

1. Project Data

Summary project data			
GEF project ID		3981	
GEF Agency project ID		NI-X1005	
GEF Replenishment Phase		GEF – 4	
Lead GEF Agency (include all for joint projects)		Inter-American Development Bank	
Project name		Integrated Watershed Management in Lake Apanás and Lake Asturias	
Country/Countries		Republic of Nicaragua	
Region		Central America	
Focal area		Multifocal – Climate Change	
Operational Program or Strategic Priorities/Objectives		BD- SP3 and SP5, CC-SP6	
Executing agencies involved		IA: The Nicaraguan Electricity Company (ENEL, in Spanish). Participating institutions: National Forestry Institute (INAFOR, in Spanish), Ministry of the Environment and Natural Resources (MARENA, in Spanish), and the National Water Authority (ANA, in Spanish).	
NGOs/CBOs involvement		Participation of local NGOs in technical training workshops	
Private sector involvement		Involvement of Private Nature Reserves (PNRs) in payment for environmental services (PES) mechanism	
CEO Endorsement (FSP) /Approval date (MSP)		April 2011	
Effectiveness date / project start		3 February 2012	
Expected date of project completion (at start)		August 2016 (CEO document)	
Actual date of project completion		3 February 2018	
Project Financing			
		At Endorsement (US \$M)	At Completion (US \$M)
Project Preparation Grant	GEF funding	0.09	0.09
	Co-financing		
GEF Project Grant		4	4
Co-financing	IA own	1.4	
	Government	2.4	
	Other multi- /bi-laterals		
	Private sector	2.4	
	NGOs/CSOs		
Total GEF funding		4.1	4.1
Total Co-financing		6.2	4.8
Total project funding (GEF grant(s) + co-financing)		10.3	8.9
Terminal evaluation/review information			
TE completion date		30 October 2018	
Author of TE		Oswaldo Patiño	
TER completion date		5 February 2020	
TER prepared by		Mourad Shalaby	
TER peer review by (if GEF IEO review)		Molly Watts Sohn	

2. Summary of Project Ratings

Criteria	Final PIR	IA Terminal Evaluation	IA Evaluation Office Review	GEF IEO Review
Project Outcomes		-	-	S
Sustainability of Outcomes		"Low"	-	MU
M&E Design		S	-	S
M&E Implementation		S	-	S
Quality of Implementation		S	-	S
Quality of Execution		S	-	S
Quality of the Terminal Evaluation Report		--	-	MS

3. Project Objectives

3.1 Global Environmental Objectives of the project:

The project's global environmental objective is to foster biodiversity conservation and climate change mitigation. (CEO Endorsement Document, p.1) The specific global environmental benefits the project seeks to deliver through its interventions are: "(i) 177, 063 tCO₂e sequestered due to the restoration of degraded lands and the implementation of sustainable land management interventions; (ii) 1,895 ha under agroforestry systems, restored/reforested riparian buffers or forested lands applying sustainable land and forest management practices; (iii) 1,000 has of habitats for endangered flora and fauna species conserved under operating a network of PNRs; and (v) 314,008 additional tons of CO₂ captured through avoided deforestation and reforestation or biomass increase through the implementation of the PES." (Request for CEO Endorsement, p.16)

3.2 Development Objectives of the project:

The project's objective is to foster biodiversity conservation and climate change mitigation in the Lakes Apanás and Asturias Watershed through: (i) the implementation of Sustainable Forest and Land Management (SFLM) activities that will increase forest carbon sequestration, reduce greenhouse gas (GHG) emissions, and protect fragile ecosystems; and (ii) the design and piloting of a scheme of Payment for Environmental Services (PES) directed to farmers and/or private owners of forested reserves to be financed by the compensation for water use to be made by the hydroelectric power within the watershed (CEO Endorsement Document, p1).

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

The TE documents several minor and major changes which occurred throughout project implementation and were mostly related to the project's schedule. The major changes which had a significant impact on the project were (TE, p20-22):

- The outcome table was modified while project execution was underway due to several events, such as the addition of one year for grant agreement execution, which delayed the project's closing. Initially, project completion was scheduled for February 2017. However, on June 10, 2016, the Inter-American Development Bank (IDB) extended project execution by 12 months in order to achieve the desired implementation and operating of the Payment for Environmental Services (PES) fund.
- In April 2015, the project was reformulated after the interim evaluation report was completed in March 2015. There was an increase in the goals for component 2 output indicators, especially those related to the establishment and improvement of the Environmental Restoration Systems (ERS).

The most noteworthy changes to project design are listed by component below.

Component 1. Strengthening of institutional structures and local land use planning capacities, soil conservation practices, and integrated watershed management.

- Several deadlines and output titles were changed during project implementation. These do not seem to have had a major impact on the project's objectives.

Component 2: Implementation of sustainable land and forestry management practices in order to enhance biodiversity conservation and carbon sequestration.

- A project reformulation modified the project's tangible goals, because of "little or in-existent interest by some of the actors in the Environmental Restoration Systems (ERS)—gallery forests and live fences around vegetables and other crops". As a result, the gallery forests system was replaced with the natural regeneration management system, and the goal was set at 490 ha; the live fences system around crops was replaced with fruit plantations, and the goal was set at 50 ha; the indicator of vegetables under conservation practices was removed; and the goals for agroforestry systems (AFS), eco-forestry coffee (EFC), and silvopastoral systems (SPS) were increased due to said system changes.

Component 3. Conservation of forest areas and biodiversity in Private Nature Reserves (PNR) and the Ramsar site.

- The goal for Output 1's indicator was changed. Initially, the goal for Output 1, "Management plans for Private Nature Reserves (PNR)," was to develop twenty-five plans. However, the Ministry of the Environment and Natural Resources (MARENA) requested the Nicaraguan Electricity Company's (ENEL) Project Execution Unit (PEU) to add the thirteen farms that had just been declared Private Nature Reserves (PNR) by the project, which rose to thirty-eight the number of plans to develop.

4. GEF IEO 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 TE rates the project's "significance" as satisfactory, explaining that "The significance of project objectives and design continues to be high, even five years later", before adding that "project objectives are aligned with country

priorities and IDB's (Inter-American Development Bank) assistance to the GoN (Government of Nicaragua)". This TER also rates the project's relevance as satisfactory, given that it is consistent with national environmental priorities of the Nicaraguan government and with the GEF Biodiversity and Climate Change focal areas and strategic programs under the fourth GEF replenishment phase (TE, p8).

The project is consistent with national priorities of the Nicaraguan Government as it will support various national policies, regulations, strategies, and plans related to the management of water, soil and biodiversity resources promoted by the government, including the following:

- First National Communication to UNFCCC and National Action Plan on Climate Change.
- Nicaragua's National Biodiversity Strategy.
- LAW N° 620. The general Law regarding national water.
- The General Law on the Environment.
- The Decree N°1308, (Law for the Protection of Land and Erosion Control).
- The LAW N°462, for the conservation and sustainable development of the forestry Sector

In terms of GEF relevance, the project is to be carried out under the focal areas of Biodiversity (BD-SP3 and BD-SP5) and Climate Change (CC-SP6) as follows:

- BD-SP3 Strengthening terrestrial Protected Areas (PA) networks, by supporting the expansion and consolidation of a network of Private Nature Reserves (PNR) in the Apanás watershed through activities funded under Component 3.
- BD-SP5 Fostering markets for biodiversity goods and services. The project will promote activities under components 3 and 4 to establish the conditions for market-based approaches to conservation.
- CC-SP6 Management of land use, land-use change and forestry as a means to protect carbon stocks and reduce greenhouse gas (GHG) emissions, through component 1 supporting the implementation of the Land Use and Integrated Management Plan (LUIMP) as part of a strategy involving communities and local governments in the zoning and rules for land use, sustainable forestry and land management. Additionally, in components 2 and 3 the project promotes land use management practices that contribute to greater carbon sequestration in forests and soils, and thereby mitigating greenhouse gas (GHG) emissions. In addition, the project will establish a system to monitor carbon fluxes and sequestration induced by land use change in the watershed under component 1.

4.2 Effectiveness	Rating: Satisfactory
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The TE's rating for project effectiveness is 'satisfactory,' which is an average of its 'very satisfactory' rating for Objective 1: Apply sustainable land-use restructuring and forestry management practices in order to increase carbon sequestration in forests, reduce greenhouse gas emissions, and protect fragile ecosystems (components 1,2 and 3); and its 'moderately satisfactory' rating for Objective 2: Designing and piloting a Payment for Environmental Services (PES) mechanism for farmers and owners of Private Nature Reserves (PNR), which will be funded with the income from payments received for using water resources to generate hydroelectric power in this watershed (component 4). Achievement level is very satisfactory for four out of five outcomes of Objective 1. As for Objective 2, despite the challenges during implementation and long design and implementation phases of the Payment for Environmental Services (PES) mechanism, the TE deems that it was successfully implemented in a 'moderately satisfactory' way. The TE rates the overall efficacy of the project as satisfactory based on the progress made toward the attainment of

the project's core indicators and objectives. This TER rates the project's effectiveness as satisfactory, given that the project objectives, outcomes and outputs were generally successfully achieved and even surpassed in many instances (see below). The Payment for Environmental Services (PES) mechanism, the main addition and highlight of this project, was effectively implemented by the project under component 4 (TE, p41-85).

Specific tools created by the project were used to track output attainment:

- (i) A carbon monitoring system.
- (ii) A land-use monitoring system
- (iii) Hydrological studies to monitor project's impact on waterflows and sedimentation
- (iv) A biodiversity monitoring system for the species living in the Ramsar site.

In addition, there was a monitoring, tracking, evaluation, and reporting system which used functional, dynamic, and comprehensive computerized tools for the various feeders. In general, the TE indicates that the outputs, objectives and outcomes were attained, pointing out that "the actions by ENEL's (The Nicaraguan Electricity Company) PEU (Project Execution Unit) and the co-executing institutions ensured the effectiveness of the activities defined to achieve those outputs".

Component 1: Strengthening the institutional framework and local capacities for land-use planning, soil conservation practices, and integrated watershed management.

The activities under this component were geared towards increasing the managerial skills of local authorities, farmers, and landowners in the watershed. Various interventions were enabled, which resulted in the following outputs:

- A Cadaster Information System (SISCAT) was successfully implemented as planned. It was completed in 2014 and provided equipment and technical training for the staff of the land registry offices of two municipalities who are currently using this tool in the performance of their land-registry and land-reordering roles. SISCAT helped strengthen the institutional capacity of these municipal offices.
- A Carbon Monitoring System (CMS) was successfully implemented as planned. CMS has the capacity to monitor carbon contents periodically in the microwatersheds. It can also evaluate forecasts and decreases in emissions or increases in captured carbon, from prevented deforestation, forestation, forest degradation, and land use changes. The CMS makes it possible to carry out analysis at the watershed or farm levels, which turns it into a monitoring and evaluation tool for good agricultural and environmental-conservation practices.
- Technical staff was trained in carbon inventory. The project set a goal of training eleven technicians in tools to estimate carbon contents. However, in the 2016-2017 period, a total of forty-three technicians and officials of the four executing agencies were trained. This means that 391% of the goal was attained.
- Three hydrometeorological stations were installed as planned.
- A Water Reference Study was carried out as planned for Lake Apanás and Lake Asturias, measuring bathymetry, water balance, waterflows and sedimentation.
- The Integral Watershed Management Plan for Lake Apanás was adopted as planned.
- Public school student leaders were trained in watershed management. 110% of this goal was achieved, in terms of the number of students that were trained.
- Watershed committee members underwent continued training in watershed management. The project reached 100% of this output as originally formulated.

Component 2: Implementation of sustainable land and forestry management practices enhancing biodiversity conservation and carbon sequestration.

Component 2 contains twelve outputs, eight of which are linked to the establishment of Environmental Restoration Systems (ERS); one to the creation of farm plans; two outputs were merged and are linked to training efforts, and, lastly, one output has to do with infrastructure development.

- Seven out of eight of the outputs linked to the establishment of Environmental Restoration Systems (ERS) were successfully reached or exceeded their goals.
- Farm plans were created as planned. Each farm plan included information about the plantation forests profile and other types of forest cover present in the farms.
- Five communities were trained in business plan formulation, sustainable forest reordering, and wood value chains as planned.
- A total of five-hundred and twenty-six farmers were trained in topics such as agroforestry, soils and environmentally sustainable farm management, widely exceeding the targeted number of one-hundred and twenty.
- Basic infrastructure projects for sediment retention were built as planned.

Component 3: Conservation of the forest and biodiversity in Private Nature Reserves (PNR) and the RAMSAR site.

- Management plans for Private Nature Reserves (PNR) were created. Execution for this output reached 111% of the original goal.
- A bioindicator monitoring system for the Ramsar site was established as planned.
- Infrastructure for biodiversity conservation was constructed and is operating as planned.
- Business plans for eco-tourist circuits were created as planned.
- Ecotourism sighting points were established as planned.

Component 4: Design and implementation of the mechanism of payments for environmental services (PES) in the Apanás watershed.

- An economic assessment study for the environmental services in the watershed and a design study for the Payment for Environment Services (PES) mechanism was created as planned.
- A fund for the Payment for Environment Services (PES) mechanism to promote plantation forests was successfully implemented, as planned.
- Dissemination workshops for the Payment for Environment Services (PES) mechanism were Implemented as planned.
- Contracts for the Payment for Environmental Services (PES) mechanism were drafted and signed. The programmed goal was seventy-five signed contracts. At project closeout date, one-hundred and eighty-four contracts had been signed, i.e., 245% of the goal was attained.

4.3 Efficiency	Rating: Satisfactory
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The TE rates the project's efficiency level as 'satisfactory', mentioning that the economic assessment of total investments generated an internal rate of return of 17%—five percentage points higher than expected—thus

exceeding investment profitability expectations. This TER also rates the project’s efficiency as satisfactory, given that most outputs and activities were accomplished and a positive cost-benefit ratio was produced, despite the fact the project was slightly more costly than planned and encountered significant delays.

The participation of the central government and local actors helped achieve project outcomes, namely the promotion of Environmental Restoration Systems (ERS); the accreditation of Private Nature Reserves (PNR); the construction of thirty-five animal breeding centers; the construction of thirty-five sighting ranches; and the signing of Payment for Environmental Services (PES) agreements. The economic assessment concludes that the cost-benefit analysis was higher than one (1.24), implying that the project generated economic benefits that were superior to the initial investment. However, the project’s executed cost, or final cost, exceeded the project’s original planned cost by 12%. The TE explains that this difference was due to (i) an increase of project goals, as a result of the review carried out in 2015, (ii) the incorporation of US\$1,400,000.00 from the Environmental Program for Disaster Risk and Climate Change Management (PAGRICC), as INAFOR’s match, and (iii) the increase in costs, as a consequence of minimum technical requirements for the infrastructure projects contained in components 1 and 2, including breeding centers and signs. Finally, the project financial execution shows that (i) 111% of the original project cost was executed, (ii) 100% of the Inter-American Development Bank (IDB)-GEF funds were used, (iii) 120% of original match funds were executed, and (iv) the original cost allocation scheme was kept without modifications, as costs focused on project financial execution.

The project, however, faced several delays during its implementation. The project was completed in February 2018, rather than in August 2016 as initially planned. Delays were mostly caused by institutional instability and weaknesses, namely high staff turnover and low participation and presence during the first years of the project, a restructuring of the Project Executing Unit (PEU), and disagreements over terms of references and contract negotiations with technical consulting services, particularly with regards to the Payments for Ecosystem Services (PES) mechanism implemented component 4. These delays and inefficiencies, however, do not seem to have affected project outcomes greatly

4.4 Sustainability	Rating: Moderately Unlikely
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The TE rates the project’s sustainability as “low”, due to the fact that the Payment for Environmental Services (PES) mechanism set up under component 4 “has high financial, as well as institutional, technical, and environmental risks because it would not have been created and implemented if no funds had been secured to run the pilot until 2021”. This TER rates the project’s sustainability as moderately unlikely, given that there is significant financial risk and uncertainty concerning the continuation of the Payment for Environmental Services (PES) mechanism after project closure, and a lack of institutional presence, experience and capacity (TE, p97-100).

Financial Sustainability

The Government of Nicaragua has limited financial resources to address the issues in the entire watershed targeted by this project. The government, through the Nicaraguan Electricity Company (ENEL), may not succeed in raising funds and attracting the necessary investment projects, grants, loans and transfers to expand environmental services in the watershed, and may not adopt the project’s Payment for Environmental Services (PES) mechanism after its

conclusion as part of the project in 2021, threatening the financial future of the conservation actions taken in the watershed.

Sociopolitical Sustainability

Sociopolitical sustainability of the project has been supported through project activities including local capacity building and institution strengthening efforts on sustainable watershed management. The project adopted a cross-cutting education strategy in all four project components, carrying out knowledge management activities with local stakeholders. Workshops on payments for environmental services (PES), water management, carbon monitoring and the establishment of biological corridors were carried out throughout the project lifecycle, as well as trainings for communities, community leaders, and farmers in topics such as hygiene, environmental education and environmental regulatory framework. These trainings and workshops helped empower and educate local stakeholders at different levels (local government, farmers, community leaders etc.) and provide tools to implement economic alternatives, such as the Payment for Environmental Services (PES) mechanism and the development of ecotourism, to the unsustainable farming practices which had been taking place prior to the project. By supporting the design and application of a Payment for Environmental Services (PES) mechanism, the project helps local populations, especially farmers, preserve the natural resources which sustain their livelihoods, as long as this mechanism is operational and adequately funded.

Institutional Framework and Governance Sustainability

There is limited institutional presence in the project area to operate the Payment for Environmental Services (PES) mechanism. Furthermore, there is a high staff turnover at the institutions participating in the project and a lack of resources to train and retain staff in the project area. As such, limited monitoring capacity and technical assistance may hinder the project's future. Finally, the TE points out that there has been little ownership shown by competent institutions for executing the Integrated Watershed Management Plan for Lake Apanás to ensure sustainability in the watershed, and weak interinstitutional coordination between the different state executing agencies involved in the project as well as between the established sub-watershed and micro-watershed committees in the affected municipalities.

Environmental sustainability

The Payment for Environmental Services (PES) mechanism helps preserve a number of forest hectares under a compensation mechanism. By increasing forest cover, sedimentation and erosion can be reduced, and waterflow for power generation will be more abundant. The government of Nicaragua and the Nicaraguan Electricity Company (ENEL) have committed themselves to supporting the Payment for Environmental Services (PES) mechanism after project closeout, until 2021, and hope to attract donors to continue to support it and ensure conservation and protection of the water resources in the watershed in the mid- and long-term.

As mentioned above, though, there are issues and risks in terms of the sustainability of the financial management of the watershed. A discontinuation of this management could lead to unsustainable rural development in the affected area, the abandonment of soil and water conservation techniques and forest recovery efforts adopted by the project, the abandonment of the Payment for Environmental Services (PES) mechanism and possibly a return to cattle-ranching and commercial agriculture. This is precisely why the TE offers numerous in-depth recommendations

to the project executing agencies and the Government of Nicaragua to maintain and protect the project's achievements (see section 9).

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?

Co-financing represented over 50% of the total project cost and was provided by The Nicaraguan Electricity Company (ENEL), the Ministry of the Environment and Natural Resources (MARENA), the National Forestry Institute (INAFOR), and the National Water Authority (ANA). The co-financing figure at project completion was USD 4.8 million, 1.4 million USD less than committed at CEO endorsement. Unfortunately, the TE does not provide a breakdown of the sources of the co-financing figure, so this TER is unable to explain the differences in materialization of the project contributions. The majority of the co-financing sums was provided by the government through its project executing agencies and through private funds leveraged by the Nicaraguan Electricity Company (ENEL).

The CEO endorsement document stipulates that "GEF funding will be essential to constitute a sound institutional and financial foundation" and "the GEF financial resources by way of a grant will be crucial to overcome the financial and institutional barriers embedded in natural resource management in low-income region". The document adds that "GEF financing will be used as seed capital for [...] introducing the PES mechanism in the watershed management, which ultimately will provide the incentive scheme necessary to ensure long-term viability of the implemented conservation efforts." Finally, the document adds that "Considering the multiplicity of watershed stakeholders and the diversity of interests and economic incentives, establishing the institutional and financial framework for sound management and mainstreaming biodiversity and climate change mitigation in the watershed would be unviable without GEF financing". As such, it seems that the GEF grant was able to successfully leverage more than double the amount it contributed and provided a financial base upon which the Nicaraguan government, through its executing agencies, was able to build upon to finance the entirety of the project (CEO endorsement document, section D).

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?

The project faced several delays during its implementation (TE, p33-36). Project execution was delayed during the first two years, due to "institutional weaknesses [...], staff turnover and low participation during the first years, financial issues in processing payments to vendors, and the lack of information about local match disbursements" at the National Water Authority (ANA). The Project Execution Unit (PEU) experienced high staff turnover, "particularly [...] at the intermediate organizational level". Furthermore, in 2014 the PEU was restructured and added new members to the unit, which resulted in a loss of continuity and a delay in the deadlines for process execution, mainly because the new officials had to be trained in their respective areas and updated on the progress on project execution made to date. Furthermore, some project activities were delayed because the co-executing institutions had not approved the terms of reference, outputs or the completed studies, namely: (i) the creation of the Carbon Monitoring System, (ii) knowledge transfer to co-executing institutions' technicians, and

lastly, (iii) technical audit to the system. Additionally, during the first semester of 2015 there were delays related to the review of the terms of reference for contracting new consulting services and for setting the technical specifications by the Ministry of the Environment and Natural Resources (MARENA). This delayed bidding processes for work procurement. A termination of the contract signed with the International Center for Tropical Agriculture (CIAT) to carry out a “Water Reference Study” (output 5) resulted in additional delays, as the bidding processes had to be started again. Consequently, the terms of reference as well as the objectives of the consulting service had to be redefined, and, six months later, the process had to be restarted. The National Agrarian University (UNA) was selected instead, which delayed the delivery of this activity.

The Payments for Ecosystem Services (PES) mechanism under component 4 was implemented and is operating, but its design process took longer than expected, since there was “a number of processes in place to ensure its implementation” such as the economic assessment and mechanism design, the contracting of a financial institution and the signing and implementation of contracts. The execution of the mechanism was also delayed, due to: delays in contracting specialists to join the project team in the first years; the duration of the bidding process and the TECNIC consulting service’s assessment of the economic feasibility of the mechanism and other instruments; contracting an additional consulting service to improve and complement TECNIC products; providing technical assistance to create and strengthen the Project Technical Unit (PTU); overseeing the implementation of the Payments for Ecosystem Services (PES) mechanism; the bidding process was completed in six months (original timeline was 21 days) and the consulting services by the Tropical Agricultural Research and Higher Education Center (CATIE) required another seven months to complete; and the contract for consulting services was extended by another month in order to create a proposal for selecting offerors for the Environmental Restoration Systems (ERS) and Private Nature Reserves (PNR), which were delayed due to the review of delivered outputs.

These factors significantly delayed project activities. The project was completed in February 2018, rather than in August 2016 as initially planned. The delays, however, do not seem to have affected project outcomes greatly, but do raise questions about institutional stability and sustainability of the project (see section 4.4).

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:

In general, the commitment by the Government of Nicaragua and The Nicaraguan Electricity Company (ENEL) has been high. The project, including its objectives, components, institutional framework, instruments, and mechanisms—i.e., the Payment for Environmental Services (PES) mechanism—were relevant for said government and the project’s executing agencies because it was aligned with their technical assistance strategies and priorities/policies. In fact, the TE points out, since the grant award date, the significance of the project has continued to grow exponentially. The need for mitigating the frequency and severity of weather events has become an important issue in the policies of the Government of Nicaragua, especially because farmers are being affected by climate change in the Lake Apanás and Lake Asturias watershed. For these reasons, the government took ownership of and committed to the policies promoted by the project. It ensured the right number of staff and resources to guarantee adequate institutional capacity and support for co-executing institutions. The four co-executing institutions from the government also took ownership of the implementation process and participated in project design, execution, and evaluation—depending on their specific role (TE, p112).

The TE adds that the government and ENEL have both been “willing to attract other donors to finance similar projects that focus on environmental protection and biodiversity conservation in the Apanás-Asturias watershed”. However, the TE also points out that there has been little ownership shown by competent institutions for executing the Integrated Watershed Management Plan for Lake Apanás to ensure sustainability in the watershed, and weak interinstitutional coordination between the different state executing agencies involved in the project as well as between the established sub-watershed and micro-watershed committees in the affected municipalities (TE, p93).

In sum, the TE rates the project’s level of participation and ownership as satisfactory. Protagonists were able to “recognize, implement, criticize, and give recommendations on the development of the processes, as a result of their involvement”. Farmers also took ownership of the project and its processes and were able to give recommendations about the needed improvements, such as the need for more technical assistance and more frequent visits; (ii) the needs for plants to be native and to be delivered in keeping with the harvest season to ensure proper engraftment; (iii) environmental education should be given in the communities of the area as a cross-cutting theme; and (iv) future infrastructure projects should be suited to the area of intervention (TE, p115).

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 the project’s overall M&E system as ‘satisfactory’, and this TER also rates the project’s M&E design as satisfactory, given that the key indicators were SMART (Specific, Measurable, Achievable, Relevant and Time-bound), the methodology for measuring the project’s impact was rigorous and the results framework was satisfactory.

The project was designed to enable monitoring of carbon stocks (component 1) and key species (component 3), hereby providing “targeted, relevant, reliable and responsive” information in line with the project objective. As such, these indicators abided by the SMART (Specific, Measurable, Achievable, Relevant and Time-bound) framework. A results Framework in Annex 1 of the CEO endorsement document considers outcomes and outputs established by each component. A specialized carbon stock monitoring methodology was developed to measure the project’s carbon sequestration impact.

In general, the outcome/output monitoring and evaluation system were in line with the project’s components. The outcome table design was informative, especially, in terms of expected outcome indicators and their respective goals.

6.2 M&E Implementation	Rating: Satisfactory
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The TE rates the project's overall M&E system as 'satisfactory', and this TER also rates the project's M&E implementation as satisfactory, given that diligent oversight of the project, through the physical presence of the implementing agency as well as through the use of efficient monitoring tools, was ensured by the Inter-American Development Bank (IDB) throughout project implementation (TE, p104).

The Inter-American Development Bank (IDB), the project's implementing agency, conducted "project oversight through inspection visits, management missions, and technical assistance to achieve the desired outcomes". The Inter-American Development Bank (IDB) held workshops that served as an assessment and problem-solving tool and ensured the active participation of executing institutions and other environmental specialists to develop and update GEF's biodiversity and climate change tracking tools. These tools included: (i) technical presence on the field for all components through the decentralized offices of each participating institution to verify outcomes and outputs on site, (ii) infrastructure projects oversight (sighting points, gabions, breeding centers) by the Project Execution Unit (PEU) and its delegation in the field, and (iii) regular visits by Inter-American Development Bank (IDB) officials and consultants.

The TE adds that monitoring and oversight actions by the Inter-American Development Bank (IDB) "detected the delays in the first years of the project". Therefore, this made it possible to implement corrective measures, especially in the area of procurement and consulting services. As a result, "the plan was updated 33 times", thus supporting the design and implementation of the Payment for Environmental Services (PES) mechanism, which took several years to materialize and start operations. The TE notes that regarding output indicators and the action/output ratio, which would serve as a reference for progress monitoring, there were several minor changes to these planned outputs, namely (i) the indicators related to the Environmental Restoration Systems (ERS), (ii) indicator renaming, and changes to deadlines, and (iii) merge of indicators related to training. These changes did not have an adverse or major effect on expected outcome indicators according to the TE (TE, p103).

During project execution, several of the executing agencies "absorbed and implemented the oversight and evaluation methodology instruments proposed by the Bank (IDB)". The objective was to get better results in project management and administration. The Inter-American Development Bank's (IDB) financial planning tools were also utilized by some of the executing agencies, making it possible "to carry out, in a satisfactory fashion, the interim and final project evaluation."

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 Inter-American Development Bank’s (IDB) performance as ‘satisfactory’, and this TER also rates the Bank’s performance as satisfactory, given that the IDB provided leadership, experience, preparatory work, technical guidance and more.

The Inter-American Development Bank (IDB) provided a core team with ample experience working in Nicaragua and in environmental project design. When preparing the project, identification missions were made by the Inter-American Development Bank (IDB) with the participation of environmental and operations specialists. The Inter-American Development Bank (IDB) team provided strong technical guidance throughout the project design. The team maintained ongoing dialogue with executing agencies and the Nicaraguan government to assess the progress made in project execution. It continuously provided technical support by making official oversight and administration missions. The team also coordinated efforts with all participating institutions to ensure the project goal achievement and supported the creation of the Payment for Environmental Services (PES) mechanism to ensure project sustainability (TE, p111).

7.2 Quality of Project Execution	Rating: Satisfactory
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The TE rates ‘government performance’ and the ‘performance of participating institutions’ separately, assigning a ‘satisfactory’ rating to both. This TER rates the quality of project execution as satisfactory, given that the four executing agencies fulfilled their respective roles adequately and all contributed to the project, although the Nicaraguan Electricity Company (ENEL) played a particularly important role.

The four executing agencies are The Nicaraguan Electricity Company (ENEL, in Spanish), the National Forestry Institute (INAFOR, in Spanish), the Ministry of the Environment and Natural Resources (MARENA, in Spanish), and the National Water Authority (ANA, in Spanish) (TE, p112).

ENEL, through the Project Execution Unit (PEU), played a key leadership and oversight role as the interinstitutional coordinator among the various co-executing institutions to execute the project. Since this was a pilot project, ENEL was able to respond to specific characteristics of the Environmental Restoration Systems (ERS) and protection of Private Nature Reserves (PNR), as part of the good practices for watershed management promoted through a fund such as the Payment of Ecosystem Services (PES) mechanism. This mechanism helps maintain the environmental services provided by the Apanás-Asturias watershed—a national heritage site of shared responsibility. ENEL as the leading institution in project execution led and collaborated with its partner institutions (INAFOR, MARENA, and ANA) and aligned these according to their responsibilities and mandates. ENEL’s capacity to delegate tasks and create strategic partnerships, together with its ability to understand and solve problems during project execution made it possible to overcome initial weaknesses that posed a threat to achieving expected outputs and outcomes.

Enel also designed and implemented an innovative computerized system for monitoring and evaluating carbon fluxes, and created technical, legal, and financial instruments for the Payment for Environmental Services (PES) mechanism, among the highlights of its participation in the project.

INAFOR coordinated, advised, and delivered the material incentives (plant and non-plant materials) to the protagonists during the implementation of component 2, establishing Environmental Restoration Systems (ERS). It also certified plantation forests and agroforestry systems, promoted trainings for stakeholders, and actively participated in coordination activities with the other co-executing institutions.

MARENA implemented component 3 (Conservation of forest areas and biodiversity in Private Nature Reserves (PNR) and the Ramsar site). It held consultation workshops to create management instruments, such as the Ramsar site Management Plan, promoting actor engagement during project execution. It led the criteria formulation process for the selection of project intervention areas and the identification of corridors with the highest potential in the micro-watershed. MARENA gave stakeholders advice on the creation of business plans and ecotourist circuits and developed an accreditation course for twenty-five local tourist guides. Additionally, MARENA monitored the establishment of breeding centers and, crucially, declared Private Nature Reserves (PNR) through ministerial decrees in order to ensure the conservation of these areas

ANA implemented component 4 (Design and implementation of the mechanism of payments for environmental services (PES) in the Apanás watershed). ANA formalized the sub-watershed component and micro-watershed committees, helped create the subsequent micro-watershed management plans, and laid the foundations for the Payment for Environmental Services (PES) mechanism as well as the preliminary version of the governing legal instruments.

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 had positive impacts on the environment, as it promoted sustainable land and forested areas “reordering”, the conservation of a Ramsar site (Lake Apanás), and biodiversity conservation of Private Nature Reserves (PNR) in the Apanás watershed. This helped preserve a watershed and an ecosystem that generates hydroelectric power and reduces carbon dioxide emissions. The project also developed a Payment for Environmental Services (PES) mechanism to support local conservation and watershed management efforts.

The specific environmental benefits associated to the proposed project interventions include: 893,256 tons of CO₂ sequestered due to the restoration of degraded lands and the implementation of sustainable land management interventions; 1,393.42 hectares of forested land added to the National Network of Private Nature Reserves (PNR); 722.6 hectares of protected forests under the Payment for Environmental Services (PES) mechanism; and 23,573,137.00 tons of sediments prevented from being transported into the watershed (TE, p40).

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.

As part of the environmental and social management strategies of the project, fifty-four consulting services and fifteen workshops on water management and carbon monitoring throughout the project lifecycle were carried out under component one; trainings for communities, community leaders, and farmers in topics such as hygiene, environmental education, and environmental regulatory framework were organized under component two; workshops for stakeholders to coordinate the establishment of biological corridors, collect feedback on sustainable land- and forested-area reordering practices and monitor project outcomes were carried out under component three; and twelve workshops for officials and local stakeholders to promote the Payment for Environmental Services (PES) mechanism among landowners and local authorities were organized under component four.

These trainings and workshops empowered and educated local stakeholders at different levels (local government, farmers, community leaders etc.), and provided an alternative to the unsustainable farming practices which had been taking place prior to the implementation of the project. The region's farmers are negatively affected by the impacts of climate change. The project's emphasis on providing an economic alternative to unsustainable agriculture, such as the Payment for Environmental Services (PES) mechanism and the development of ecotourism, affected people's incomes as well as their health through an improved and preserved environment. The involvement of community leaders and the promotion of community forestry also improved community relationships in the affected 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

The project supported local capacity building and institution strengthening efforts on sustainable watershed management. The project adopted a cross-cutting education strategy in all four project components, carrying out the following knowledge management activities with local stakeholders:

- A diploma course in Natural Resources Management and Handling with a Focus on Watersheds was provided by the Nicaraguan Electricity Company (ENEL) in 2015 and trained one-hundred and fifty people in technical and managerial aspects related to handling and management of natural resources with a focus on watersheds and gender.
- A training course for local tourist guides was coordinated by the Ministry of the Environment and Natural Resources (MARENA) and given by the National Agrarian University. It trained and accredited twenty-five community youths and provided them with the necessary knowledge and tools to provide and disseminate information about the historic, cultural, and environmental potential of the Apanás-Asturias watershed.

Various technical training workshops were held throughout project execution. Their objective was to train actors in specific topics depending on their role. The following results were achieved:

- One-hundred and fifty-five officials and Private Nature Reserves (PNR) owners were trained in land-use planning and soil conservation practices, use of the Carbon Monitoring System (CMS), methodology for

bioindicator monitoring and updating of the Environmental Land Reordering and Watershed Management Plan for Lake Apanás and Lake Asturias and the Ramsar site Plan.

- Ninety-eight leaders of the micro-watershed committee and the potable water and sanitation committee were trained in water management, the concept of micro-watershed committees, and the Payment for Environmental Services (PES) mechanism.
- Four-hundred and seventy-two local actors, including NGOs, foundations, associations, and community leaders participated in two educational forums. One was led by a TECNIC consultant who made a presentation about the Payment for Environmental Services (PES) mechanism. The other one was led by the National Agrarian University's Aquatic Resources Research Center (CIRA) with the objective of disseminating information about the socialization of hydrological studies in the Apanás sub-watershed.
- One-thousand six-hundred and sixty-one project protagonists and beneficiaries were guided through the process of creating their own farm plan, and were trained in establishing and managing agroforestry systems, watershed management, pest and disease control, developing environmental educational values, biodiversity conservation, and Payment for Environmental Services (PES) mechanism operations.
- Forty-two actors and beneficiaries with Private Nature Reserves (PNR) were trained in managing biodiversity conservation infrastructures, as well as captive animals, orchids, and how the Payment for Environmental Services (PES) mechanism works.
- In the context of the 2015 World Wildlife Day that promotes the preservation of the habitat of wildlife species, four-hundred and fifty-two actors were trained, two-hundred and eighty-seven of which were families from the communities, and one-hundred and sixty-five of which were student leaders from the twenty-eight schools located in the sub-watershed.
- In order to manage the project successfully, institutional actors, protagonists, and community members in the project area were provided with technical assistance. Also, regular tours around the intervention area were coordinated, as well as frequent meetings with the various stakeholders involved.
- Two-thousand nine-hundred and five actors participated in training activities, which had a positive impact on project management and project area. Local and institutional capacities were built up on sustainable watershed management, leaders were trained, and the skills of community actors and institutions were improved.

In sum, environmental and social management and institutional capacity-building were included throughout project implementation and execution as part of the technical capacities' themes, which were developed with the participation of the stakeholders. Overall institutional strengthening and capacity building, deemed 'satisfactory' by the TE, took place throughout the project. Because of this, the institutional constraints at the beginning of the project were overcome and the expected goals were met.

b) Governance

The project, including its objectives, components, institutional framework, instruments, and mechanisms—i.e., the Payment for Environmental Services (PES) mechanism—were relevant to the Nicaraguan government because they were aligned with their technical assistance strategies and priorities/policies. The project had a positive impact on governance, as the government took ownership of the project and committed to its promoted policies. It ensured the right number of staff and resources to guarantee adequate institutional capacity and support for co-executing institutions. The four co-executing institutions from the government took ownership of the implementation process and participated in the project design, execution, and evaluation. By appointing the Nicaraguan Electricity Company (ENEL) to lead the project, the government improved its interinstitutional coordination among the various co-executing institutions executing the project.

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 implementation of the PAGRICC program (the Environmental Program for Disaster Risk Management and Climate Change) by MARENA was not accounted for during the design phase. The PAGRICC program is an initiative funded by the Nordic Development Fund, the Inter-American Development Bank (IDB) and the Swiss Agency for Development and Cooperation (SDC) to support the government of Nicaragua to adequately manage its natural resources and reduce risks from natural disasters associated to climate change, particularly its effects on agriculture. The PAGRICC program contributed USD 1.4 million to the project, improving the sustainability of the soil and forested areas in the Apanás watershed by applying Environmental Restoration Systems (ERS) on 4,304.0 ha.

As a result, there is a total of 10,452.8 ha of protected land in the watershed, 3,325.8 ha of which (32%) were there before project start, 2,823.0 of which (27%) were established through the Inter-American Development Bank (IDB) project, and 4,304.0 of which (41%) were established through the PAGRICC program.

It should be noted, however, that there is no estimate of the amount of carbon or sediments that the PAGRICC program prevented in Lake Apanás and Lake Asturias. While the calculation for sediments may be impossible to obtain, the TE recommends measuring carbon dioxide fluxes in order to determine more accurately the amount of captured greenhouse gas (GHG) emissions (TE, p86).

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.

The TE explains that the project is fully replicable because it is “pertinent, relevant, efficient, effective, and has an adequate institutional framework”. But it would be even more replicable if it managed to ensure the sustainability and continuation of the Payment for Environmental Services (PES) mechanism by securing more funding after project completion. In turn, this would ensure “the necessary seed capital” to make the desired long-term impact, which consists of decreasing and mitigating erosion processes and ensuring the necessary streamflow for power generation. To ensure the project’s replicability, the TE deems it necessary to develop a continuous promotion and dissemination plan every year, at the institutional and governmental levels. These plans would guarantee and promote project ownership among stakeholders in the mid- and long-term (TE, p101).

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 provides seven main lessons learned from project design and implementation (TE, p119-120):

- **The importance of having a committed entity in a leading role.** As mentioned earlier, the Nicaraguan Electricity Company (ENEL) led interinstitutional coordination efforts, coordinating, developing, and overseeing project activities and responsibilities among the co-executing agencies. ENEL's role was especially important given that the participating entities were undergoing a learning process and were still defining their roles and responsibilities. ENEL's leadership helped ensure the achievement of the project's goals.

- **The importance of specific and measurable indicators.** It is essential to have clearly defined reference values and objectives (SMART indicators) in order to properly monitor progress made and evaluate outcomes. Also, in a results-oriented process, there should be a set of "measurable and meaningful" outcome indicators. The system of project indicators was detailed and ambitious, thus making performance monitoring and evaluation much easier.

- **Creation of an integrated Procurement Plan.** The TE mentions that the Procurement Plan should have been conceived from the design phase "with a holistic or comprehensive view of the bidding processes and contracts" throughout project execution and should have taken the scope and the lifecycle of the project—five years—into account. However, the project was designed to account for only 18 months of the project, leading to "excessive modifications" to the initial procurement plan and a total of 33 changes. Local market capacity (vendors, prices, purchase of materials, etc.) should have been analyzed and the procurement plan should have had a deep and detailed analysis of the processes to follow while considering important elements, such as the evaluation of the operational context of the country, vendor and market capacity, mitigation of procurement-related risks, analysis of participants and stakeholders and a list of vendors and their scope.

- **Strategic planning based on local stakeholder mapping.** When designing a new project phase, it is important to conduct strategic planning based on local actor mapping with participation mechanisms geared to address the needs of these stakeholders and adjusted to the territorial dynamics and realities. This planning should include, as a cross-cutting element, a permanent awareness raising and social promotion campaign in order to facilitate adoption of changes based on the local needs and project guidelines.

- **Communication plans and awareness raising campaigns.** In order to ensure effective project planning and management, a cross-cutting communication and awareness raising plan should have been developed for potential beneficiaries. The purpose of this plan would have been to facilitate understanding among involved stakeholders, optimize the management of human and financial resources related to project activities, and enhance local participation and support. This plan should include a dissemination, training, and technical assistance plan, an assessment adjusted to the local reality, the establishment of objective and accurate training activities, a permanent and cross-cutting social promotion campaign, and an awareness raising strategy for the target population at different levels of intervention.

- **Implementation of a Payment for Environmental Services (PES) mechanism.** The design of a sustainable PES mechanism should begin since project inception or even before that. A great time investment is required for the planning, development, and implementation phases of PES mechanisms, especially in the case of this project's pilot PES mechanism financed with external resources. The creation of future environmental funds should be based on an effective analysis of demand and more realistic execution plans. Furthermore, alternative funding sources should be considered when developing and implementing these funds in order to reduce the financial risk of the mechanism and increase sustainability and autonomy.

- **Sustainability: A medium-to-long-term challenge.** As mentioned above, there needs to be a project formulation team in charge of securing new income sources to ensure the sustainability of the Payment for Environmental Services (PES) mechanism and the complementary actions to ensure biodiversity conservation and mitigation of greenhouse gas emissions by continuing to apply land use reordering practices in a second phase.

9.2 Briefly describe the recommendations given in the terminal evaluation.

The TE provides recommendations for each component of the project (TE, p116-118):

Component 1. Strengthening of institutional structures and local land use planning capacities, soil conservation practices, and integrated watershed management.

- When designing similar projects, a Communications, Promotion, and Engagement Plan should be designed, in a cross-cutting way, for key actors and, above all, for municipal authorities. Furthermore, a mapping of stakeholders in the watershed must be created, to understand their actions and engagement objectives for a more effective project management.
- Decrees are a local legal implementation instrument. Through them, municipal authorities can participate in a responsible way in the process of managing the land and the natural resources, as per their mandate set forth in Law 40, "Law of Municipal Offices." Therefore, it is advisable, for future operations, to consider this tool through collaboration with local authorities.
- Executing a project where there is participation from various institutions requires strong and ongoing leadership, especially when there is involvement of several ministries and entities that have different objectives and responsibilities but share the same purpose. Once project operations come to an end, the Nicaraguan Electricity Company (ENEL) must continue its leadership of the Watershed Management Plan for Lake Apanás and Lake Asturias. In turn, water production and electric power generation will be benefited as a result of the expansion of the Payment for Environmental Services (PES) and other similar mechanisms to cover the rest of the watershed area.

Component 2: Implementation of sustainable land and forestry management practices in order to enhance biodiversity conservation and carbon sequestration.

- For future projects, it is advisable to focus on promoting systems with greater cover, such as coffee plantations, natural regeneration management (NRM), natural forest, and industrial plantation forests (IPF). This can be achieved by improving incentives.
- It is recommended to improve logistics in order to optimize delivery times of the plant material. A focus on local vendors should be given based on the needs of the target population.
- Ideally, each stakeholder should have a farm plan in order to achieve an effective watershed management.
- The systematization of the developed implementation and technical assistance activities should adhere to a monitoring and follow up system in place.
- For future projects in the same geographic area, it is recommended that the National Forestry Institute (INAFOR) revisit and assess activities carried out by previous projects. This will ensure continuity in the watershed management and can be achieved through a beneficiary record or database, which can also be an input for future impact assessments in order to improve forest cover.

Component 3: Conservation of forest areas and biodiversity in Private Nature Reserves (PNR) and the Ramsar site.

- The Ministry of the Environment and Natural Resources (MARENA) should implement a monitoring and follow up strategy for Private Nature Reserves (PNR) owners in order to ensure the conservation of the areas declared PNRs by law and promote incentives for the new conservation initiatives in the watershed. A performance evaluation should be carried out for all PNRs created by the project. This should be based on the implementation of Environmental Management Plans (EMP) and the development of ecotourist circuits. This evaluation should take the actors into account—i.e., those receiving a Payment for

Environmental Services (PES) incentive. Their benefits, amount of incentive, and sustainability should be evaluated.

- An institutional program should be created through the Ministry of the Environment and Natural Resources' (MARENA) System of Protected Areas to support resource management and technical assistance to monitor the activities established by the project and promote sustainability.
- A fund to develop business plans for eco-businesses should be created, which can lead to higher income as a result of conservation activities.
- Native species to the area should be used for new animal breeding initiatives.

Component 4: Design and implementation of the Payments for Environmental Services mechanism in the Apanás-Asturias watershed

- The TE recommends that the Nicaraguan Electricity Company (ENEL) carry out the necessary economic and financial estimates to consider charging a fee for the use of water for electric power generation, as this can generate income for the Payment for Environmental Services (PES) mechanism. In turn, this can ensure the sustainability of expansion of forested areas that are protected under the proposed scheme, as a result of the payment for water use in the watershed (potable water, energy, etc.). The TE also recommends that ENEL finance monitoring and administration costs until 2021 (end of project grant) and should leverage resources from other government sources and international grants while the Payment for Environmental Services (PES) mechanism is operating.
- A file record for each farm detailing the monitoring and condition of the system implemented by the project should be kept and should include monitoring and registration information about plants as a requirement to be added to the Payment for Environmental Services (PES) mechanism.

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 IEO 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 report contains detailed information, tables, and figures which describe outputs, outcomes and impacts. The information is abundant although sometimes lacking precision and clarity.	S
To what extent is the report internally consistent, the evidence presented complete and convincing, and ratings well substantiated?	The report is somewhat inconsistent when explaining the financial sustainability of the Payment for Environmental Services (PES) mechanism: it appears to doubt the sustainability of the mechanism from a financial and institutional perspective, but in other instances seems more optimistic about its future.	MS
To what extent does the report properly assess project sustainability and/or project exit strategy?	The report provides a detailed table analyzing different aspect of sustainability, although information about social sustainability is lacking. Also, the report does not provide a summary of the mentioned table.	MS
To what extent are the lessons learned supported by the evidence	The 'lessons learned' section is clear and informative and properly summarizes the project's main lessons learned.	S

presented and are they comprehensive?		
Does the report include the actual project costs (total and per activity) and actual co-financing used?	The report does not provide a breakdown of the sources of co-financing, which is confusing because of the difference between the report's figures and the CEO endorsement document's numbers. The report does provide project costs per component and activity.	MU
Assess the quality of the report's evaluation of project M&E systems:	The report provides a satisfactory description of M&E design and implementation, and even adds a third dimension, M&E utilization.	S
Overall TE Rating		MS

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