1. Project Data

Summary project data			
GEF project ID		658	
GEF Agency project ID		644	
GEF Replenishment Phase		GEF - 2	
Lead GEF Agency (include all for joint projects)		UNDP	
Project name		Slovenia – Removing Barriers to the Increased Use of Biomass as an Energy Source (SVN/99/G31/A/1G/99)	
Country/Countries		Slovenia	
Region		Eastern Europe	
Focal area		Climate Change	
Operational Program or Strategic Priorities/Objectives		OP 6: Promoting the adoption of renewable energy by removing barriers and reducing implementation costs.	
Executing agencies involved		Agency for Efficient Use of Energy of Slovenia (AURE) within the Ministry of Environment, Spatial Planning and Energy (MoESPE)	
NGOs/CBOs involvement		[Not Involved]	
Private sector involvement		Beneficiaries: manufacturers of biomass equipment.	
CEO Endorsement (FSP) /Approval date (MSP)		February 5, 2001	
Effectiveness date / project start		October 2002	
Expected date of project completion (at start)		31 January 2004	
Actual date of project completion		30 June 2007	
Project Financing			
		At Endorsement (US $M)	**At Completion (US $M)**
Project Preparation Grant	GEF funding	0.098	0.098
	Co-financing		
GEF Project Grant		4.30	4.30
Co-financing	IA own		
	Government	6.9	5.62
	Other multi- /bi-laterals		
	Private sector	1.00	3.90
	NGOs/CSOs		
Total GEF funding		4.398	4.30
Total Co-financing		7.9	9.52
Total project funding (GEF grant(s) + co-financing)		12.298	13.82[1]
Terminal evaluation/review information			
TE completion date		30 June 2007	
TE submission date		31 December 2006 (revised planned closing date)	
Author of TE		Brad Johnson	
TER completion date		January 10, 2015	
TER prepared by		Erika Hernandez	
TER peer review by (if GEF EO review)		Joshua Schneck	

[1] Calculations come from Final PIR since a breakdown was not presented by the Terminal Evaluation. TE presents totals that are somewhat different and do not have their corresponding breakdown.

2. Summary of Project Ratings

Criteria	Final PIR	IA Terminal Evaluation	IA Evaluation Office Review	GEF EO Review
Project Outcomes	NA	NA	NA	S
Sustainability of Outcomes	NA	NA	NA	UA
M&E Design	NA	NA	NA	MU
M&E Implementation	NA	HS	NA	S
Quality of Implementation	HS	HS	NA	S
Quality of Execution	HS	HS*	NA	S
Quality of the Terminal Evaluation Report	NA	NA	NA	MS

* Quality of Execution is referred to as Project Implementation in TE, but clearly covers activities relating to Quality of Execution in GEF parlance. TE, pg 15.

3. Project Objectives

3.1 Global Environmental Objectives of the project:

The Global Environmental Objectives of the project, as stated in the Project Document (PD), are to increase the efficiency of Slovenia's energy sector, through mitigating greenhouse gas emissions in compliance with the Kyoto Protocol Commitments. Slovenia imports 70% of its total primary energy. The Government's objectives (as per the Strategy of Energy Use and Supply) were to increase the share of renewable energy sources and to enhance the combined heat and power production [p. 5, TE]. This strategy also seeks to increase energy efficiency from 50% up to 90%, through installing correctly sized gas fired boilers [p. 5, TE]. PD states that more than 600,000 tons of wood biomass waste is unused annually. The Project Document also states that Slovenia's Energy sector accounted for some 30% of Slovenia's total energy consumption and 28% of total GHG emissions (14.4M tons in 1994), and that there were large opportunities for increased efficiency [p. 4, PD]. The PD provides a target for lifetime reductions of emissions due to the project. PD states that "(t)he cumulative impact of the project by facilitating the implementation of 50 Biomass District Heating projects has been estimated to about 1.8 million tons of CO_2 over the next twenty years,." Although this estimation does not distinguish between direct and indirect emission reductions [p. 14, TE]. TE provides an emission reduction target of 9,800 tons per year of CO_2 reductions from implemented projects to be achieved during the project implementation period [p. 7, TE].

3.2 Development Objectives of the project:

The long-term development objective is "to remove barriers to the increased use of biomass as an energy source, thereby reducing the fossil fuel consumption and the associated greenhouse gas emissions. The project is also envisioned to support the sustainable development of the local economies by creating new income and employment opportunities," [p. 18, TE].

The PD defines the following four immediate objectives:

- Immediate objective 1. Finalizing project implementation arrangements and build the capacity of the local project personnel to conduct and supervise the project activities;
- Immediate objective 2. Finalizing the feasibility studies for the development of a pipeline of at least 20 biomass district heating and other wood biomass related energy projects to be presented for financing. The objective mentions the need to address awareness, information and capacity barriers [b(i)-b(vi)] as well as financial barriers [c(i)-c(ii)].

- Immediate objective 3. Facilitating the implementation of the biomass district heating and other wood biomass related energy projects.
- Immediate objective 4. Promoting the sustainable growth of using biomass as an energy source in Slovenia, [p. 18-23, TE].

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

No. According to the TE, no changes were made to the GEO, DO, or other activities during implementation.

4. GEF EO assessment of Outcomes and Sustainability

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

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

Please justify ratings in the space below each box.

4.1 **Relevance**	Rating: **Satisfactory**

The project is relevant to both the GEF and to the Government of Slovenia. For the Government of Slovenia, relevance is seen in that the project complements activities seeking to promote the usage of biomass as an alternative energy source in the country, by combining technical assistance with a financial support scheme leveraging other sources of financing [p. 1, TE]. Specifically, the project focuses on wood biomass-based district heating (BDH) as an alternative to fossil fuel based heating systems. Moreover, biomass systems are cost-effective technologies that will contribute to the reduction of CO_2 emission reductions. The Government of Slovenia has supported renewable energy projects since 1991 through its public competition program [p. 11, TE]. For the GEF, the project's objectives are consistent with GEF Operational Program 6*: Promoting renewable energy by removing barriers and reducing implementation costs* and due to its pertinence to climate change.

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

The TE does not provide an overall rating for Effectiveness. The TER rates this section as *satisfactory*. The project informed municipalities, industries and farmers, and raised awareness through publicizing the project's information and biomass-related data through its website and in other 3 external websites. Eight BDH projects were financed under the program, exceeding project targets of 3-5 [p. 17, TE]. Annual emissions reductions achieved over the course of project implementation were estimated at 7,880 tons of CO_2/yr compared with an initial target of 9,800 tons Co2/yr [p. 21, TE]. Nevertheless, Slovenia's

Environmental Public Fund, EcoFund is yet to be established as it needs approval by the parliament. Progress towards expected outcomes is detailed further below along the four immediate objectives defined in the PD:

1. **Immediate Objective 1 (Moderately Satisfactory)**
   - 1.1 Finalized project implementation arrangements: The National Project Director (NPD) was appointed, the Project Steering Committee (PSC) and the Project Implementation Unit (PIU) were established [p. 37, TE]. Project initiation workshop was not carried out. The Biomass Energy Fund was informally established at the EcoFund, Slovenia's Environmental Public Fund. However, in order to be formally established, legislation still needs to be approved at the Parliament.
   - 1.2 Enhanced capacity of the local experts to implement the project: To increase the personnel's knowledge on biomass energy projects, PIU carried out several study tours to BDH units in Sweden and Austria; attended BDH workshops in Austria and Germany, among other outputs. Feasibility studies, business plans and tender documents were prepared. TE is unclear whether other important materials including a guidebook and training materials were developed,

2. **Immediate Objective 2 (Satisfactory)**
   - 2.1 Potential municipalities, industries, farmers and others are fully informed about wood biomass as an energy source: All of the outputs in this section were attained and rated as *satisfactory* or *highly satisfactory* by the TE. Information was disseminated through the project's website (600 hits per month) and the creation of 3 internet portals. Meetings and discussions were held with municipalities, private investors, farmers and owners of wood resources but their attendance number is not provided. Feasibility studies were performed for 3 municipalities, meeting the pre-feasibility analysis target. Project results were discussed and disseminated in 2 municipalities (Kočevje and Vransko).
   - 2.2 Detailed feasibility studies, business and financing plans: Existing feasibility studies were reviewed, resulting in 3 BDH projects. In total, 40 detailed feasibility studies for the 40 desired BDH projects were completed, meeting one of the principal goals of the project. Assessment on the possible financing schemes was carried out but it was done poorly, according to the TE. This was because the financial mechanism adopted further delayed the development of guidelines, funding criteria and pro-forma agreements [p. 5, TE]. Feasibility studies were prepared for 40 projects in local communities, which received important support from the municipalities.

3. **Immediate Objective 3 (Highly Satisfactory)**
   - 3.1 A national biomass energy program adopted: The TE does not state whether the National Biomass Energy Program was fully adopted but this is implied in the TE. The TE states that the Ministry of the Environment and Spatial Planning and the PIU helped to define the targets for biomass energy programs to achieve the national Kyoto goals.
   - 3.2 Model Heat Supply Agreement: Several agreements were prepared to buttress the development of BDH investment proposals.

3.3 Commissioning of 3-5 demonstration projects:. All documentation that was needed to launch the demonstration projects was completed, and the TE states that 8 BDH plants were ultimately financed, exceeding the initial target substantially.

4. Immediate Objective 4 (Moderately Satisfactory)

4.1 Recommendations for the long term strategy, institutional and financial framework to support biomass energy activities adopted: TE states that Legislation to establish and capitalize the Biomass Energy Fund has been put forth by the Government (Operational Program of Wood Biomass Energy Use for the period 2007-2013) [p. 42, TE]. At the moment of the TE's submission, an independent national agency to support biomass energy activities was not established as initially suggested (PD states this objective will be pursued "as applicable"), because the Law on Environmental Protection is still pending approval at the Slovenian parliament.

TE provides estimates of direct project impacts over a 20 year period as being 176,800 tons CO2, and negligible indirect impacts [p. 23, TE]. The PD provided a target for lifetime reductions of emissions due to the project, if the project were ultimately successful in facilitating the implementation of 50 Biomass District Heating projects, but this target (1.8 million tons of CO2 over the next twenty years) does not distinguish between direct and indirect emission reductions and so is incompatible with the direct emissions impact estimated in the TE.

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

The TE does not provide a rating for efficiency. This TER rates project efficiency as *moderately satisfactory*, based on the evidence provided in the TE narrative. The project experienced several delays but these did not lead to poorer outcomes. First, the project was expected to start on March 2002 but the date was moved to October 2002. This was due to institutional restructuring in Slovenia. Slovenia's Environmental Public Fund (EcoFund), was originally assigned as the principal executing agency. Nevertheless, the government assigned the Agency for Efficient Use of Energy (AURE) as the responsible executing agency while leaving EcoFund the responsibility of the financial component. During this time, AURE had been part of the Ministry of Economy and was then transferred to the Ministry of Environment, Spatial Planning and Energy (MoESPE) [p. 5, TE]. Second, there was a nine-month delay on the development of guidelines, funding criteria, pro-forma agreements and the implementation of project activities to develop the biomass-based district heating (BDH) project[p 5, TE]. Third, accession to the European Union imposed rules also caused delays. Nevertheless, after the creation of the Project Implementation Unit (PIU), the project appeared to operate promptly. Delays related to PIU's operation were not significant. The project's originally 3-year period planned went beyond the targets set at the project document, lasting 4 years and 8 months [p. 5, TE].

Financially, TE states that the innovative equity scheme adopted to finance the project was cost-effective. [p. 13, TE].

4.4 **Sustainability**	Rating: **Unable to Assess**

The Terminal Evaluation (TE) provided general information on the sustainability of project outcomes but did not assign a rating for this section. This TER finds there is insufficient information in the TE to provide a rating on Sustainability. Some risks to project sustainability that are identified briefly in the TE include: (1) the small size of forest holdings in Slovenia that impede the development of a market to supply woody biomass; (2) uncertainty over biomass prices; (3) the existence of conventional fuels for DH systems at a relatively low price; and (4) uncertainty over the formal establishment of EcoFund. No information regarding sociopolitical or environmental risks to sustainability was provided.

- Financial resources **(Unable to assess)**. Slovenia seems to have an enough financial base to continue carrying on the project's biomass-based district heating activities. The TE states that the Biomass Equity Fund is sustainable but has very low levels of leverage. A solution to this could be the new capital requested by the creation of an Equity Fund that derived from the adoption of a new Environmental Law [p 26, TE]. An important risk to the project's sustainability is the need to strengthen the biomass supply market. The small size of forest holdings (up to 3 hectare) pose a great challenge, leading to uncertain biomass prices. The Agricultural Advisory Service, the Forestry Service and the Energy Advisory Service are already working toward identifying synergies to support the supply market, their success remains to be seen. Ensuring a supply market depends on the activities of the wood processing industry in Slovenia, and other markets like Italy and Austria, which are also suppliers.
- Sociopolitical **(Unable to Assess)**. While no sociopolitical risks were identified in the TE, a full assessment of socio-political risks is considered important in order to provide an overall rating for sustainability of project outcomes.
- Institutional framework and governance **(Moderately Likely)**. Although EcoFund has been established meanwhile, its formal approval was still pending in the Parliament. The main targeted institution for the project's implementation was the Agency for Efficient Use of Energy (AURE) from the Ministry of Environment, Spatial Planning and Energy (MoESPE). TE states that the ways in which policies, programs rules and regulations impact the viability of BDH and other biomass systems, and methods to ensure a viable biomass supply market has not been yet studied and, thus, would be necessary to explore whether they hinder wood energy activities [p. 25, TE].
- Environmental **(Unable to Assess)**. No environmental threats were identified in the TE. Land degradation and use impact was not provided in the project's report [p. 3, TE]. Neither was the amount of reduction of direct, direct post-project and indirect CO_2 emissions specifically reported particularly by 8 investment projects but a yearly estimate [p. 21, TE].

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?

Yes, this TER found that there were differences between the expected and actual co-financing while comparing the financial breakdown from the final PIR to the TE. That is, a total of $9.5M final co-financing was provided compared with the $8M expected. However, the reasons for this, or the effect of co-financing on project outcomes and sustainability are not discussed in the Terminal Evaluation.

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 was extended by 1 year, 8 months. It was originally 3-year period planned went beyond the targets set at the project document, lasting 4 years and 8 months [p. 5, TE]. It also experienced numerous delays during implementation. First, the project was expected to start on March 2002 but the date was moved to October 2002. This was due to institutional restructuring in Slovenia. Slovenia's Environmental Public Fund (EcoFund), was originally assigned as the principal executing agency. Nevertheless, the government assigned the Agency for Efficient Use of Energy (AURE) as the responsible executing agency while leaving EcoFund the responsibility of the financial component. During this time, AURE had been part of the Ministry of Economy and was then transferred to the Ministry of Environment, Spatial Planning and Energy (MoESPE) [p. 5, TE]. Second, there was a nine-month delay on the development of guidelines, funding criteria, pro-forma agreements and the implementation of project activities to develop the biomass-based district heating (BDH) project. This was due to an innovative fund investment that adopted and also because of the need to follow Slovenian procurement regulations [p 5, TE]. Third, accession to the European Union imposed rules also caused delays. Nevertheless, after the creation of the Project Implementation Unit (PIU), the project appeared to operate promptly although this doesn't mean that, as part of the reestablished AURE, it did not experience restrictions. However, delays related to this issue were not significant. In addition, GEF funds were delayed and difficulties in "specific biomass project execution" [p. 17, TE].

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 the TE's country ownership section, it only assess the ownership before the project's implementation. On the one hand, this TER found that country ownership *positively* affected the project outcomes and sustainability through the Agency for Efficient Use of Energy (AURE). On the other hand, it also found that country ownership *negatively* affected these items given the equity instrument that was used and administered by the EcoFund. While AURE headed the project's overall execution; the EcoFund implemented the project's financial component through the recently established Biomass Energy Fund (Fund) [p. 8, TE]. Within AURE, a Project Implementation Unit (PIU) was established to coordinate

activities such as capacity building and developing a pipeline of projects for the Fund. Despite the complexities of managing the Biomass Energy Fund, the PIU managed to project activities effectively and promptly, as per the TE [p. 15]. For example, the PIU developed strategic partnerships with the Association of Biomass Organisations of Slovenia (SLOBIOM) and the LesEnSvet network [p. 12, TE]. It also allowed the close collaboration with the Steering Committee. However, for this to happen, the PIU was revised given that its team was over-designed, to face the challenges posed by the equity investments at the Fund and the expiration time in the PDF B document [p. 9, TE].

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 does not provide a rating for M&E design. However, the TE states that the project's log frame "contained a clear set of objectives with a matrix for measurement of progress and success." (TE, pg 10). At the same time, the TE finds that the log frame had an unrealistic target with regard to Output 4, whereby success of a cross-sectoral national program to promote the use of biomass as a heat source (Output 3) would be the adoption of this program by the Government, as this was outside the project's control and unrealistic in its assessment of the time required [TE, p. 10]. This TER gives the rating of *moderately unsatisfactory* for M&E Design at entry based on the design presented in the PD and the analysis found in the TE. The PD does not contain indicators for assessing the progress of the project's awareness-raising and capacity-building components and does not state whether these values will be assessed during project implementation. Using the GEF SMART acronym (*specific, measurable, achievable, realistic and timely*) as a guide for best practices, TER concurs with TE's assessment that targets and indicators for component 3 were unachievable/unrealistic given the scope of the project. No schedule is provided in the TE for when M&E activities are to take place, outside of annual performance reports and a mid-term review. Moreover, the PD does not provide a dedicated budget for M&E activities nor define roles and responsibilities for M&E.

6.2 **M&E Implementation**	Rating: **Satisfactory**

The TE rated M&E Implementation as *highly satisfactory* because the collected data served the double purpose of examining: "global impacts and financial sustainability," [p. 16-17]. However, this TER found that M&E Implementation was *satisfactory* because the quality of project outputs was not assessed. [p. 17, TE]. TE states that M&E data collection allowed creation of post-project tools to calculate CO_2 emission reductions that would be available to the citizenry [p. 17, TE]. As per the final PIR, M&E activities operated throughout the project [see p. 3-6, PIR].

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**

The TE does not provide a rating for quality of implementation (rating given is for quality of execution, in GEF parlance). However, the TE does provide an assessment of UNDP's performance in the narrative of the TE. The TE states that "the project benefited from an active and constructive engagement of the UNDP Regional Center. The office brought a wealth of knowledge about biomass financing initiatives in the region and an understanding of the need for flexibility in project implementation," [p. 14, TE]. Moreover, the quality of the project design is assessed as *highly satisfactory*. This TER rates the quality of project implementation as *satisfactory* because issues with the financing approach adopted in the PD that are identified in the TE. TE states that the implementation plan did not account for the complexity of using GEF funds to finance equity investments, which caused delays in implementing activities. It also did not take into account the long preparatory periods needed for planning and operationalizing biomass district heating systems. [p. 8. TE]. GEF resources were ultimately transferred to the Government of Slovenia. Ideally, the GEF investment would become a delayed equity investment by the project owners, which should have immediately purchased 50% of the initial value of their respective equity shares. This was not achieved as the equity design caused project owners to buy this product at an advanced stage. This caused a nine-month delay [p. 13, TE]. In addition and as noted above, the design of the project's M&E system had shortcomings. The project design included a logical framework that contained immediate objectives and expected outputs, but indicators to assess progress on the project's awareness-raising and capacity-building components were not provided.

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

The TE rates the overall quality of Project Execution (termed "Implementation" in the TE), as *highly satisfactory*. This TER rates Quality of Project Execution as *satisfactory*. AURE appears to have been supportive to the project and PIU managed project implementation effectively [p. 16, TE]. However, the restructuring of Slovenia's Agency for Efficient Use of Energy (AURE) negatively impacted project execution. According to the TE, once the Project Implementation Unit (PIU) from AURE was created the project "proceeded expeditiously." Despite that there were some constraints and delays related to bureaucratic procedures, the PIU managed to expedite the process as much as possible [p. 15, TE]. The government agencies and organizations involved such as MoESPE, AURE, EcoFund and the Project's Steering Committee effectively oversaw the project's development. Consultations between the PIU and

stakeholders were incentivized by the requirement that projects had to obtain the approval of the Steering Committee. This mechanism helped the PIU to maintain its leverage in face of aggressive negotiations by potential investors. Project modifications were granted timely via Tripartite meetings and consultations [p. 15-16, TE].

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.

Although no change was documented, the project estimated a 20 year period of CO_2 emission reduction taking into account the existence of 3 major BDH (biomass-based district heating) plants with a total of 9.9MW. With the usage of 100% biomass, it is estimated that 2,776 tons of carbon dioxide emissions were avoided [p. 21, TE]. Apart of this, the TE states that a direct reduction of 176, 800 tons of CO_2 over the project's 20-year lifetime can be expected. Effects on land degradation and land use changes were not presented, as per the TE [p. 23, TE]. It was not possible to identify changes in forest depletion or avoidance of methane from wood residues because there were other contributing external factors, such as demand by the Italian and Austrian markets for biomass fuels from Slovenia [p. 23-24, TE].

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.

No socioeconomic changes were reported by the Terminal Evaluation. However, partnerships and strategic relations were created, particularly in motivating municipalities to co-invest into BDH projects [p. 12, TE]. Economic calculations are not specifically provided but seem to be available in Excel Files created by The Jozef Stefan Institute [p. 20-21, TE]. Consultations were held during 1999-2000 [p. 11-12, TE] but no follow up was given so as to assess socioeconomic change.

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 includes a special section on capacity building related to training, increased awareness and knowledge. However, not notable changes were identified. Some of the activities were: the project disseminated information of biomass energy technologies through designing a website where it provides technical information and contains brochures and leaflets. Three additional internet portals were established. Meetings on raising awareness were organized during 2005-2006, including 9 local presentations of modern technologies for the production, processing and use of wood biomass. More than 5,500 participants attended a visit that promoted the learning of wood processing machinery, machines and procedures for preparing fuel. There were two trainings organized by the Project Implementation Unit (PIU) on "Biomass Energy Supply Contracting in European Practice" and on "Quality Management in Planning and Construction of Biomass Energy Systems." The participants received a translation of the rules and manuals from the QM – Wood Boilers program. Training on small biomass boilers for installers, chimney sweeps and designers was organized by the PIU and the Association of Biomass Organizations of Slovenia, during 2004-2005. This was done through cooperating with regional representatives of the Forestry Service, the Agricultural Advisory Service and the Energy Advisory Service. Technical assistance and inputs to develop sound national programs and plans to introduce biomass as a sustainable energy source were provided to the Ministries and other public institutions. All these outputs are expected to have caused change. Nevertheless, such change is not documented. Regarding infrastructure, 3 BDH plants were built along the project. The specific effect of these plants is not reported. The TE does not mention the setup of environmental monitoring systems.

b) Governance

The most important element to strengthening this project's system of governance is the new Environmental Law that, up until the TE's submission, was under revision for approval at the parliament. Such approval would mean the formal establishment of the Equity Fund, allowing to increase the leverage of the fund and finance more projects [p. 26, TE]. Once the project is concluded, the PIU unit is set to disappear. The PIU performed very important work in identifying BDH opportunities and brokering strategic partnerships. If these kind of activities are not followed up by any other unit in the government, then the project's sustainability is at risk and long-term change would not be ensured.

Another important risk to the project's governance is the need to strengthen the biomass supply market, as change in this regard was not reported. The small size of forest holdings (up to 3 hectare) pose a great challenge. The Agricultural Advisory Service, the Forestry Service and the Energy Advisory Service are already working toward identifying synergies to support the supply market [p. 25, TE] but their success remains to be seen. Ensuring a supply market depends on the activities of the wood processing industry in Slovenia, and other markets like Italy and Austria, which are also suppliers.

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.

No unintended impacts were identified at the TE. However, if market change were possible through the increase of biomass supply, the country would undergo economic change.

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.

No initiatives have been mainstreamed, replicated or scaled up by government or other stakeholders by the project's end.

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.

In its page 31, the Terminal Evaluation identified the following lessons learned:

- Deployment of GEF resources as equity investments in renewable energy projects can serve as a powerful catalyst for project financing but requires extensive legal documentation relative to loan programs;
- Equity investments require liquidity, transparency in pricing, and effective exit strategies to be fully effective;
- Replication of equity investment schemes will depend on local market conditions and availability of affordable local debt financing;
- Equity investment schemes should focus on larger projects as transaction cost relative to project size is a deterrent to project sponsors;
- Marketing strategies should have a greater focus on decision makers;
- The success of a financial program will depend in large measure on the professional and entrepreneurial approach of the PIU;
- Sustainable financial models require timely repayment of investments to achieve appropriate leveraging capacity;

- Project Documents should resist the temptation to over design project budgets and human resources;
- Lessons learned from other relevant programs should pay close attention to financial models; and,
- Special attention should be paid during the project development process to the legal treatment of the transfer of GEF resources to host governments.

9.2 Briefly describe the recommendations given in the terminal evaluation.

To reinforce sustainability and feasibility of the Biomass Energy Funds, the TE provide these recommendations [p. 26-30]:

- ✓ To amend to the Contract's Articles of Association. The contract for the purchase of equity by the Government of Slovenia requires that it amends its Articles of Associations. For example, that the Government of Slovenia grants consent regarding the adoption in changes in the articles of association, increase and reduction in share capital, among other resolutions. When the company holds a supervisory board, the Government of Slovenia should have the right to elect at least one member of the Supervisory Board within 6 months of the agreement's execution. That the company's managing director is obligated to obtain previous approval of the company's shareholder's meeting to engage in transactions. These provisions are suggested in order to protect minority shareholders from harmful actions by enhancing their shareholder ownership.
- ✓ To convert the Biomass Energy Fund equity into a commercial bank debt. Suggests an alternative approach to the exit strategy for the equity acquired by the Biomass Energy Fund, which consists of having project sponsors to purchase all of the government's equity at face value in 3 to 5 years. For this to happen, requesting a loan equal in value to GEF's equity investment at 100% would enable meeting repaying obligations to the government. Hence technology risks would decrease and banks would be able to look at actual performance and financial data. Hence, converting the Biomass Energy Fund equity investment to a commercial bank debt would restore the balance between debt and equity, and would generate additional revenues.
- ✓ To avoid delaying the tendering of the GEF equity. Instead of delaying the tendering of GEF equity to the market, the Government of Slovenia should accelerate this process. According to the TE, three years of operating should be sufficient for the market to assess projects' value. In order to mitigate a project sponsor's risk to pay 50% of the payment in 3-5 years, the Biomass Energy Fund could require them to obtain a bank guarantee of payment.

10. Quality of the Terminal Evaluation Report

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

Criteria	GEF EO comments	Rating
To what extent does the report contain an assessment of relevant outcomes and impacts of the project and the achievement of the objectives?	*The TE provides a detailed assessment of progress achieved per Objective, Outputs and Activities. However, some the report would be easier to follow if the ratings assessment provided on pg 37 was better-integrated into the text of the report.*	**S**
To what extent is the report internally consistent, the evidence presented complete and convincing, and ratings well substantiated?	*The report is overall consistent but evidence for output attainment is not complete or convincing. The TE should have expanded on the evidence provided in 9.4 Detailed Assessment of Objectives, Outputs and Activities [p. 37-43].*	**MS**
To what extent does the report properly assess project sustainability and/or project exit strategy?	*While Sustainability is discussed in brief, The report does not offer provide a rating for sustainability nor assess the sustainability of project outcomes in a sufficiently detailed and through manner.*	**U**
To what extent are the lessons learned supported by the evidence presented and are they comprehensive?	*Lessons learned are brief, but in general, appear useful and grounded in project experiences*	**S**
Does the report include the actual project costs (total and per activity) and actual co-financing used?	*The TE does not state project costs per component. Final financial breakdown does not match with the original breakdown.*	**U**
Assess the quality of the report's evaluation of project M&E systems:	*The quality of the reports evaluation was moderately satisfactory as it did not fully address shortcomings in the M&E design or provide a detailed picture of M&E implementation.*	**MU**
Overall TE Rating		**MS**

TE Rating: (0.3 * (5+4)) + (0.1 * (2+5+2+3)) = 2.7 + 1.2 = 3.9 = MS

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

This TER reviewed the Project's TE, PIR and PD.