Terminal Evaluation Review form, GEF Independent Evaluation Office, APR 2015

1. Project Data

Summary project data			
GEF project ID		3144	
GEF Agency project ID		3618	
GEF Replenishment Phase		GEF-4	
Lead GEF Agency (include all for joint projects)		UNDP	
Project name		Electricity Production from Biomass in Uruguay (PROBIO)	
Country/Countries		Uruguay	
Region		Latin America and the Caribbean	
Focal area		Climate Change	
Operational Program or Strategic Priorities/Objectives		CC-SO4; CC-SP4	
Executing agencies involved		Ministry of Housing, Use of Land and Environment (under the National Environment Directorate)	
NGOs/CBOs involvement		Not given	
Private sector involvement		Interconsult; Aeroterra; INGESUR; and ICA	
CEO Endorsement (FSP) /Approval date (MSP)		April 23, 2010	
Effectiveness date / project start		October 26, 2010	
Expected date of project completion (at start)		December 31, 2013	
Actual date of project completion		December 31, 2014	
Project Financing			
		At Endorsement (US $M)	**At Completion (US $M)**
Project Preparation Grant	GEF funding	.05	.05
	Co-financing	.05	.05
GEF Project Grant		.95	.95[1]
Co-financing	IA own	.03	.03
	Government	.78	.76
	Other multi- /bi-laterals		
	Private sector	6.75	30
	NGOs/CSOs		
Total GEF funding		1	1
Total Co-financing		7.61	30.84
Total project funding (GEF grant(s) + co-financing)		8.61	31.84
Terminal evaluation/review information			
TE completion date		April 2015	
Author of TE		Jorge Leiva	
TER completion date		2/24/2016	
TER prepared by		Laura Nissley	
TER peer review by (if GEF IEO review)		Molly Watts	

[1] The TE indicates on page 24 that all GEF funds were fully spent.

2. Summary of Project Ratings

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

3. Project Objectives

3.1 Global Environmental Objectives of the project:

The Project Document does not explicitly state the Global Environmental Objectives, however the goal of the project is to "reduce greenhouse gas emissions from fossil-based electricity generation in Uruguay by promoting the development of decentralized biomass power generation from residues and industrial by-products" (pg. 9). At the time of the project design, the disposal of biomass residues from organic waste was limited to burning in the open air, creating negative impacts on the environmental. Additionally, forestry wastes were generally not disposed of at all, generating methane emissions and soil and groundwater pollution.

3.2 Development Objectives of the project:

The Project Document does not explicitly state the Development Objectives of the project, however the objective of the project is to "promote the integration of biomass-based power generators into the national electricity grid by the development and implementation scenarios for the sustainable, large-scale exploitation of domestic forestry and agro-industry biomass residues" (pg. 9).

The expected programmatic outcomes[2] of the project included:

- Outcome 1: A comprehensive assessment of domestic forestry resources has been completed as input for policy development, including a survey of market aspects
- Outcome 2: The current policy framework for electricity generation based on biomass residues from forest and agro-industry, has been strengthened
- Outcome 3: The business opportunities of biomass-based power generation have been promoted among industries, investors and the general public
- Outcome 4: One biomass-based electricity generator (5 MW) has been installed, supplying energy to the national grid, and a mechanism for widespread replication has been prepared

[2] The project design included a fifth outcome related to the implementation of the M&E plan and the dissemination of lessons learned.

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

There were no changes to the project's objectives during implementation. There were however, adjustments made to some project outcomes and components. Six years elapsed between the design of the project and the beginning of implementation. During this time, Uruguay strengthened its institutional frameworks for renewable energy and provided economic incentives for renewable energy investment. By 2011, seven power plants had been installed. Therefore, the project team eliminated Outcome 4 (installation of a pilot biomass plant) and replaced it with three case studies on existing biomass plants (TE pg. ii). Additionally, Outcome 2 (current policy framework strengthened) and its associated results were re-oriented to focus on biomass "byproducts" rather than "waste," reflecting the changing practices in the forestry sector (TE pg. 27).

Additionally, the Strategic Environmental Assessment (SEA) was eliminated and replaced with studies which could be used as the foundation for a SEA in the future. The National Environment Directorate reasoned that it did not have enough information to start a SEA on the extraction of biomass wastes in the forestry sector, and in general, SEAs for other sectors were prioritized (TE pg. iii).

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**

The TE provides a rating of "relevant" for this component of project outcomes. This TER, which uses a different scale, adjusts this rating to **Satisfactory** for project relevance. The project outcomes are consistent with the GEF-4 Climate Change Focal Area Strategic Objective 4, *to promote on-grid renewable energy*, and Strategic Program 4*, promoting sustainable energy production from biomass*. Additionally, the project outcomes are consistent with Uruguay's policies and strategies for climate change mitigation, including the national 2005-2030 Energy Policy, which promotes renewable energy, including biomass. The Energy Policy calls for 15% of power generated to be from non-conventional renewable energies, specifically from wind, biomass wastes, and micro-hydraulic power. The project

outcomes are also consistent with Uruguay's international commitments under the United National Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol (TE pg. 41).

4.2 **Effectiveness**	Rating: **Moderately Satisfactory**

The TE provides a rating of **Highly Satisfactory** for project effectiveness, which this TER downgrades to **Moderately Satisfactory**. The project achieved its objective of promoting the integration of biomass-based power generators into the national grid. Although the project moved away from piloting a biomass plant, the project generated the knowledge and technical know-how for installing competitive biomass plants and generating business opportunities related to biomass power generation (TE pg. 37). The project experienced moderate shortcomings, particularly regarding the strengthening of the existing policy framework. As a result, greenhouse gas emissions were not reduced as a result of project activities by the end of the implementation period (TE pg. v).

A summary of the project's achievements, by programmatic outcome, is below:

- **Outcome 1: A comprehensive assessment of domestic forestry resources has been completed as input for the development of policies, including a survey on market economic impacts:** Expected results under this outcome included: (1) a database of forest biomass created, (2) GIS module containing the geographical distribution of forestry biomass created, (3) economic assessment on the commercial value of forestry biomass resources conducted, and (4) a Strategic Environmental Assessment (SEA) carried out for the forestry sector. At the time of the TE, the database had been developed and the GIS module was in the final testing stage. As mentioned above, the project team eliminated the SEA component of the project and replaced it with studies which could be used as the foundation for a SEA in the future. At the time of the evaluation, all the environmental studies had been completed. The economic assessment, which was executed in partnership with the INIA Tacuarembó, was only partially completed by the time of the TE (TE pgs. 20-21; 38-39).

- **Outcome 2: The current policy framework for electricity generation based on biomass byproducts from forestry and agriculture industries, has been strengthened:** Expected results under this outcome included: (1) knowledge generated on the economic, technical, and logistical aspects of forestry biomass byproducts, (2) national strategy developed for the use of biomass for energy generation, (3) emissions, operations, and safety guidelines for biomass facilities developed, (4) forestry policy framework reviewed on energy relevant issues, and (4) local development plan sustainable use of biomass for energy purposes developed. At the time of the evaluation, the studies on economic and technical variables of biomass power generation had been completed. Additionally, guidelines on biomass plant safety and operations, as well as the mitigation of atmospheric emissions, were developed. Existing policies and regulations were also analyzed, including the "bidding" process under Decree 367/010. In

its analysis, the project identified factors that were generating low private sector involvement in renewable energy bids. As a result of these findings, Uruguay's national electricity company (UTE) developed a new decree for bidding, which is expected to be released in late 2014/early 2015 (TE pg. iv).

On the other hand, the TE does not cite any examples of local development plans that emerged by the time of the evaluation. A national strategy for the use of biomass for energy generation had also not emerged by the time of the TE, although an official strategy was expected to materialize in 2015 (TE pgs. 21-24).

- **Outcome 3: Business opportunities related with biomass power generation have been promoted among industry, investors and public:**
  Expected results under this outcome included: (1) technical support provided to private sector for investing in biomass generation, (2) increased knowledge on the sustainable use of biomass for energy purposes among targeted investors, equipment and service providers, and the general public, and (3) experts and stakeholders in biomass development brought together through a national seminar. At the time of the evaluation, technical support had been provided through the development and dissemination of technical, environmental, and economic guidelines. Additionally, some components of an information campaign had materialized, including the development of a website and press releases. However, no evidence of an increase in knowledge was cited in the TE. Finally, a national workshop on the sustainable use of energy crops was held at the end of the project (TE pgs. 22-25; 39-40).

- **Outcome 4: A biomass power generator (5MW) has been installed and it is supplying energy to the national energy grid; and a mechanism for its widespread replication has been prepared:**
  The project team eliminated the pilot biomass plant/power generator component from the project strategy, and therefore the results under this outcome were heavily revised. Ultimately, it was decided that case studies on three existing biomass plants would be conducted instead. At the time of the evaluation, the case studies had been completed and a report on lessons learned was generated (TE pg. 22). Additionally, a training workshop was held for technicians working at the existing power plants (2014 PIR pg. 17).

4.3 **Efficiency**	Rating: **Moderately Satisfactory**

The TE provides a rating of **Satisfactory** for project efficiency, which this TER downgrades to **Moderately Satisfactory**. The project experienced moderate delays at start-up due to challenges establishing the roles and responsibilities of the participating government ministries (Environment, Forestry, and Energy) and setting up the necessary financial arrangements for the project. As a result, the hiring of the project

coordinator and support staff took longer than expected, and the inception workshop was delayed a full year (2012 PIR IP Rating and Adjustments).

Additionally, six years had elapsed between the design of the project (2005-2007) and the beginning of implementation (2010-2011). During this time, the biomass energy sector shifted in Uruguay. In particular, institutional frameworks for renewable energy were strengthened, economic incentives emerged for renewable energy investment, and biomass power plants were built. Therefore, some of the original project outcomes and results needed to be adjusted to fit the new context. In 2012, an external consultant was hired to assess the project's strategy and make recommendations for revising the project's framework (TE pg. 27). The 2013 PIR noted that that this process was done in a transparent and timely manner, with minimal disruptions and delays in implementation (pg. 25). Ultimately, the project completion date was extended one year, from December 2013 to December 2014. The extension allowed the project to achieve its objective, however some results were not achieved by the end of the project, including the elaboration of a national strategy for the use of biomass for energy generation. It should also be noted that the Uruguayan Government had to commit additional funding for the terminal evaluation, as the project had fully spent the GEF funds (TE pg. 34).

4.4 **Sustainability**	Rating: **Moderately Likely**

The TE provides a rating of **Moderately Likely** for project sustainability, and this TER concurs.

Financial Resources

This TER assesses financial sustainability to be **Moderately Likely**. The TE alludes to the possibility of a new GEF-funded project ("BIOVALOR") which would build upon the results of the project. Specifically, the new project would focus on the sustainable use of waste and biomass byproducts from agroindustry (TE pg. 43). However, there are moderate risks related to the global market, including low oil prices which could affect the renewable energy market. Additionally, at the time of the TE, natural gas for electricity generation was surging in Uruguay (TE pg. 44).

Sociopolitical

This TER assesses sociopolitical sustainability to be **Likely**. The TE notes that project was executed in a participatory manner, with strong stakeholder ownership over project outcomes and results (TE pg. 41). The knowledge generated by the project through technical and economic studies has been embraced by both public and private institutions. The TE notes that local development organizations are increasingly incorporating biomass as part of their work, indicating commitment to the long-term objectives of the project (TE pg. 43). The TE does not cite any political risks that would undermine the sustainability of project outcomes.

Institutional Frameworks and Governance

This TER assesses the sustainability of institutional frameworks and governance to be **Moderately Likely**. As noted above, Uruguay has strengthened its institutional and legal frameworks for renewable energy. The 2005-2030 Energy Policy incorporates non-conventional renewable energies, including biomass, intro its framework (TE pg. ii). Additionally, the project contributed to the development of a new Decree for purchasing energy, which calls for bidding 60 MW of power generation from biomass. The new decree is expected to be released in late 2014/early 2015, and should contribute to the reduction of greenhouse gas emissions (TE pg. iv; 36). The project also contributed to the development of a national strategy for the use of biomass for energy generation, which was expected to materialize in 2015, after the project ended.

Environmental

This TER assesses environmental sustainability to be **Likely**. The TE notes that the availability of forest biomass byproducts is sufficient to power the seven plants operating at the time of the TE. Therefore, the TE notes that it is reasonable to assume that the biomass power plants will continue producing energy (pg. 43). The TE does not cite any risks associated with environmental sustainability.

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 TE notes that actual co-financing was significantly higher than expected, due to an influx of private sector investment (444% of the planned $6.75 million) (TE pg. 35). However, it should be noted that the planned $6.75 million from private sector partners was intended for the installation of a pilot biomass power plant, which the project did not ultimately pursue. It is misleading the project continually claimed the construction of the power plant as a result, even though this occurred before the project began. Furthermore, the project claims the private funds spent on the construction of the power plant as disbursed co-financing for the project (see for example, pg. 31 of the 2013 PIR). This calls into question the $30 million in private sector co-financing cited in the TE.

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 Document was signed on October 26, 2010, however project implementation did not begin until late 2011. Delays at project start-up were due to challenges establishing the roles and responsibilities of the participating government ministries (Environment, Forestry, and Energy) and setting up the necessary financial arrangements for the project. Additionally, the project framework and

strategy was revised in 2012 to better reflect changes in the operating environment. Although the project managed these changes in a timely manner, some delays in implementation occurred. As a result, the project was extended one year, from December 2013 to December 2014. Some project results were not achieved within the project timeframe, including the elaboration of the project strategy and the completion of the economic assessment, which was executed in partnership with the INIA Tacuarembó.

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:

Country ownership over the project was strong. The TE notes that the project was executed in a participatory manner, involving three key ministries: the Ministry of Housing, Use of Land and Environment (MVOTMA); the Ministry of Industry, Energy and Mining (MIEM); and the Ministry of Agriculture, Livestock and Fisheries (MGAP). The TE notes that the ministry staff trained by the project will be involved in the follow-up, GEF-funded project BIOVALOR, which should contribute to institutional sustainability (TE pg. vi). Additionally, the Uruguayan Government contributed $.76 million in co-financing for the 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: **Moderately Unsatisfactory**

The TE provides a rating of **Satisfactory** for M&E design at entry, which this TER downgrades to **Moderately Unsatisfactory**. There were significant shortcomings in the M&E approach presented in the Project Document. The results framework was meant to serve as the reference tool for monitoring the project's implementation and evaluating the project's performance and impact (PD pg. 24). However, the indicators provided in the results framework were not SMART (specific, measurable, achievable, relevant, and timely), but simply restated the project's outputs. For example, Indicator 2.D was "Review of forestry policy framework on energy relevant issues," which is identical to Output 2.5. The target for Indicator 2.D, "A review (report) produced including recommendations on relevant aspects of forestry policy," also simply restates the intended output. The project's framework therefore precludes results-based monitoring. Furthermore, the framework does not include any indicators to track the intended environmental changes of the project, such as a reduction in greenhouse gas emissions (TE pg. 17).

The Project Document does include a general M&E plan which was expected to be elaborated by the project management unit (PMU) before the inception workshop. The M&E plan outlined the general M&E activities, including the day-to-day monitoring, periodic progress reports, annual performance reports, midterm and final evaluation, and dissemination of lessons learned. The M&E plan also included the responsible parties for each M&E activity, along with the corresponding budget and timeframe. The plan called for a total dedicated budget of $65,000 for M&E, or approximately 6.8% of the GEF budget.

6.2 **M&E Implementation**	Rating: **Moderately Unsatisfactory**

The TE provides a rating of **Satisfactory** for M&E implementation, which this TER downgrades to **Moderately Unsatisfactory**. As described above, the project underwent significant revisions to its overall strategy in 2012. An external consultant was hired to modify the results framework and indicators (TE pgs. 29-31). This "substantive revision" replaced the planned for midterm evaluation (TE pg. 28). Although the new strategy better reflected the situation in Uruguay, the revised indicators contained the same flaws as the original indicators, namely that they were outputs rather than indicators (TE pg. 28). Additionally, the "pilot power plant" outcome and associated indicators were left in the framework and reported on throughout the life of the project. This is extremely misleading as it implies that the pilot power plant was a result of the project, when in reality the power plant was installed prior to the project start (TE pg. 47). It should also be noted that the government had to commit funds for the terminal evaluation, as GEF funds were fully spent (TE pg. 34).

The TE does note that the project amended its annual work plans to include milestones and incremental targets (TE pg. 33). Although results-based monitoring was absent, the project team did diligently report on project activities. Additionally, the project steering committee set up a project-monitoring group to verify the project's progress (TE pg. 33).

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: **Moderately Satisfactory**

The TE provides a rating of **Satisfactory** for quality of project implementation, which this TER downgrades to **Moderately Satisfactory**. As noted above, six years elapsed between the design of the project and the beginning of implementation. During this time, the operational environment in Uruguay shifted. Therefore, UNDP and the GEF approved changes to the original project design, including the elimination of the pilot biomass plant and the Strategic Environmental Assessment (SEA). However, both the original and revised project designs contained flawed M&E plans, including a lack of SMART indicators, which impacted the project's ability to engage in results-based monitoring.

The TE does note however, that the UNDP Country Office provided satisfactory financial support and technical assistance to the executing agency throughout the life of the project. UNDP was actively involved in the administration of project funds and provided training to the project team on standard procurement practices. UNDP was also in charge of hiring national and international experts to support the project. Additionally, the TE notes that the Regional Technical Advisor shared UNDP's experience implementing similar projects in other countries (pg. 36).

7.2 **Quality of Project Execution**	Rating: **Moderately Satisfactory**

The TE provides a rating of **Satisfactory** for quality of project execution, which this TER downgrades to **Moderately Satisfactory**. The executing agency for this project was the Ministry of Housing, Use of Land and Environment (MVOTMA) under the National Environment Directorate, or DINAMA. The TE notes that the project utilized a system of "National Execution," where DINAMA partnered with the Energy National Directorate (DNE) and the General Forestry Directorate (DFG) to execute project activities (TE pg. 12). Sectoral specialists from each of these Directorates staffed the Project Management Unit (PMU). The TE notes that this project management arrangement was effective, and served to strengthen all participating institutions (pg. 32).

Additionally, the PMU is credited with engaging in adaptive management. Initial consultations and studies indicated that the project strategy needed to be updated, and therefore the PMU hired a consultant to adjust the project results and indicators. The 2013 PIR noted that that revision process was done in a transparent and timely manner, with minimal disruptions and delays in implementation (pg. 25). As noted elsewhere, the M&E approach in the revised project design was flawed. The project team diligently reported on project activities, however results-based monitoring did not occur.

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 TE does not cite any environmental changes that occurred by the end of the project.

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 does not cite any socioeconomic changes that occurred by the end of the project.

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 TE generally acknowledges that the project "contributed [to] generating a context of higher certainties about the use and situation of biomass in Uruguay, allowing authorities and investors [to] have a solid basis for elaborating estimates and policy instruments, [improving] environmental controls for existing biomass facilities and [increasing] certainty in the [decision-making] process of all involved actors" (pg. 37). Specifically, the TE notes that the project generated knowledge on the situation of biomass energy in Uruguay, provided technical support to the private sector for investing in biomass generation, and executed aspects of an information campaign (pg. 22). The 2014 PIR also indicates that a training workshop was held for technicians working at the existing power plants, although the results of this training are unclear (2014 PIR pg. 17).

b) Governance

Under the project, existing policies and regulations for renewable energy were analyzed, including the “bidding” process under Decree 367/010. As a result of project’s findings, Uruguay's national electricity company (UTE) developed a new decree for bidding, which is expected to be released in late 2014/early 2015. Additionally, environmental impact assessments were conducted on particulate matter, gas emissions, and ash production, which resulted in proposals for air quality monitoring (TE pg. iv).

Although it was not finalized by the end of the project, the project contributed to the development of a national strategy for the use of biomass for energy generation. The official strategy was expected to materialize in 2015 (TE pg. 22).

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 does not cite any unintended impacts that occurred by the end of the project.

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 does not cite any GEF initiatives that had been adopted at scale by the end of the project. However the TE does note that a new GEF project, BIOVALOR, was designed to build upon project results. Specifically, BIOVALOR would focus on the sustainable use of waste and biomass byproducts from agroindustry (TE pg. 43).

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 the following lessons learned (pg. 47):

- Project indicators should not be changed for fitting to a present situation, but an explanation of reasons by which a result could not be reached should be done instead. Neither assign a result as accomplished before project started, since indicators are a direct measure of the expected activities of the project. Changing indicators and results produce confusion for the evaluator and makes the result analysis more difficult.

- The participative management with the associated institutions and the hiring of project personnel working inside of these entities showed very good results, thanks to the availability of useful information for the project. On the other hand, these personnel had the ability to detect the institutional needs and priorities and align them with those from the project. This situation created loyalty with project activities and provided sustainability.

- [Biomass fuel is available in Uruguay] and its development is ensured by companies that present vertical integration (they are owners of the forest and transformation industry).

- The viability of forestry biomass use as fuel depends to a large extent on operational costs involved in transport and biomass treatment before being used as a fuel.

- The use of biomass as fuel entails emissions of air pollutants that should be controlled by abatement technologies. Ash production is an environmental [concern] to put attention on, since there is no experience in the country nor technology available for either making an alternative use or safety disposal procedure.

- Drying of biomass and its storage at open air also generates environmental issues, due to percolated liquid production that contaminates ground, thus authorities should also pay attention to this matter.

9.2 Briefly describe the recommendations given in the terminal evaluation.

The TE provides the following recommendations (pgs. 46-47):

<u>Corrective measures for design, implementation and project monitoring and evaluation</u>

- For project design it is advisable to elaborate indicators for results. A document, a policy, etc., are not results, but actors making use of these products, that is a result.

- [Optimizing] the number of indicators is suggested, leaving only those related with key aspects of a program.

- For [substantial revisions to the project design], it would be recommendable to leave indicators and project results as written in the original Project Document, since this allows evaluators to have a clearer view of what was attempted to achieve and problems related to each project component. It is better to explain if the indicator or result is not appropriate and provide contextual information that enable the evaluator to balance all involved factors.

- It is suggested not to include in the logic framework statements for objectives already achieved before project starts, since these are not owned by the incumbent project.

Actions to follow up or reinforce initial benefits from project

- The participative and respectful management towards existent institutions is seen as positive for the achievement of project results. It is suggested to continue along this line with the activities that will follow PROBIO [the project].

- A good approach to local authorities and organizations would have a good impact on biomass project ownership by neighbor communities.

- It would be convenient that DINAMA [the National Environment Directorate] would exercise an active role in enforcement, elaboration of specific regulations and solutions for some environmental problems from biomass technologies, such as fuel storage.

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's assessment of project effectiveness is comprehensive. The details provided on the changes to the project's design were particularly helpful in comparing the expected and actual results. However, the efficiency section was weak.	**MS**
To what extent is the report internally consistent, the evidence presented complete and convincing, and ratings well substantiated?	The report is internally consistent and the evidence presented is complete for some sections. However, ratings are not always consistent with the evidence provided, and are significantly inflated for M&E.	**MS**
To what extent does the report properly assess project sustainability and/or project exit strategy?	Although the sustainability section itself is weak, information regarding sustainability can be found in other sections of the report.	**MS**
To what extent are the lessons learned supported by the evidence presented and are they comprehensive?	The lessons learned are largely supported by the evidence provided. However, this TER disagrees with the report's assertion that results and indicators should not be revised when the project design is substantially revised.	**MS**
Does the report include the actual project costs (total and per activity) and actual co-financing used?	The report includes actual project costs, however it does not break down the GEF contribution. Actual co-financing information is provided.	**MU**
Assess the quality of the report's evaluation of project M&E systems:	The report's evaluation of project M&E systems is weak. The report rightly identifies flawed indicators as a concern, and even goes so far as to propose revised indicators. Yet, the report assigns a rating of satisfactory for both M&E design and implementation.	**MU**
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).