1. Project Data

Summary project data			
GEF project ID		4517	
GEF Agency project ID		4382	
GEF Replenishment Phase		GEF-5	
Lead GEF Agency (include all for joint projects)		UNDP – United Nations Development Programme	
Project name		Reducing Barriers to Accelerate the Development of Biomass Markets in Serbia	
Country/Countries		Serbia	
Region		ECA – Europe and Central Asia	
Focal area		Climate Change	
Operational Program or Strategic Priorities/Objectives		Promote Investment in Renewable Energy Technologies (TE p2)	
Executing agencies involved		Ministry of Energy and Mining (lead partner) and Ministry of Agriculture and Environmental Protection of the Republic of Serbia	
NGOs/CBOs involvement		None	
Private sector involvement		Considerable co-financing from the private sector (over two-thirds of actual total project cost), "enormous contribution to success of the project" (TE p9).	
CEO Endorsement (FSP) /Approval date (MSP)		28 January 2010	
Effectiveness date / project start		21 May 2014	
Expected date of project completion (at start)		May 2018	
Actual date of project completion		May 2019	
Project Financing			
		At Endorsement (US $M)	**At Completion (US $M)**
Project Preparation Grant	GEF funding	-	-
	Co-financing	-	-
GEF Project Grant		2.845	2.845
Co-financing	IA own	0.56	0.56
	Government	1.8	1.8
	Other multi- /bi-laterals	1.47	1.027
	Private sector	23.8	22.655.380
	NGOs/CSOs		
Total GEF funding		2.845	2.845
Total Co-financing		27.63	26.042.380
Total project funding (GEF grant(s) + co-financing)		30.475	28.887.380
Terminal evaluation/review information			
TE completion date		April 2019	
Author of TE		Manfred Stockmayer	
TER completion date		14 May 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 (2017 PIR, overall DO rating)	HS		HS
Sustainability of Outcomes		L		ML
M&E Design		S		S
M&E Implementation		HS		S
Quality of Implementation		HS		S
Quality of Execution		S		S
Quality of the Terminal Evaluation Report			-	S

3. Project Objectives

3.1 Global Environmental Objectives of the project:

The project's main environmental goal is to reduce greenhouse gas (GHG) emissions associated with electricity generation in Serbia. The project will focus on biomass to electricity technologies in the agricultural (biogas) and forest sectors to facilitate the future deployment of efficient technologies and increase the share of sustainable bioenergy in the Serbian electricity sector (CEO Endorsement document p7).

3.2 Development Objectives of the project:

The project objective is to reduce barriers to accelerate the development of biomass markets in Serbia, by facilitating investments in agricultural and forest biomass energy projects, which due to various legal, institutional and financial barriers cannot attract enough financial resources from other sources (CEO Endorsement document p9).

The project's strategy was built around 5 outcomes:

- Outcome 1: Improved capability of local municipalities and entrepreneurs to identify, prioritize and develop biomass investment opportunities in Serbia;
- Outcome 2: Stronger and more effective secondary legislation related to biomass energy is developed, approved and implemented;
- Outcome 3: Successfully operating a Biomass Support Unit (BSU) which leads to increased capability of municipalities and entrepreneurs in Serbia to develop, finance, construct, and operate bankable biomass energy projects;
- Outcome 4: A minimum of six biomass projects are successfully financed, constructed and operating by the end of the project;
- Outcome 5: At least 12 additional biomass projects are being supported by the Biomass Support Unit and Investment Support Mechanism by the end of the project.

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

Throughout the implementation of the project, the project team applied an adaptive management approach, leading to several changes in activities during implementation (TE p20-21):

- In the inception phase of the project, it became clear that some activities had to be excluded, such as work on a biomass atlas, as this had been covered by another project, and 10 instead of 20 seminars for banks and project developers were held.
- After project start it was concluded that adequate licensing procedures for biomass already existed. The project had been working on guidance, information-sharing and training activities on licensing, which were subsequently cancelled.
- A National Renewable Energy Action Plan was developed once the project started. As a corrective action, 29 municipal biomass balances and biomass programs and plans were developed, which led to the identification of several investment opportunities.
- The Institute for Standardization of Serbia was originally envisaged as a partner in the project. As they received support in translation of standards from GIZ, their participation in the project was not required.
- Immediately after project start, the European Bank for Reconstruction and Development (EBRD) reversed its initial readiness for cooperation and declined to work with the project, after GEF's approval of the project. As a consequence, the project team had to reinvent the implementation strategy and find alternative mechanisms for project implementation, in particular for the Investment Grant Mechanism.

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 assesses that the project was "Relevant" for Serbia, and this TER agrees that relevance was satisfactory, given that the project advances the host country's desire to develop its biomass potential, and is relevant to GEF and UNDP priorities and experience (TE p35).

The project was fully in line with the “Energy Sector Development Strategy of the Republic of Serbia for the Period by 2025 with Projections by 2030”, a strategy that mentions the country’s large biomass potential, identifies opportunities in biogas co-generation facilities and envisions a strong role of biomass in contributing to an increase in the share of renewables in Serbia’s energy supply. To reach this goal, the project developed 6 biogas projects; held various awareness-raising seminars and trainings on the benefits of biomass energy; elaborated position papers; built up the capacity of municipalities to understand demand and supply of biomass; and developed an e-trading portal for sellers and buyers of various forms of biomass.

This project is consistent with GEF Strategic Program 4: "Promoting Sustainable Energy Production from Biomass". The project is relevant to UNDP’s expertise, experience and priority of advancing economic development through renewable energy exploitation. UNDP has successfully implemented five biomass projects within the region, including in Belarus, Latvia, Poland, Slovakia and Slovenia, and is developing new biomass projects in Croatia, Ukraine, and Georgia.

4.2 **Effectiveness**	Rating: Highly satisfactory

The TE rates effectiveness as “Highly Satisfactory” and this TER agrees with this rating, given that the project over-achieved its emission reductions target by 69%. Electricity generation alone will generate emission reductions of 970,000 tons of CO2 over a period of 20 years, which is 55% over the target. Furthermore, the project’s objective to reduce barriers to accelerate the development of biomass markets in Serbia was achieved and surpassed. The project managed to install more than double the expected capacity (6.32 MW vs 3 MW) by the end of the project. Additional capacity additions initiated by the project, which will be implemented after project closure, will bring the installed capacity to almost triple of the original project objective (TE p28-34).

- Outcome 1: Improved capability of local municipalities and entrepreneurs to identify, prioritize and develop biomass investment opportunities in Serbia;

A total of 11 workshops were held compared to 12 regional seminars planned, which the TE considers a minor shortcoming. Training courses were carried out in the form of on-site training for students. Close contact between universities and operators has been established and training courses will be continued in the future. Extensive and high-quality material on investments in biomass in Serbia was prepared and disseminated.

- Outcome 2: Stronger and more effective secondary legislation related to biomass energy is developed, approved and implemented;

The project provided the required support for the development of government decrees by providing legal support to the Ministry of Energy. Also, a methodology for monitoring the raw material

consumption and energy production for biomass/biogas plants was prepared with support by the project.

- Outcome 3: Successfully operating Biomass Support Unit which leads to increased capability of municipalities and entrepreneurs in Serbia to develop, finance, construct, and operate bankable biomass energy projects;

Adaptive management was successfully applied by preparing municipal biomass balances and biomass programs and plans. The number of workshops and trainings provided was over-achieved. Operational criteria were agreed with relevant stakeholders and investment grants were released to investors, as planned.

- Outcome 4: A minimum of six biomass projects are successfully financed, constructed and operating by the end of the Project;

The Investment Grant Mechanism was successfully implemented and supported projects are operating. The project managed to install more than double the expected capacity (6.32 MW vs 3 MW) by the end of the project, with additional capacity additions initiated by the project.

- Outcome 5: At least 12 additional biomass projects are being supported by the Biomass Support Unit and Investment Support Mechanism by the end of the Project

Under this outcome, the result was only “moderately satisfactory” in the TE. 1 new project was put into operation in 2019 and 1 new project will be put into operation in 2020. A total of 5 other projects have been identified but are in early stages of development.

4.3 **Efficiency**	Rating: Highly Satisfactory

The TE’s rating for efficiency of the project is “Highly Satisfactory”, and this TER aggress with this rating, as the target of the project was to reach the installation of 3 MW biomass generation capacity and overall emission reductions of 624,000 tons of CO2 with a grant component of US$ 1.8 million. With the same amount of money, the project managed to install 6.32 MW of biomass generation capacity (over-performance of 110%) and achieve estimated greenhouse gas (GHG) emission reductions of 1,054,000 tons of CO2 (over-performance of 69%). The fact that co-funding by the private sector was slightly lower than expected in the Project Document (ProDoc) validates even further the efficiency of implementation.

In terms of timeliness, it seems that the TE was published before the project fully ended, as there is no actual date of project completion in the report. Due to elections and flooding in Serbia, the start of the project was delayed from early 2014 to October 2014. More than 2 years had passed since work on the ProDoc had started and there was a time span of 16 months between the first presentation of the

ProDoc to GEF and project start, due to a number of developments in Serbia, such as the development of the National Renewable Energy Action Plan.

4.4 **Sustainability**	Rating: Moderately likely

The overall rating on the likelihood of sustainability is considered as "Likely" in the TE, based on the four ratings given to the financial, socio-economic, institutional and environmental risks. This TER rates sustainability as moderately likely, given that there are a few financial and institutional risks, in addition to the potentially unsustainable nature of biomass energy (TE p37).

Financial sustainability

The project successfully launched a biomass support unit and implemented a sustainable financial mechanism to support biomass projects which will continue beyond the lifetime of this project. The TE acknowledges certain financial risks to the sustainability of the outcomes of the project. The biogas projects supported through the Investment Grant Scheme have all been able to secure a FIT (feed-in tariff) for a period of 12 years. After the end of this period, the projects will receive the market price for electricity at that time, if no further support scheme is provided. This presents a risk for the continuation of the operation after 12 years, potentially endangering the desired impact of the project, which has been calculated over a period of 20 years. The Ministry of Mining and Energy has recognized the need to find a solution for that situation and will be looking at prolonging the support through a (lower) FIT. Details of that support scheme will have to be elaborated over the coming years.

Environmental sustainability

Regarding environmental risk, the TE explains that there is limited exposure as long as wood and agricultural residues are being used. If there would be a rapid expansion of the biomass energy market and related rapidly growing demand for biomass fuels, the environmental risks could not be entirely neglected. The demand for biomass material could lead to deforestation and forest degradation. But at the current and projected levels of demand, the environmental risks are considered negligible. Furthermore, the project helped Serbia avoid CO2 emissions, and is set to continue to do so long after project closure, positively contributing to environmental sustainability.

Socio-economic sustainability

From a socio-economic point of view there is no barrier to the sustainability of the project's outcomes. The TE points out that there is an increased level of awareness on the opportunities of various forms of biomass (woody biomass, agricultural biomass, energy crops). Policy makers, decision-makers on a municipal level and investors are well aware of these opportunities.

Institutional sustainability

The implementation of the project has shown that there is an existing institutional framework, which is actively working on improving the use of biomass in Serbia. The National Renewable Energy Action Plan (NREAP) and the "Energy Sector Development Strategy of the Republic of Serbia" are good indications of this institutional framework. The TE does, however, point out that responses received in different interviews during the evaluation mission led to the conclusion that cooperation between ministries is working well on an expert level, but can be improved on a higher level, i.e. on a political / ministerial level.

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 was indispensable to the completion of the project (TE p6). Co-financing commitments were a total of US$ 27.63 million during the preparation phase, with the majority of contributions from the private sector. Cash co-financing commitments of the private sector finally reached US$ 22.7 million, 95% of the expected figure from the private sector, out of a total project cost of US$ 30 million. In total, co-financing commitments from all partners are US$ 26.0 million, 94% of the figure at CEO endorsement, out of total final project cost US$ 28.8 million (TE p23-25).

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?

Due to elections and flooding in Serbia, the start of the project was delayed from early 2014 to October 2014. In terms of timeliness, it seems that the TE was published before the project fully ended, as there is no actual date of project completion in the report.

A key recommendation of the project's mid-term review, conducted in February 2017, was a request for a no-cost extension of 12 months to allow for monitoring of the implementation of pilot projects, as well as the project's indirect impacts, including greenhouse gas (GHG) emission reductions. The no-cost extension was granted and the project end-date was moved to May 2019 (TE p8).

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 in the project was high, according to the TE. There was a strong interest by the Ministry of Mining and Energy to achieve tangible results through the project. The National Project Director took a very active role in the project and was indispensable in overcoming key obstacles during project implementation.

The reduced interest of some governmental institutions was seen by stakeholders to be based more on personal and political reasons rather than a lack of interest in supporting the increased use of biomass in Serbia. Other institutions involved in the implementation of the project, such as the Serbian Chamber of Commerce, were highly committed partners in the implementation of the project, working with municipalities, organizing workshops and seminars and identifying potential partners in the private sector (TE p36).

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

The Monitoring and Evaluation design at entry is rated as "Satisfactory" by the TE, and this TER agrees with this rating. The project's M&E system design consisted of the indicators and outputs of the project's results framework, the project inception workshop, annual Project Implementation Reviews (PIRs), periodic monitoring through site visits and the project Mid-Term Review (MTR) (TE p25).

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

The TE's rating for the project's monitoring and evaluation is "Highly Satisfactory", and this TER deems satisfactory M&E implementation, given that the project's mid-term and implementation reviews were thoroughly adhered to (TE p25).

The project Mid-Term Review (MTR) recommended improving monitoring and verification of greenhouse gas (GHG) emissions at all 6 plants during the remaining project lifetime by collecting and analyzing actual operational data from all 6 biogas plants, noting that there was an error in calculating the emission reduction target as determined during project implementation. The project has thus been monitoring the greenhouse gas (GHG) emission reductions in all 6 plants and presented a report in January 2019 on "Monitoring of the direct Greenhouse Gas Emission Reduction Impact by the Supported Pilot Projects". The report contains information on electricity and heat generation in 2017 from the 5 plants operational in 2017 and calculates the GHG emission reductions achieved in 2017 as well as over a period of 20 years based on the 2017 figures.

The project's close attention to progress and achievement of all indicators is also evidenced by the detailed comments on each of the indicators given in the 2017 and 2018 Project Implementation Reviews (PIRs).

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 rates the performances of both the implementing and executing agencies as "Satisfactory", and this TER agrees with these ratings, in both cases. The support of UNDP, as the implementing agency through its country office, was strong, steady and effective throughout project implementation. The project overcame serious challenges such as the withdrawal of the European Bank for Reconstruction and Development (EBRD) and several private sector partners who had provided co-financing commitments before project start.

The project was implemented based on the UNDP National Implementation Modality (NIM). The project management arrangements were slightly amended at project start to reflect the new composition of the Government of Serbia and revised arrangements for implementation of the Investment Grant Support Mechanism due to the previously-mentioned withdrawal of EBRD. UNDP's experience in implementing similar projects in the region as well as the existence of a country office in Serbia represented an important advantage (TE p26).

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

Project execution was satisfactory. Day-to-day management of the project was carried out by a Project Management Unit (PMU) that was independent of but answerable to the executing agency (Ministry of Mining and Energy – MoME) and both supported and overseen by the GEF Implementing Agency (UNDP Serbia). A project board was established, consisting of the MoME, the Ministry of Agriculture, Forestry and Water Management, UNDP Serbia and the PMU. The project board held 8 meetings during the course of the project with MoME, UNDP and PMU participating in all meetings.

A key component in the management arrangements was the Biomass Support Unit (BSU). The BSU was set up in the MoME to include permanent members from i) the other relevant ministries (Agriculture

and Environmental Protection) and ii) external project partners from different institutions relevant for the Project (EBRD, Serbian Chamber of Commerce, Standing Conference of Towns and Municipalities, Institute for Standardization and Regional Development Agency/Srem). To ensure inclusion of additional financing partners, such as local banks, in the implementation of the Investment Grant Support Mechanism, the BSU was tasked to undertake regular consultation and coordination of relevant project activities with financial institutions. The TE notes that according to stakeholders, the project board was duly involved and regularly consulted on all important decisions and stakeholders' views were taken into account and their approval sought before final decisions. The project team successfully created excellent working relationships with all relevant stakeholders (TE p26).

8. Assessment of Project Impacts

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

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

The project was designed to reduce barriers in generating electricity from and to accelerate the development of the biomass market in Serbia, which it did successfully, leading to sizeable reductions in greenhouse gas (GHG) emissions for the foreseeable future. The target of the project was to reach the installation of 3 MW biomass generation capacity and overall emission reductions of 624,000 tons of CO2. The project managed to install 6.32 MW of biomass generation capacity (over-performance of 110%) and achieve estimated GHG emission reductions of 1,054,000 (over-performance of 69%). Reduced GHG emissions lead to improved air quality and a host of environmental co-benefits (TE p36).

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.

Project design and implementation were focused on entities (municipalities, private companies, etc.) rather than individuals. As such, the project had a limited social impact.

The project successfully operated a Biomass Support Unit which increased the capability of entrepreneurs in Serbia to develop, finance, construct, and operate bankable biomass energy projects.

The project's biomass/biogas installations are delivering constant power to the grid and provide new work opportunities for local companies and people.

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 complemented government activities to promote the use of biomass as an energy source in Serbia for electricity generation, by combining a technical assistance package which included building the institutional capacity required to address the legal and institutional barriers with awareness-raising among government and financing sectors.Trainings and workshops carried out during the project increased the capacity of various stakeholders, including banks, investors or municipalities, to successfully design and implement biomass projects.

b) Governance

The project had a very good impact on a municipal level, where decision-makers in the 29 municipalities covered by the project now understand the supply and demand situation of biomass in their municipalities, providing them with the basis to develop such projects. The implementation of the project demonstrated that there is an existing institutional framework which is actively working on improving the use of biomass in Serbia. The National Renewable Energy Action Plan (NREAP) and the "Energy Sector Development Strategy of the Republic of Serbia for the Period by 2025 with Projections by 2030" are good indications of that. However, the TE notes that responses received in different interviews during the evaluation mission led to the conclusion that cooperation between ministries is working well on an expert level, but can be improved on a higher (political) level. Nonetheless, the project had a good overall impact on governance at the municipal and national level, greatly advancing biomass development and management in Serbia (TE p38).

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.

There were no documented unintended impacts 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 project succeeded in further mainstreaming biomass development in municipal, regional and national governance in Serbia, through improved capacity and legislation (TE p36). The TE mentions the Development Partnership Framework 2016-2020 for Serbia, which defined five main outcomes to set the direction of UN system development assistance for the years 2016 – 2020. Renewable energy, including biomass, plays a major role under Pilar IV "Environment, Climate Change and Resilient Communities" and the relevant Outcome 8: "By 2020, there are improved capacities to combat climate change and manage natural resources and communities are more resilient to the effects of natural and man-made disasters". In this sense, the project has helped Serbia reach these goals through the development of renewable biomass (TE p36).

The project design and implementation envisioned the development of the biomass market and replication after the end of project activities. Replicability was taken into account throughout the project design phase: directly, through the support provided by the Biomass Support Unit (BSU) to at least 12 additional projects, through technical assistance and investment grants (Outcome 5 – Output 5.1) and through the continued existence of the BSU beyond the lifetime of the project; and indirectly, through realized flagship biomass projects which will give confidence to investors that such projects are commercially viable with proven technology, training, information dissemination and development of a National Biomass Program (TE 18).

In terms of scaling-up, the project managed to install more than double the expected capacity (6.32 MW vs 3 MW) by the end of the project, due to efficiency rather than scaling-up *per se*. Additional capacity additions initiated by the project, which will be implemented after project closure, will bring the installed capacity to almost triple the original project objective (TE p28).

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. / 9.2 Briefly describe the recommendations given in the terminal evaluation.

The main conclusion of the TE is that the project is highly satisfactory as it has significantly exceeded the targets for installed capacity of biomass and CO2 emission reductions. In addition, $22.7 million US$ of private sector investment has been leveraged by the project at a ratio of over 7-1 when compared to the $3 million US$ GEF grant. Nonetheless, several lessons and recommendations are provided (TE p8-9):

- The final version of the Project Document (ProDoc) was modified by several people and underwent various last-minute changes before receiving GEF approval. This led to conflicting targets, wrong calculations and other inconsistencies. A final quality check of the document can increase consistency and support a smooth start of project implementation.
- Several factors delayed the start of the project, such as elections and flooding in Serbia. In such a situation, a critical, thorough review of outcomes, outputs and activities in the inception phase of the project is necessary and the Project Results Framework should have been modified accordingly. In addition, the TE suggests hiring an international Chief Technical Advisor (CTA) to support the project from the start. Support and guidance by experienced UNDP staff would also have been helpful in discussing and deciding whether modifications to the project could be made and to what extent these modifications should have been made.
- As in many other projects, the ProDoc included the adoption of policies and regulations as a project output. Projects can commit to work on policies and regulations, but the adoption of these legal documents is in many cases not dependent on the quality of work provided by the project, but on political decisions and entities. Projects should therefore be careful with the level of commitment when it comes to the legal framework.
- A number of initiatives have been working on promoting the increased use of biomass for energy purposes, both for heat and electricity. A stronger coordination with other initiatives is necessary to avoid duplications. In this sense, coordination at the level of decision makers is helpful.
- Project design and the M&E system must include interim targets and milestones, as these help project management assess progress and take adaptive management steps, if necessary.
- The private sector has had an enormous contribution to the success of the Project, overcoming hurdles and covering additional costs. It would be important to invite the private sector to share this experience with all relevant stakeholders, so implementation of new projects could be smoother.
- It was discussed during the evaluator's on-site mission that the energy community is requesting Serbia to apply auctioning for adding new renewable energy capacity to the grid. The evaluator advises that biomass/biogas should not compete with other renewables under an auctioning scheme, but that the feed-in tariff scheme for biogas continue and be prolonged.
- The e-trading platform, which was set-up as part of the project, is an excellent opportunity for sellers and purchasers of various forms of biomass to meet and to create a transparent market. Sustaining this platform financially, by membership fees as well as revenues from selling advertisements for instance, would be a key factor in the viability of biomass projects in Serbia.

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 project adequately assesses project impacts and achievements, although the information is somewhat scattered.	**MS**
To what extent is the report internally consistent, the evidence presented complete and convincing, and ratings well substantiated?	The report is consistent in highlighting the project's main achievements, namely greenhouse gas (GHG) emission reductions and the removal of barriers to accelerate the development of biomass markets in Serbia.	**S**
To what extent does the report properly assess project sustainability and/or project exit strategy?	The sustainability section addresses all four dimensions of sustainability (financial, social, institutional and environmental) but in a somewhat superficial way.	**MS**
To what extent are the lessons learned supported by the evidence presented and are they comprehensive?	The lessons learned and recommendations are detailed, comprehensive and directly derived from project experience.	**HS**
Does the report include the actual project costs (total and per activity) and actual co-financing used?	The project's co-financing data and costs per outcomes are clearly presented in the annexes.	**HS**
Assess the quality of the report's evaluation of project M&E systems:	The TE's assessment of M&E shortcomings in both design and implementation are detailed and helpful.	**S**
Overall TE Rating		**S**

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