while project execution did not face any major challenges, no evidence of exceptional efforts was found. The Ministry of Agrarian Development was the executing agency but the Dom Helder Camara Project (PDHC) undertook the actual management of the project. The PDHC demonstrated high ownership and designed a good project management structure. A Project Management Unit (PMU) and eight Local Supervision Units (LSUs) were set up. These units together oversaw the implementation of project activities, carried out monitoring and coordinated with all the organizations involved in the project. The structure also included Territorial Committees and a Steering Committee. The PD also included State Technical Chambers in this structure, but these were not set up. However, the TE finds that the project did not suffer due the absence of these chambers as Territorial Committees performed in-state coordination in many cases. Project execution did face some challenges, which the executing agencies overcame with some effort. It was difficult to work with the civil society organizations hired to provide technical assistance and incorporate their work proposals into the project. Some of the teams hired had low technical capacity, which required the agency to carry out training and retraining activities (TE, pgs. 30-32). However, the project management team was able to overcome these challenges during implementation and execution issues were resolved by project completion.

8. Assessment of Project Impacts

Note - In instances where information on any impact related topic is not provided in the terminal evaluations, the reviewer should indicate in the relevant sections below that this is indeed the case and identify the information gaps. When providing information on topics related to impact, please cite the page number of the terminal evaluation from where the information is sourced.

8.1 Environmental Change. Describe the changes in environmental stress and environmental status that occurred by the end of the project. Include both quantitative and qualitative changes documented, sources of information for these changes, and how project activities contributed to or hindered these changes. Also include how contextual factors have contributed to or hindered these changes.

The project was successful in generating environmental gains and thus meeting its global environmental objective. The TE found that more than 10,000 ha of land were under sustainable production methods and more than 45,000 ha of Caatinga had been preserved. Reduced erosion, fire, and exposure of soils and better water use were recorded. Soil erosion was reduced by 68 percent on average, there was a 37 percent increase in the species in managed areas, and there was a 15 to 79 percent increase in carbon stocks in two managed areas (TE, pg. 3).

8.2 Socioeconomic change. Describe any changes in human well-being (income, education, health, community relationships, etc.) that occurred by the end of the project. Include both quantitative and qualitative changes documented, sources of information for these changes, and how project activities contributed to or hindered these changes. Also include how contextual factors have contributed to or hindered these changes.

The TE (pg. 3) finds that household incomes had increased in the range of “55 percent to 205 percent vis-à-vis the poverty line” due to activities involving vegetable gardens, agroecological consortia, and Caatinga management. Average monthly income to households from participation in agroecological fairs gradually increased to R\$440.76 in 2010 and R\$574.10 in 2011 from R\$360.47 in 2009. Much of monthly income from sales at agroecological fairs comes from the output of vegetable gardens and orchards, which ensure a regular source of income due to the diversity of products. In addition to income from selling these products, product diversity broadens the variety of foods consumed by households. Furthermore, the installation of ecostoves, biodigesters and the establishment of solid waste management systems improved the quality of life of the households in the project area.

8.3 Capacity and governance changes. Describe notable changes in capacities and governance that can lead to large-scale action (both mass and legislative) bringing about positive environmental change. “Capacities” include awareness, knowledge, skills, infrastructure, and environmental monitoring systems, among others. “Governance” refers to decision-making processes, structures and systems, including access to and use of information, and thus would include laws, administrative bodies, trust-building and conflict resolution processes, information-sharing systems, etc. Indicate how project activities contributed to/ hindered these changes, as well as how contextual factors have influenced these changes.

a) Capacities

As part of component 1 of the project, many training activities were carried out that aimed at improving the capacity of farmers, technical professionals and facilitators to carry out the sustainable land management practices encouraged by the project. 5646 farmers, 501 leaders, 212 young people and 130 technical professionals were trained to implement and promote the

adoption of sustainable practices. Additionally, awareness raising activities were also carried out in 250 communities to enhance their knowledge about sustainable production and land conservation. A framework for environmental education was developed and activities related to it were carried out in 9 schools.

b) Governance

The project does not seem to have had a strong impact on governance. It did, however, build on the management and M&E systems of the Dom Helder Camara Project (PDHC) and made them stronger. It also produced research and studies on payment mechanisms for environmental services, which can be used to create the policy for such a program. However, at the time of the TE's writing no steps had been taken to create any legislative action for such a program.

8.4 *Unintended impacts.* Describe any impacts not targeted by the project, whether positive or negative, affecting either ecological or social aspects. Indicate the factors that contributed to these unintended impacts occurring.

The TE reports that the project did generate some results that were not specified in the PD. These include improved food security, increased value of local resources, and enhanced self-esteem among households involved. But the TE highlights the strengthening of social organizations as one of the most important unintended impacts. The operational method used in communities and settlements encouraged and strengthened local organizations. Thus, many community associations became stronger and were in a better position to operate than before the start of this project's support (TE pg. 40).

8.5 *Adoption of GEF initiatives at scale.* Identify any initiatives (e.g. technologies, approaches, financing instruments, implementing bodies, legal frameworks, information systems) that have been mainstreamed, replicated and/or scaled up by government and other stakeholders by project end. Include the extent to which this broader adoption has taken place, e.g. if plans and resources have been established but no actual adoption has taken place, or if market change and large-scale environmental benefits have begun to occur. Indicate how project activities and other contextual factors contributed to these taking place. If broader adoption has not taken place as expected, indicate which factors (both project-related and contextual) have hindered this from happening.

As mentioned in the 'Sustainability' section, several agencies in the country were either planning to or had already started replicating some of the project activities in other areas at the time the TE was written. For instance, family biowater systems were being promoted in Rio Grande do Norte, biowater systems and biodigesters were being installed in Ceara and Pernambuco, and the production and storage of fodder had been planned in Pernambuco. The second phase of the Dom Helder Camara Project (PDHC) had also been approved, which was to build on this project's accomplishments and reach out to new households to continue the project's work. The Ministry of Environment, Water Resources and Legal Amazon, which supported the idea that a management plan for timber use is the only way to manage the Caatinga, had also been convinced by the project and shown interest in the project's sustainable management techniques (TE, pgs. 21-22).

9. Lessons and recommendations

9.1 Briefly describe the key lessons, good practices, or approaches mentioned in the terminal evaluation report that could have application for other GEF projects.

The TE lists the following lessons (pgs. 37-41):

1. It is important to address environmental issues from a production standpoint rather than vice versa, as it is the case in many initiatives launched in Brazil and abroad that seek, but usually fail, to involve the populations in solving environmental problems without discussing production aspects or treating such aspects as a secondary issue.
2. Incorporating project activities into the PDHC implementation system was a key element in achieving project outcomes. Thus, “capacity-building efforts” through a “multiple” advice system were able to develop a focused and very efficient process of experimentation and training. Market access and increased income were also important factors to encourage households.
3. The process of identifying, testing, training, and providing assistance were key to the development and incorporation, by women and men farmers, of sustainable practices.
4. There is a need to invest even more in disseminating innovations and integrating the subsystems of the agroecological system. They enhance production and provide a broader view of environmental issues and a better understanding of the phenomena involved in land degradation. In addition to integrating, it is important to expand the range of options in terms of innovative practices. Thus, for example, it might be helpful to devote more efforts to other fronts, such as production and storage of fodder and diversification of monocultures (e.g., cashew orchards in Rio Grande do Norte).
5. While data from the field shows that there are cases in which resources obtained through credit were used to implement sustainable projects by households, there is also evidence that these resources are generally channeled to other uses, which households might consider more pressing. Funds from PRONAF Drought [Pronaf Estiagem], to which many households served by this project have access, are often used this way. Most of these funds were used to buy food for animals or to rebuild the herd. It is important to remember that it is the bank that ultimately defines what items may or may not be funded and chooses what lines of credit will be given priority. Additionally, sustainable proposals not always get sufficient attention. There is a need for a program to offer “incentives” to enhance the use of sustainable practices. Caatinga management is an “urgent” case, as there is a need for funds to fence the areas.
6. The relationship between sustainable practices, environmental gains and production gains was recorded by the monitoring systems and analyzed. The results from these studies could be grouped into a publication that could also contain testimonials of women and men farmers and, therefore, could be used by social organizations (Unions and Federations of Rural Workers, Community Associations and groups of farmers) when making their claims and taking part in public policy debates.

7. In order to meet multi-dimensional objectives - overcoming poverty, reducing land degradation, promoting sustainable development -, such as those intended by the project or by similar initiatives, it is essential that actions focus the production chain, that is, the chain from building productive innovations to the flow of production.
8. The study conducted in a micro-watershed is an important input for both the debate and the making of policies on paying family farmers for environmental services in the semi-arid northeastern Brazil. Therefore, it is important to analyze and discuss the results generated by the study with the sectors concerned with this issue (watershed committees, social organizations, municipal, state and federal governments, and institutions involved with the carbon market, among others). However, many challenges still need to be overcome. This is an arrangement that lacks a legal framework, financing, institutional support from mediators (government agencies, watershed committees, etc.), among others.

9.2 Briefly describe the recommendations given in the terminal evaluation.

The TE does not include any recommendations.

10. Quality of the Terminal Evaluation Report

A six point rating scale is used for each sub-criteria and overall rating of the terminal evaluation report (Highly Satisfactory to Highly Unsatisfactory)

Criteria	GEF EO comments	Rating
To what extent does the report contain an assessment of relevant outcomes and impacts of the project and the achievement of the objectives?	The TE provides a systematic assessment of outcomes and impacts and compares the achievement of objectives stated in the PD.	S
To what extent is the report internally consistent, the evidence presented complete and convincing, and ratings well substantiated?	The report assesses each aspect of project performance in-depth and is internally consistent.	S
To what extent does the report properly assess project sustainability and/or project exit strategy?	The TE includes a comprehensive assessment of all aspects of sustainability.	S
To what extent are the lessons learned supported by the evidence presented and are they comprehensive?	The report presents a comprehensive set of lessons learned which follow logically from the evidence presented.	S
Does the report include the actual project costs (total and per activity) and actual co-financing used?	It provides a detailed account of co-financing and costs per component.	S
Assess the quality of the report's evaluation of project M&E systems:	The report provides a good overview of the M&E system and notes its shortcomings.	S
Overall TE Rating		S

11. Note any additional sources of information used in the preparation of the terminal evaluation report (excluding PIRs, TEs, and PADs).