United Nations Development Programme

Council of Ministries of Bosnia and Herzegovina

Evaluation of UNDP/GEF Project: Bosnia and Herzegovina – Biomass Energy for Employment and Energy Security Project

(PIMS No: 3880)

Mid-Term Evaluation Report

Mission Members:
Mr. Roland Wong, International Consultant
Ms. Sanja Pokrajac, National Consultant

March 2012

TABLE OF CONTENTS

PAGE

ACKNOWLEDGEMENTS ..... **II**

ABBREVIATIONS ..... **III**

EXECUTIVE SUMMARY ..... **IV**

1. INTRODUCTION **1**

1.1 BACKGROUND 1
1.1.1 Rationale for Developing Biomass Energy for BiH *2*
1.1.2 Institutional Arrangements for Implementing Biomass Energy Projects in BiH *2*
1.2 PROJECT GOALS, OBJECTIVES AND EXPECTED RESULTS 2
1.3 MID-TERM EVALUATION 3
1.3.1 Purpose of the Evaluation *3*
1.3.2 Key Issues to be Addressed *4*
1.3.3 Evaluation Methodology and Structure of the Evaluation *4*
1.4 PROJECT IMPLEMENTATION ARRANGEMENTS 5

2. KEY FINDINGS **6**

2.1 PROJECT PROGRESS AND ACHIEVEMENTS TO DATE 6
2.1.1 Project Outputs *6*
2.1.2 Project Impacts *13*
2.2 PROJECT DESIGN AND RELEVANCE 14
2.2.1 Project Relevance and Country Drivenness *14*
2.2.2 Project Design and Implementation Approach *14*
2.3 PROJECT IMPLEMENTATION ARRANGEMENTS 15
2.3.1 Stakeholder Involvement, Linkages to Project and Other Interventions in Sector *15*
2.3.2 Management, Monitoring and Evaluation, Identification and Management of Risk *16*
2.4 PROJECT BUDGET AND COST EFFECTIVENESS 17
2.5 EVALUATION OF PROJECT 18
2.6 SUSTAINABILITY AND REPLICABILITY 19
2.6.1 Sustainability *19*
2.6.2 Replicability *21*

3. CONCLUSIONS AND RECOMMENDATIONS **22**

3.1 CONCLUSIONS 22
3.2 RECOMMENDATIONS 23
3.3 LESSONS LEARNED 24

APPENDIX A – MISSION TERMS OF REFERENCE **26**

APPENDIX B – MISSION ITINERARY (FOR JAN 31 – FEB 8, 2012) **42**

APPENDIX C – LIST OF PERSONS INTERVIEWED AND DOCUMENTS REVIEWED **44**

ACKNOWLEDGEMENTS

The Evaluators wishes to acknowledge with gratitude the time and effort expended by all project participants and stakeholders during the evaluation interviews. This provided valuable insights, candid perspectives, and made the evaluation process more enjoyable for the entire team. In particular, we wish to thank UNDP Bosnia & Herzegovina for arranging mission logistics, itinerary and stakeholder interviews. We hope that this report will contribute to the successful conclusion of the project, and the sustained development of biomass as a source of energy for heating and electricity in Bosnia and Herzegovina.

ABBREVIATIONS

APR	Annual Progress Report
BiH	Bosnia and Herzegovina
CDM	Clean Development Mechanism
CO	Country Office
DNA	Designated National Authority
DEX	Direct Execution (of a project by UNDP)
EBRD	European Bank for Reconstruction and Development
EE	Energy efficiency
ESCO	Energy Service Company
FBiH	Federation of Bosnia and Herzegovina
FI	Financial Intermediate
FIT	Feed-in tariff
FSC	Forest Stewardship Council
GEF	Global Environment Facility
GHG	Greenhouse Gas
GoBH	Government of Bosnia and Herzegovina
GoRS	Government of Republika of Srpska
IPPs	Independent Power Producers
KfW	Kreditanstalt für Wiederaufbau / German Bank for Reconstruction
KM	Kovertabilna Marka (national currency of BiH)
kTOE	Kilotonnes of oil equivalent
kWh	Kilowatthour
log-frame	logical framework matrix
M&E	Monitoring and Evaluation
MoFTER	Ministry of Foreign Trade and Economic Relations
MOU	Memorandum of Understanding
MTE	Mid-Term Evaluation
MW	Megawatt
MWh	Megawatt hour
NBA	National Biomass Association
NGO	Non-governmental Organization
PAB	Project Advisory Board
PB	Project Board
PIR	Project Implementation Report
ProDoc	UNDP Project Document for “Bosnia: Biomass Energy for Employment and Energy Security”
PIR	Project Implementation Reports
PMU	Project Management Unit
RE	Renewable Energy
RS	Republika of Srpska
RTA	Regional Technical Advisor
SME	Small and Medium Size Enterprise
SRRP	Srebrenica Regional Recovery Programme (UNDP-funded)
TA	Technical Assistance
UNDP	United Nations Development Programme
USAID	U.S. Agency for International Development
UNFCCC	United Nations Framework Convention on Climate Change

EXECUTIVE SUMMARY

Brief Description of the Project

This report summarizes the findings of the Mid-Term Evaluation Mission conducted during February 1-8, 2012 for "BiH: Biomass Energy for Employment and Energy Security" implemented by the United Nations Development Programme (UNDP), PIMS 3880, with financing support provided by the Global Environment Facility (GEF). The Project Document (ProDoc) provides details of barriers to the development of biomass energy projects in Bosnia and Herzegovina (BiH). Project activities include increasing market demand for biomass energy through implementing pilot biomass energy projects in the education sector, developing sustained sources of biomass fuel supplies for biomass energy projects, and raising awareness of policymakers, the financial sector and technology and biomass fuel suppliers of the benefits and opportunities of biomass as an energy resource.

Prior to the commencement of this Project, there were few, if any, concentrated activities to develop biomass as a renewable energy source for BiH. Biomass use has mainly been confined to rural residential heating in the form of firewood, charcoal, and more recently, pellets and briquettes. The majority of these wood stoves, however, are antiquated and inefficient. Though there is a paucity of data on fuel types for residential heating, approximately 58% of the total energy demand for heating in the residential sector is satisfied through the use of wood; the remaining 44% is provided through the use of coal, oil products, and electricity[1]. The use of coal for heating is confined to larger urban centers where central heating systems are more prevalent and where biomass is not as easy to obtain as in rural areas. For public and commercial buildings, the use of heating oil is common in smaller municipalities throughout BiH while natural gas and oil are used in larger urban centers. The potential for the use of biomass for heating purposes has been viewed as an excellent means to provide energy security to BiH as well as employment opportunities.

Context and Purpose of the Evaluation

The purpose of the mid-term evaluation (MTE) for this Project was to *evaluate the progress towards attainment of global environmental objectives, project objectives and outcomes, capture lessons learned and suggest recommendations on major improvements.* The MTE is to serve as an agent of change and play a critical role in supporting accountability. As such, the MTE will serve to:

- Strengthen the adaptive management and monitoring functions of the Project;
- Enhance the likelihood of achievement of Project and GEF objectives through analyzing project strengths and weaknesses and suggesting measures for improvement;
- Enhance organizational and development learning;
- Enable informed decision-making;
- Create the basis for replication of successful project outcomes achieved to date;
- Identify and validate proposed changes to the Prodoc to ensure achievement of all project objectives; and
- Assess whether it is possible to achieve the objectives in the given timeframe, taking into consideration the speed, at which the project is proceeding.

[1] http://www.euroqualityfiles.net/AgriPolicy/Report%202.2/Agripolicy%20WP2D2%20Bosnia-Herzegovina%20Final.pdf, pg 9

Evaluation of Project

The overall rating of the Project is satisfactory (S)[2], mainly due to the Project achieving most of its intended mid-term targets and laying a strong foundation for biomass installations in 2012 and towards the end of the Project. The outcomes in the next 4 months of the tenders for biomass boiler installations and biomass fuel supply, however, are pivotal in determining the overall outcomes of the project. Remaining project resources will need to focus on ensuring timely and effective delivery of 10 biomass energy systems to reach the Project target of 10 schools.

Project sustainability is likely (L)[3] with the proviso that there is a positive response to the wood chip supply tender to be issued by the various schools within the next 4 months. The recommendations of this evaluation are targeted to reduce the risks of non-responsive tenders, and to increase the likelihood of an outcome of 3 operational biomass heating systems by the end of 2012. The Evaluation team notes that the Project's efforts on achieve the outcome of "increased demand for biomass energy" are limited by the Project design which only provides project resources to demonstrate the viability of biomass energy that will ultimately reduce the energy costs of schools. With UNDP funds being used to finance the first three biomass boilers on this Project in 2012, more efforts are required to sustain this Project in the Republika of Srpska (RS) by having an RS government commitment for budgetary allocations to install biomass boilers in public buildings. The Project appears to have catalyzed biomass boiler installations in the Federation of Bosnia and Herzegovina (FBiH), where there are firm commitments and FBiH government budgetary locations for the use of biomass for heating in public buildings.

One of the positive outcomes from the Project has been the formation of the BiH National Biomass Association (NBA) that should serve to strengthen another Project outcome, raising awareness of the benefits and business opportunities of biomass energy. Through the Project's efforts to strengthen the NBA, the NBA will be able to promote and lobby for resolution of the aforementioned budgetary issues that hinder widespread development of biomass energy for heating in BiH, notably with the RS government.

The Project has provided indirect assistance, through the Bihac regional UNDP office, for setting up biomass boilers for 6 other public buildings, all within the FBiH. While the ESCO business model has been replicated in the FBiH public sector, there are challenges to its replicability in RS jurisdictions. RS public procurement policy only allows supplies and services to be procured through yearly tenders, a condition unfavorable to the ESCO business model. This has resulted in the lack of any recent biomass boiler installations in the RS. The Project will need to review possible strategies to facilitate ESCO formation in RS jurisdictions through close collaboration with the NBA and then review its budget to assess if it can provide adequate support. The NBA could lobby the RS government for changes that allow heat service contracts that ESCOs can manage.

Recommendations

Recommendation 1: Ensure that the 2012 biomass boiler installations in Srebrenica are operational with sufficient and sustainable supplies of biomass. There are no dedicated local wood chip suppliers in Srebrenica and school board tenders are being prepared for a one-year

[2] *S is satisfactory*, defined as the project has minor shortcomings in the achievement of its objectives.

[3] *L is likely* defined as very likely to continue and resources in place.

supply of wood chips for three schools. There is a high risk of non-responsive tenders for the supply of wood chips for 3 biomass boilers as there is not a critical demand for wood chips (a demand sufficient for an entrepreneur to start-up a wood chip business). A non-responsive tender would result in 2012 biomass boiler installations without any biomass for fuel. As a backup plan to reduce this risk, the Project should get approval from the Project Advisory Board on the use of pellets for the first year of operation of the 2012 biomass boiler installations in the event a wood chip supply is not secured. Pellets are likely to be a cheaper fuel than oil but not wood chips. In 2013, demand for wood chips for 6 biomass boilers should be developed likely resulting in a responsive tender; this demand is deemed sufficient for an entrepreneur to invest in a viable wood chip business.

*Recommendation 2: Allocate a significant portion of remaining Project resources to strengthening the involvement of the National Biomass Association in activities that support biomass energy system development for public buildings and other sectors***.** The Project can support and strengthen NBA efforts to:

- strengthen the regulatory framework for biomass energy system development in the RS and FBiH;
- inform policy for government energy and industrial regulators. This can include frequent dialogue with RS policymakers on current constraints to forming profitable wood chip supply businesses and possible solutions to overcome these constraints;
- remove administrative blockages that hinder widespread development of biomass energy systems in the public sector, notably in the RS;
- lobby for the ESCO model of energy service provision for all of BiH. Currently, the ESCO model is used for heating service contracts in the FBiH. However, the ESCO model does not exist in the RS due to their procurement policy of not awarding multi-year supply contracts.

*Recommendation 3: Set aside sufficient resources for the design of an MRV system for biomass heating conversions based on best international practices on reporting the energy and cost savings resulting from biomass boilers installed in 2012 and 2013***.** The MRV system will provide more confidence to public officials of the benefits of biomass based on systems operational in the public sector. The system should incorporate a substantial degree of rigor in the manner to which the energy consumption and baselines are determined. The credibility of the reported energy savings should catalyze further interest in developing biomass energy systems in the public sector throughout BiH. In addition, the use of an improved MRV system for reporting energy usage and GHG reductions will better position BiH in a post-2012 climate change regime (potentially allowing the country to formulate Nationally Appropriate Mitigation Actions, NAMAs), and would serve as a model for other carbon reduction projects in BiH. On a macro-scale, the intention of an improved MRV system is to boost the confidence of international institutions in the carbon reductions generated in BiH. This increased confidence in BiH may attract carbon finance to augment current financing levels of low carbon energy systems in the public sector.

The commencement of an FAO project in 2013 will also provide an opportunity for this Project to access improved baseline data on the use of biomass for heating in individual houses mostly in rural areas throughout BiH. The FAO Project, amongst other activities, will be undertaking field surveys on the household and district heating systems in BiH as well as collection of data on the consumption of energy products for heating. With an improved baseline on energy consumption for heating in BiH, the Project can position its stakeholders at the conclusion of the Project, to set up programs to improve the efficiency of the heat

generation in a number of sectors including the residential and public sector. FAO is well known for its experience in conducting such baseline energy studies globally. A similar forestry project was completed in Serbia that included an energy component.

Recommendation 4: Promote energy efficiency with the development of future biomass energy projects in BiH (and similar projects in the region) to enhance the adoption biomass energy and reduce the cost of biomass energy. With the Project facilitating the cleaning of school radiators throughout Srebrenica, it also promoted energy efficiency of the heating system will have the impact of reducing biomass fuel consumption and costs. There should be an emphasis of promoting EE for all future UNDP-GEF biomass projects. Other EE measures that may provide reduced biomass consumption for heating applications may include energy efficient windows and insulation for walls and heat ducts.

*Recommendation 5: Extend the project terminal date from December 2013 to December 2014 to allow sufficient time for the Project to obtain approvals, source co-financing, and complete 10 biomass boiler installations***.** The recommended extension of the terminal date takes into consideration the required preparation time for planning, designing the biomass heating systems, and the annual window for biomass boiler installations during the July to September period. The December 2014 terminal date will also allow for sufficient data collection of the energy performance of all biomass boiler installations. For the 2012 installations, two years of energy savings can be reported, and one year for the 2013 installations. These data can be presented in a well-organized MRV format to be set up under this Project as in Recommendation 3.

Lessons Learned

Key lessons from this project include:

- For the numerous GEF energy-related projects where there is weak or even absent baseline data, project designs should contain substantial efforts to collect such data that will contribute towards confident estimates of the benefits of RE or EE investments. Without such data, it will very difficult to convince stakeholders (public or private) to invest in any EE or RE interventions. The poor baseline likely contributed to the Project's original estimate of 20 biomass boilers with an average power of 20 kW, which had to be revised downwards to 10 biomass boilers at an average of 150 kW. The cost of the 150 kW boilers is, on average, much more costly;
- Tendering for services that are not readily available in a particular location requires careful design. Failure to do so may result in procurement delays that may cause critical delays in the overall delivery schedule of the project. On this Project, insufficient TA resources were allocated to the design of the first tender process. As a result, the first tender for boiler design and installation was dropped, fortunately without an adverse consequence to the project schedule. Notwithstanding the substantial effort and time required to design an effective tender, an improved approach to tendering design would need to involve the assessment of the capacities of the vendors available to provide such services, and assembling a roster of vendors. Such an effort will require project personnel to visit a number of vendors to assess their capabilities.

1. INTRODUCTION

This report summarizes the findings of the Mid-Term Evaluation Mission conducted during February 1-8, 2012 for "BiH: Biomass Energy for Employment and Energy Security" (herein referred to as the "Project") implemented by the United Nations Development Program (UNDP), PIMS 3880 and with financing support provided by the Global Environment Facility (GEF). The Project Document (Prodoc) provides details to barriers to the development of biomass energy projects in Bosnia and Herzegovina (BiH). Project activities include increasing market demand for biomass energy through implementing pilot biomass energy projects in the education sector, developing sustained sources of biomass fuel supplies for biomass energy projects, and raising awareness of policymakers, the financial sector and technology and biomass fuel suppliers of the benefits and opportunities of biomass as an energy resource. The Prodoc was signed in October 2009, with Project activities commencing in November 2009, an Inception workshop conducted in March 2010, and an expected Project completion date of December 31, 2013.

1.1 Background

Since 1995, Bosnia and Herzegovina (BiH) has emerged as a stable country with the assistance of foreign aid. Prior to 2009, GDP growth of BiH has ranged from 4% to 9.6% since 1999[4]. BiH is also making efforts for accession into the European Union (EU) to which its currency, the *Konvertabilna Marka* (KM) is linked to the Euro (to provide a measure of macro-economic stability). More relevant to this Project, BiH, as one of the conditions for EU accession, needs to develop renewable energy.

In the BiH energy sector, primary energy consumption is comprised of coal (high sulphur lignite coal), hydroelectricity, oil and gas. In 2009, over 5,953 kTOE of energy was produced and consumed in BiH. Of this amount, indigenous coal and hydro resources accounted for an estimated 70% of the country's total energy consumption while imported oil and gas, mainly from Russia, accounted for 30%[5]. Only 20% of the coal was used for electricity generation with the remainder of the coal used for industrial purposes and residential heating. Other renewable energy resources such as wind, solar and biomass have not been developed as yet in BiH. In a business-as-usual scenario, coal is the preferred primary fuel for BiH due to its availability domestically and associated lower cost of production.

Prior to the commencement of this Project, there were few, if any, concentrated activities to develop biomass as a renewable energy source for BiH. Biomass use has mainly been confined to rural residential heating in the form of firewood, charcoal, and more recently, pellets and briquettes. The majority of these wood stoves, however, are antiquated and inefficient. Though there is a paucity of data on fuel types for residential heating, approximately 58% of the total energy demand for heating in the residential sector is satisfied through the use of wood; the remaining 44% is provided through the use of coal, oil products, and electricity[6]. The use of coal for heating is confined to larger urban centers where more central heating systems are more prevalent and where biomass is not as easy to obtain as in rural areas. For public and commercial buildings, the use of heating oil is common in smaller

[4] World Bank data from http://www.tradingeconomics.com/bosnia-and-herzegovina/gdp-growth-annual-percent-wb-data.html
[5] http://www.iea.org/stats/balancetable.asp?COUNTRY_CODE=BA
[6] http://www.euroqualityfiles.net/AgriPolicy/Report%202.2/Agripolicy%20WP2D2%20Bosnia-Herzegovina%20Final.pdf, pg 9

municipalities throughout BiH while natural gas and oil are used in larger urban centers. The potential for the use of biomass for heating purposes has been viewed as an excellent means to provide energy security to BiH as well as employment opportunities.

1.1.1 Rationale for Developing Biomass Energy for BiH

The benefits to BiH from the use of biomass will improve energy security, environmental conditions and employment opportunities, and the country's standing in Europe to developing renewable energy sources. To catalyze its use, this Project was designed to remove key barriers to implementation of biomass investments in BiH, namely:

- Lack of awareness of government officials, technology suppliers, and the general public of the benefits of biomass as a primary energy resource and associated business opportunities;
- Lack of any working examples of efficient biomass energy technologies in the country; and
- Lack of any developed biomass fuel businesses to provide sustained fuel supplies to biomass energy plants.

With this backdrop, the Project design of 2005 consisted of the removal of these barriers to biomass energy development in Bosnia and Herzegovina.

1.1.2 Institutional Arrangements for Implementing Biomass Energy Projects in BiH

The institutional arrangements for implementing this Project in BiH are unique. At the end of the war in 1995, a General Framework Agreement for Peace (GFAP) in BiH established a complex governance structure consisting of:

- two Entity level governments: Federation of Bosnia and Herzegovina (FBiH) and Republika Srpska (RS);
- local governments comprising of 10 Cantons in the Federation and two cities and 61 municipalities in the RS excluding the Brcko District; and
- the State level institutions for BiH (Council of Ministers). The Council is the federal government that coordinates governmental activities of Entity-level governments.

The constitution of BiH empowers the State to co-ordinate activities within the exclusive domain of the Entities. The Department for Energy operates within the Council of Ministers' Ministry of Foreign Trade and Economic Relations (MoFTER) to strengthen the coordination functions of the State on national energy issues. Energy-related issues, however, are under the responsibility of the Entities. For the RS entity, energy issues are managed through the Ministry of Industry, Energy and Mining.

1.2 Project Goals, Objectives and Expected Results

The project development **goal** is *to sustainably reduce GHG emissions through a transformation of the biomass market in Bosnia and Herzegovina*.

To achieve this goal, the Project was designed to achieve a number of outcomes[7]:

- Market demand for biomass energy is increased. This was to be achieved through the development of biomass energy projects in 10 schools;
- Sustainable biomass fuel supply markets have been strengthened and expanded. This was to be achieved through the development of sustained biomass fuel supplies to biomass boilers in 10 schools; and
- Policymakers, financial sector, fuel and technology suppliers and niche markets are convinced of benefits and market opportunities for biomass energy. This was to be achieved through the establishment of baseline information, estimation of benefits derived from the use of biomass as a heating fuel, and advocacy activities including dissemination of information through a school education program.

1.3 Mid-Term Evaluation

1.3.1 Purpose of the Evaluation

The purpose of the mid-term evaluation (MTE) for this Project was to *evaluate the progress towards attainment of global environmental objectives, project objectives and outcomes, capture lessons learned and suggest recommendations on major improvements.* The MTE serves as an agent of change and plays a critical role in supporting accountability. As such, the MTE serves to:

- Strengthen the adaptive management and monitoring functions of the Project;
- Enhance the likelihood of achievement of Project and GEF objectives through analyzing project strengths and weaknesses and suggesting measures for improvement;
- Enhance organizational and development learning;
- Enable informed decision-making;
- Create the basis for replication of successful project outcomes achieved to date;
- Identify and validate proposed changes to the Prodoc to ensure achievement of all project objectives; and
- Assess whether it is possible to achieve the objectives in the given timeframe, taking into consideration the speed, at which the project is proceeding.

In accordance with UNDP/GEF monitoring and evaluation (M&E) policies and procedures, all projects with long implementation periods (e.g. over 5 or 6 years) are strongly encouraged to conduct MTEs. In addition to providing an independent in-depth review of implementation progress, the MTE is intending to be responsive to GEF Council decisions on transparency and better access of information during implementation. MTEs are intended to identify potential project design problems, assess progress towards the achievement of objectives, identify and document lessons learned (including lessons that might improve design and implementation of other UNDP/GEF projects), and to make recommendations regarding specific actions that might be taken to improve the project. It is expected to serve as a means of validating or filling the gaps in the initial assessment of relevance, effectiveness and efficiency obtained from monitoring. The MTE provides the opportunity to assess early signs of project success or failure and prompt necessary adjustments.

[7] Based on the Project's Inception Report of May 2010

For these reasons, an evaluation mission was fielded to Sarajevo from February 1-8, 2012 for the MTE of this UNDP-GEF medium-sized Project.

1.3.2 Key Issues to be Addressed

Key issues to be addressed by this MTE include:

- The appropriateness of the project concept and design in the context of the current events in Bosnia and Herzegovina;
- Implementation of the Project in the context of effectiveness and efficiency in the delivery of its activities; and
- Project impacts based on current outputs and outcomes and the likelihood of sustaining project results.

Outputs from this MTE will be used to chart future directions on this Project.

1.3.3 Evaluation Methodology and Structure of the Evaluation

The methodology adopted for this evaluation includes:

- Review of project documentation (i.e. project documents, APRs/PIRs, inception meeting minutes) and other pertinent background information;
- Interviews with key project personnel including the Project Manager, past project personnel, project consultants, and relevant UNDP staff;
- Interview with relevant stakeholders from Government (e.g. Ministry of Foreign Trade and Economic Relations, GEF focal point); and
- Field visits to selected project sites and interviews with beneficiaries.

A detailed itinerary of the Mission is shown in Appendix B. A full list of documents reviewed and people interviewed is given in Annex C. The Evaluation Mission for the UNDP-GEF project comprised of one International Consultant and one National Consultant.

This evaluation report is presented as follows:

- An overview of project implementation from the commencement of operations in October 21, 2009;
- Review of project results based on project design and execution;
- Conclusions and recommendations that can increase the probabilities of a successful conclusion; and
- Lessons learned from implementation of the project to date.

This evaluation has taken into consideration the GEF Monitoring and Evaluation policy available from:

http://thegef.org/MonitoringandEvaluation/MEPoliciesProcedures/mepoliciesprocedures.html

as well as the UNDP-GEF Monitoring and Evaluation policy that can be downloaded from:

http://www.undp.org/gef/05/monitoring/policies.html

The Evaluation also meets conditions set by the UNDP Document entitled "Handbook on Planning, Monitoring and Evaluating for Development Results", 2009:

http://www.undp.org/evaluation/handbook/documents/english/pme-handbook.pdf

and the "Addendum June 2011 Evaluation":

http://www.undp.org/evaluation/documents/HandBook/addendum/Evaluation-Addendum-June-2011.pdf

1.4 Project Implementation Arrangements

This Project is direct execution (DEX) by UNDP. The Project Implementation Unit (PIU) consists of a project manager, associate and assistant who manage the Project's technical assistance and pool of experts to support biomass energy development efforts within the MoFTER and various ministries within the Republic of Srpska. The Project Board (PB) is comprised of two representatives from MoFTER and UNDP Programme staff, and reviews and approves annual work plans and budgets prepared by the project manager. There is also a Project Advisory Board (PAB) consisting of representatives from relevant RS Ministries (Ministry of Agriculture, Forestry and Water Management; Ministry for Spatial Planning, Civil Engineering and Ecology; Ministry of Industry, Energy and Mining; and Ministry of Education and Culture) and UNDP to discuss and coordinate various field level implementation issues and to overview and advise on overall project implementation.

2. KEY FINDINGS

2.1 Project Progress and Achievements to Date

2.1.1 Project Outputs

Project implementation has been in accordance with the work plan, although with minor delays from the original schedule. Project outputs to date have included:

- *Completion of a 4-day study tour in BiH during December 2010 for 35 participants (15 representatives from local governments and school directors) on successful examples on the use of biomass.* This trip exposed school management personnel to all segments of biomass supply chain including production of biomass boilers, storage facilities, the use of wood residues for heating in the private and public sectors, and increased their awareness (measured as 25% according to pre- and post-study tour surveys) of the benefits of using forest residues as fuel for heating schools, most notably cost savings;
- *A signed MOU with the RS Ministry of Education and Culture in February 2011.* After numerous consultations, the MOU links the Ministry with the following activities: teachers training including development of material, development of an energy and environment text book, promotion of biomass energy throughout Srebrenica regional schools, installation of boilers and further development of biomass as an energy resource for schools;
- *Educational materials for disseminating knowledge of energy and environmental issues in schools throughout the Project duration commencing in 2010;*
- *Completion of a tender in May 2011 for the installation of boilers for 5 elementary schools in Srebrenica.* This tender was subsequently annulled as none of the 3 companies that submitted proposals had satisfied tender conditions;
- *Additional awareness raising and educational materials and events in 2011 in Srebrenica* including:
    - Four teaching modules on energy and environmental protection;
    - Forty teachers participating in training on the teaching modules with a measured 50% knowledge increase after the training sessions;
    - A World Environment Day school competition and exhibition in Srebrenica;
    - Technical publications on biomass energy in BiH, analysis of wood residue potential in BiH, and cost benefit analysis of the BiH biomass sector;
- *Baseline information and the cost-benefit analysis of biomass projects for the schools in Srebrenica Region as of May 2011.* The information has created an improved understanding in the Srebrenica Region amongst school managers on the use of biomass boilers for heating schools. As a consequence, there has been increased demand for biomass energy systems for schools;
- *Support for energy efficiency in 6 schools to clean and repair radiators in late 2011.* This resulted in a reduction of energy consumption by 20% and GHG emissions of 29 tCO_2 annually;
- *Biomass boiler specifications for 3 elementary schools in October 2011;*
- *New terms of references for biomass boilers and storage facilities, and new procurement procedures for boiler installations in December 2011 for implementation during Q2 of 2012.* This included the preparation of 3 separate tenders for i) engineering drawings of each boiler installation; ii) procurement and installation of the

biomass boiler on the basis of the engineering drawings; and iii) biomass fuel supply, the tender of which is to be issued by the school board;

- *The formation of a National Biomass Association (NBA) in December 2011.* This association was founded by 22 legal entities from both private and public sectors including academia, producers, suppliers, consultants and other interested parties. Final legal registration of the NBA is expected to be completed in March 2012; and
- *Translation to local language and advocating for adoption of 5 EU standards for solid biomass fuel into national legislation* including:
    - EN 14961-1:2010 – Solid biofuels – Fuel specification and classes – part 1: General requirements;
    - EN 14961-2:2010 – Solid biofuels – Fuel specification and classes – part 2: Wood pellets for non-industrial use;
    - EN 14961-3:2010 – Solid biofuels – Fuel specification and classes – part 3: Wood briquettes for non-industrial use;
    - EN 14961-4:2010 – Solid biofuels – Fuel specification and classes – part 4: Wood chips for non-industrial use; and
    - EN 14961-5:2010 – Solid biofuels – Fuel specification and classes – part 5: Firewood for non-industrial use.

In summary, the Project has made good progress from October 2009 to date on increasing technical knowledge of biomass heating systems amongst relevant stakeholders and increasing demand for biomass heating systems. Actual Project outputs are summarized against the Project log-frame in Table 1.

Table 1: Project Progress Observed in February 2012 (against May 2010 log-frame from Inception Report)

Project Strategy (taken from Prodoc)	**Measurable Indicators from Prodoc Log-Frame**	**EOP Target**	***Status of Delivery as of February 2012***	***Rating***[8]
Project Objective: The overall project goal is a sustainable reduction of GHG emissions through a transformation of the biomass energy market in Bosnia and Herzegovina.	Number of schools retrofitted or new biomass boilers with GHG reductions	10 schools with new or retrofitted biomass boilers	Zero biomass boilers have been installed with only 3 schools at an advanced stage of planning and design. The Project, however, did provide indirect assistance to a school in Velika Kladuša (in the Federation of BiH) for the installation of a biomass pellet boiler	
		5,200 tCO_{2e} in direct emissions reductions	To date, there have been no direct emission reductions from retrofitted or new biomass boilers although 290 tCO_{2e} of emission reductions were generated from cleaning of radiators for heating energy efficiency. This was a direct result of the schools having a raised level of awareness on energy issues, on biomass as a fuel for heating, and approval of the schools to permit work on cleaning radiators	
Outcome 1: Market demand for biomass energy is increased	*Output 1.1*: Number of new small scale biomass energy projects under advanced planning (engineering design stage) / construction in the project area	10 new small scale biomass energy projects *as a mid-term target*	3 biomass energy systems under advanced planning and design at Bratunac, Srebrenica and Milici. This includes the tendering of the engineering design (for the boiler installations and the civil works for the wood chip storage areas), and another tender for the supply and installation of the boiler based on the engineering designs of the first tender. With engineering design tenders to be opened by March 2012, installation of 3 biomass boilers is expected to be completed by September 2012 Discussions for biomass energy systems for the other 7 schools are underway with 3 schools in agreement for installations in 2013; partial financing of these 3 schools is expected to come from UNDPs SRRP project. Financing for the remaining 4 biomass	

[8] Green cell shows completion and successful achievement; Yellow cell shows expected completion by the end of the project; Red cell show poor achievement and unlikely to be complete by end of Project

Table 1: Project Progress Observed in February 2012 (against May 2010 log-frame from Inception Report)

Project Strategy (taken from Prodoc)	**Measurable Indicators from Prodoc Log-Frame**	**EOP Target**	***Status of Delivery as of February 2012***	***Rating***[8]
			installations, however, has not been confirmed. Advanced planning and design of the 2012 biomass boiler installations does indicate a growing demand for biomass energy.	
	Output 1.2: Number of schools retrofitted or new biomass boilers with GHG reductions	10 schools	None are retrofitted though 3 schools are under advanced planning, 3 schools under preliminary planning, and one school that received indirect assistance for the installation of a biomass pellet boiler	
	Output 1.3: Emission reductions from the use of biomass boilers	5,200 tCO_{2eq} of direct emissions reductions	To date, there have been no direct emission reductions from retrofitted or new biomass boilers although 580 tCO_{2e} of emission reductions were generated from cleaning of school radiators. This was a direct result of the schools have a raised level of awareness on energy issues and on biomass as a fuel for heating; this facilitated approval by the schools to permit work on cleaning radiators	
	Output 1.4: Number of regions where business model (heat service contracting) is replicated	At least 2 other regions replicating the business model	Heat service contracting has been promoted and replicated in 4 other municipalities in the public building sector in FBiH. Work still remains to sustain biomass school heating system development in the Srebrenica Region within the RS	
Outcome 2: Sustainable biomass fuel supply markets strengthened and expanded	*Output 2.1*: Number of wood-processing companies showing real interest in wood fuel supply to local markets in the project area that have forestry concessions that cover a percentage of the required biomass supply for the 10 boilers, and have MOUs for fuel supply projects	5 companies with MOUs having 200% of fuel required by demonstration projects *as a mid-term target*	While there are no MOUs from any companies to supply wood fuel for the 3 school biomass boilers to be installed in 2012, the Project has facilitated formation of a "biomass purchaser group". This group will be tasked to purchase biomass for 3 schools in 2012 and 3 schools in 2013. This conforms to RS public procurement policy where a contract for fuel supply has to be reviewed each year. There is a high risk, however, that the tender issued by the purchaser group may be non-responsive considering there are no wood chip supply businesses in the Srebrenica region, and that a critical demand for wood chips is required if a	

Table 1: Project Progress Observed in February 2012 (against May 2010 log-frame from Inception Report)

Project Strategy (taken from Prodoc)	**Measurable Indicators from Prodoc Log-Frame**	**EOP Target**	***Status of Delivery as of February 2012***	***Rating***[8]
			business is to be formed in the Srebrenica region to supply biomass for school boilers. The Project is providing technical assistance to schools (and the purchaser group) in the Srebrenica Region to insert wood chip fuel specifications in the tender documentation. This may reduce this risk of a non-responsive tender. The newly formed National Biomass Association (NBA) can play a role in helping to form new wood chip businesses in Srebrenica. This may reduce the risk of the non-responsive tender for wood chips in the 2Q 2012 Through SRRP, over 100 forestry worker trainees received training in sustainable and environmentally friendly methods of wood extraction wood extraction methods (i.e. chainsaw operation and tractor extraction) that conform to international FSC standards. A wood chip business in Srebrenica would likely have the personnel to comply with such wood extraction methods. The upgrades in the skills of forestry workers have improved the prospects for sustainable employment in the forestry sector in Srebrenica.	
	Output 2.2: Annual tonnage or volume of sustainably sourced (certified) biomass fuel wood (chips or logs) supplied to project boilers at a competitive price	250 tonnes or 900 m^3 per year of sustainably sourced (certified) biomass fuel wood	250 tonnes certified but not delivered. This is due to the fact no biomass boilers at this time are operational. Tenders are being set up by the schools for the supply of wood chips to school boilers to be opened during the summer of 2012.	
	Reductions in the perception of fuel supply risk as measured in a "consumer confidence"	50% reduction as indicated in a "consumer confidence"	While a "consumer confidence" survey has not been completed, there have been a number of activities by the Project to indicate reduced perception of fuel supply risk including:	

Table 1: Project Progress Observed in February 2012 (against May 2010 log-frame from Inception Report)

Project Strategy (taken from Prodoc)	**Measurable Indicators from Prodoc Log-Frame**	**EOP Target**	***Status of Delivery as of February 2012***	***Rating***[8]
	survey.	survey.	• a supply and demand study of biomass in the Srebrenica Region; • an MOU signed by the RS Ministry of Education on the benefits and feasibility of biomass as a fuel for heating schools; • stakeholder engagement and cooperation that has resulted in 3 schools giving approval for 2012 biomass heating installations. The Project will not undertake a consumer confidence survey given its limited usefulness to implementing pilot biomass heating systems for Srebrenica schools.	
	Offers for biomass fuel supply as a measure of competition in the fuel supply business for the 10 biomass boilers	Biomass supply offers that total 150% of the needs of the 10 biomass boilers	0% of biomass fuel supply offers have been secured. Tenders are being prepared by the school purchaser groups (with assistance from the Project) for the supply of wood chips to school boilers. Tenders for biomass supply are to be awarded during the summer of 2012.	
Outcome 3: Policy makers, financial sector, fuel and technology suppliers and niche markets are convinced of benefits and market opportunities for biomass energy	"Biomass energy awareness and capacity score" from project survey to indicate improved awareness and capacities of users on biomass issues	Doubling of awareness from surveys *as a mid-term target*	Baseline survey of biomass awareness taken at Inception Phase of the project Project undertook a number of activities designed to raise awareness and biomass knowledge of relevant stakeholders including: • Study tours in BiH of existing biomass installations; • Surveys and reports on baselines; • Biomass supply and demand studies • Collection of reliable data on local costs and benefits of biomass energy; • Publicity events at schools and Srebrenica communities Survey of knowledge of stakeholders was measured after these activities. Survey results were available in early 2011 and indicated a	

Table 1: Project Progress Observed in February 2012 (against May 2010 log-frame from Inception Report)

Project Strategy (taken from Prodoc)	**Measurable Indicators from Prodoc Log-Frame**	**EOP Target**	***Status of Delivery as of February 2012***	***Rating***[8]
			high level of awareness amongst stakeholders at the State level of government as well as the municipal and school board levels for biomass energy systems as a means of offsetting rising fossil fuel costs. The formation of a National Biomass Association (NBA) is an indication of an excellent outcome of awareness raising activities of the Project. The achievement is even more outstanding in that it has brought together a wide spectrum of stakeholders in a country where such partnerships have had little precedence. The NBA will provide a sustained platform on which to scale-up awareness raising of biomass. The Project in cooperation with the BiH Institute for Standardization initiated activities to translate EU standard for Solid Biofuels EN 14961, as guidance for the supply of good quality biomass fuel for project beneficiaries.	
	"Biomass energy awareness and capacity score" from project survey to indicate improved awareness and capacities of users on biomass issues	Quadrupling of "Biomass energy awareness and capacity score" in project area (see Output 3.3)	Survey not yet done and scheduled for end of Project.	

2.1.2 Project Impacts

Considering that there were no concentrated biomass energy activities in BiH prior to 2009, the Project has made an impact on raising awareness, knowledge and interest in biomass energy development in BiH. The MTE Mission has observed that State and RS government stakeholders are highly supportive of Project assistance to improve energy security and environmental conditions and creating local employment. The Project is also having a positive impact on raising awareness amongst education sector stakeholders in Srebrenica on the benefits on biomass energy projects. The planned installation of biomass boilers in Srebrenica is drawing interest to biomass business opportunities amongst suppliers and energy service companies. The most impressive impact of the Project activities, however, is the formation of the NBA to provide a strong and sustained platform on which stakeholders in BiH can scale-up the promotion of biomass throughout all sectors of society.

However, for the project to maximize its impact, it will need to focus on having operational biomass boiler heating systems to demonstrate tangible benefits for schools. Currently, the Project is focusing on getting 3 biomass boilers in place for 2012 through an "Expression of Interest" (EOI) in early 2011 and two tenders: one for engineering of boiler installations for 3 schools; and one for the supply and installation of these boilers according to the engineered drawings (from the first tender). The EOI has drawn interest from early 2011 from a number of companies in BiH as well as neighboring countries. The future impact of the Project will be in large part determined by the outcome of these tenders, the efficiency of expediting the tenders, and having operational biomass boilers by the winter of 2012-13.

To date, GHG reductions have been generated that can be *directly* attributed to the Project. This included GHG reductions from the cleaning of 6 radiators at various Srebrenica schools and the school at Velika Kladuša (in the Federation of BiH) switching to biomass pellets in 2011. Unfortunately, no data has been collected from this school on pellet use and, hence, estimates of GHG emission reduction impacts are not available and reported in this evaluation. With the planned installation of 3 biomass boilers during the summer of 2012, the impact of direct emissions reduction of the Project activities will increase. Future GHG emission reductions will be estimated using the methodologies suggested by the "Manual for Calculating GHG Benefits of GEF Projects: Energy Efficiency and Renewable Energy Projects". Table 2 summarizes these GHG reductions resulting from the Project.

Table 2: Summary of CO_2 Reductions from the Project
(cumulative over a 20-year period)

Direct emission reduction[9], t CO_2	290[10]
Direct post-project emission reduction[11], t CO_2	0
Indirect emission reduction[12], t CO_2	0
TOTAL EMISSION REDUCTIONS DUE TO UNDP-GEF PROJECT, t CO_2	**290**

[9] Direct emission reductions are from demonstration projects and investments leveraged during the projects' supervised implementation.

[10] This includes an annual emission reduction of 29 tonnes CO_{2e} that becomes 0 tonnes after 20 years. Not included are the emission reductions from the biomass pellet boiler at Velika Kladuša school

[11] Due to the investments supported by mechanisms (e.g., revolving funds) that continue operating after the end of the project (2 x 7 Years assumed).

[12] Indirect emission reductions are from projects being developed from raised awareness generated by the project but without the direct assistance of the Project.

2.2 Project Design and Relevance

2.2.1 Project Relevance and Country Drivenness

Bosnia and Herzegovina currently does not have any specific energy strategies or policies. However, this Project has relevance to a number of national strategies and plans as well as international protocols including:

- The Mid-term Development Strategy of Bosnia and Herzegovina (2004-07) emphasizes the need for environmental protection and energy savings. Relevant to this Project, this includes improvement of energy efficiency, market liberalization, protection of the environment and increased use of renewable energy sources. There has been no updated development strategy from the GoBH;
- The Poverty Reduction Strategy Paper[13] mentions the underutilization of biomass as an energy resource;
- The National Environmental Action Plan (NEAP) of 2003 also proposes energy efficiency measures through technology restructuring, better use of energy resources, maximize the use renewable energy, and balanced consumption of domestic and foreign energy resources. These strategies are high level policy documents which have yet to be developed into concrete strategies;
- Membership in the Energy Charter Conference since 1994 and signatory of the Energy Charter Treaty (ECT) and the Protocol on Energy Efficiency and Related Environmental Aspects (PEEREA). The main issues of ECT and PEEREA include investments, trade and transit, and energy efficiency. Article 19 of the ECT requires all member states strive to minimize, in an economically efficient manner, harmful environmental impacts resulting from energy-related activities. PEEREA is designed to reinforce energy efficiency policies and programmes focusing on principles of developing energy efficient strategies, real-costs reflecting prices, transparency.

2.2.2 Project Design and Implementation Approach

The design of the Project has been based on the fact that there were no focused activities in developing biomass as an energy resource in BiH. As such, there was no baseline information on the use of biomass for heating in BiH, with a low level of awareness amongst key stakeholders on the benefits of biomass and business opportunities in the sector. Considering Project progress to date and extrapolating what can be achieved by the end of the Project, the design of the Project is appropriate to support catalytic activities for biomass energy development and to instill public and private stakeholder confidence on biomass energy in BiH. The successes to date in promoting biomass heating systems in this sector has led to additional requests for technical assistance to scale-up the use of biomass for public buildings in four other municipalities in BiH.

Implementation approaches to the Project have been highly strategic and conducted in a participatory manner based on close collaborative working relationships between the State government (mainly MoFTER), Entity government (relevant RS Ministries) and Project personnel. A consequence to this approach has been strong support and collaboration from State and Entity governments as well as school board personnel on facilitating the installation of biomass boilers and procuring a sustained supply of biomass fuel for these biomass boilers.

[13] www.BH.prsp.info

The Project has also benefited from close collaboration with the UNDP-funded Srebrenica Regional Recovery Project (SRRP)[14] that has had long established ties with the community to improve living conditions in the Srebrenica community since 2003. A portion of SRRP activities were aimed to improve employment opportunities through the development of Forest Stewardship Council (FSC)[15] certification of forest harvesting methods and improving the skills and management of local personnel. Forestry workers of Srebrenica now have the knowledge and certification to sustainably harvest forests through prudent planning and management of tree harvests. Illegal forest harvesting has been reduced substantially in the past 3 years[16].

One implementation issue has been the sluggish response of some schools in the Srebrenica Region to approving and implementing biomass boiler installations. The log-frame anticipated advanced plans and engineering for 10 biomass boilers; however, to date only 3 are in such a stage. Although the Project has signed an MOU with the RS Ministry of Education that mandates all schools convert to biomass heating systems, slow progress of biomass development can be attributed to the following issues:

- *Some of the schools have recently expended funds on upgrading their oil-fuelled boilers*. As such, administrators of these schools have not yet placed a high priority on biomass boiler installations, notwithstanding their operational cost benefits and the RS Ministry of Education MOU ordering the conversion of schools to biomass;
- *Shortfalls in committed co-financing*. The disappearance of committed co-financing from "Narodno Grijanje" (as referenced in the ProDoc) has resulted in a shortfall of financing for biomass boiler installations. Financing for the 2012 biomass boiler installations has been committed by the Project and SRRP. The Project is currently seeking co-financing from other sources including SRRP for remaining 7 biomass boiler installations; and
- *Slow absorption of some school administrators on the concepts of adopting biomass boilers*. This has resulted in more effort being expended to improve their understanding of the benefits and reduced operational costs of a biomass heating system, and subsequent delays in receiving approvals for biomass boiler installations.

However, in conclusion, *the Project design and implementation approach have been appropriate, laying the foundation for its successful conclusion within the 2 or 3 years of remaining time.*

2.3 Project Implementation Arrangements

2.3.1 Stakeholder Involvement, Linkages to Project and Other Interventions in Sector

The Project design requires close collaboration and involvement of the three levels of government, the State level, the Entity level (in Republika Srpska) and the municipalities. With most State ministries and entity government agencies being severely understaffed, UNDP Project staff have a unique relationship with their public sector counterparts by providing assistance to implement biomass energy projects. With a chronic shortage of available government personnel, the Project can be justified under a DEX implementation modality. The

[14] http://www.undp.ba/index.aspx?PID=21&RID=60
[15] http://www.fsc.org/
[16] Personal communication with Project Manager of SRRP

result of this implementation arrangement is *strong involvement of the Council of Ministers of BiH, GoRS, municipalities and school management on the Project*.

The Project has also successfully facilitated the formation of the National Biomass Association (NBA). The formation of the NBA is designed to strengthen the biomass lobby for legislative and regulatory changes that will accelerate the development of biomass energy in BiH. The NBA will also raise the profile of biomass energy in BiH as well as engage stakeholders with strong vested interests in biomass energy. The current membership of the NBA covers a wide range of sectors in BiH from public sector officers to academia and the private sector.

With regards to linkages with other projects in the renewable energy sector, this Project is the first renewable energy project in BiH; as such, there are no linkages with other projects in renewable energy. However, as mentioned in the previous Section 2.2.2, this Project has a strong linkage with SRRP. Outcome 2 of this Project is to develop a sustainable biomass fuel supply market through improving the skills and management of local personnel to implement a sustainable forest harvesting plan that meets the Forest Stewardship Council (FSC) standards, which in turn would create employment opportunities for the residents of Srebrenica. In 2008 and 2009, sustainable use of the environment was promoted for the forestry sector on SRRP through the introduction of the international certification standards of the FSC. Training for FSC certification on sustainable methods for wood extraction with improved chain of custody procedures was provided to over 100 forestry workers. The training provided a number of benefits to the forestry sector in the Srebrenica Region including:

- Local forestry companies with FSC personnel who will have an advantage in obtaining wood extraction licenses from the public state forest, the RS State Forestry Enterprise. Their extraction methods will be implemented to sustain forestry resources and managed in a more transparent manner;
- The sale of FSC certified wood products will command a premium in developed country markets, providing additional income to local forestry companies;
- Local forestry companies will be enabled to provide stable employment.

An FAO Project entitled “Wood energy for sustainable rural development” TCP/YUG/3201 is scheduled to commence operations in BiH in 2013. The FAO Project is designed to:

- strengthen the overall capacity of the forestry sector in BiH through knowledge dissemination on wood energy systems; and
- develop a national wood energy action plan for increased wood energy production; and
- promote the utilization of wood as an environmentally friendly source of energy that is integrated within the forestry and energy programmes.

Strong linkages to this project are recommended (as detailed in Section 3.2, Recommendation 3).

2.3.2 Management, Monitoring and Evaluation, Identification and Management of Risk

Management and M&E of the Project has been adequate. This was based on a review of the Project PIRs and associated documentation that provides a clear picture of Project accomplishments and delays, risks and follow-up actions to mitigate risks.

2.4 Project Budget and Cost Effectiveness

Table 3 provides an overview of expenditures of the GEF Project budget of USD 966,850 from October 2009 to December 31, 2011. To date, USD 361,064 or close to 37% of the Project budget has been expended. Considering USD 300,000 of the remaining Project budget is allocated to the procurement of biomass boilers, only USD 305,786 remains in the Project budget for remaining technical assistance activities.

Table 3: Project Budget and Expenditures (2009-2011)

Budget categories	Code	Budget (from Inception Rpt)	2009	2010	2011 (to Dec 31)	Total Expended	Remaining
1.Market demand for biomass energy is increased							
International consultants	71200	80,000		11,094	8,202	*19,296*	
Local consultants	71300	73,000		18,017	23,485	*41,501*	
Contractual services individuals	71400	63,000		20,108	25,117	*45,225*	
Travel	71600	20,050		3,992	4,287	*8,279*	
Contractual Services-Comp	72100			24,205	6,582	*30,786*	
Equipment	72800	300,000			0	*0*	
Miscellaneous	74500	14,000			467	*467*	
Foreign Exchange Currency Loss	76100			-153		*-153*	
Subtotal		550,050		77,261	68,140	*145,401*	***404,649***
2. Sustainable biomass fuel supply markets strengthened and expanded							
Local consultants	71300	20,000			2,888	*2,888*	
Contractual services companies	72100				9,658	*9,658*	
Subtotal		20,000		0	12,546	*12,546*	***7,454***
3. Policymakers, financers, technology suppliers and technical personnel have improved knowledge of biomass energy							
International consultants	71200	42,000		2,986	3,250	*6,236*	
Local consultants	71300	124,000		6,293	81	*6,373*	
Contractual Services - Ind	71400					*0*	
Travel	71600	18,800		6,069	7,587	*13,655*	
Contractual Services - comp	72100	120,000	1,591	65,330	70,120	*137,041*	
Audio Visual&Print Prod Costs	74200					*0*	
Miscellaneous	74500	29,000		5,435	6,807	*12,242*	
Foreign Exchange Currency Loss	76100			13		*13*	
Subtotal		333,800	1,591	86,124	87,844	*175,560*	***158,240***
4. Project Management							
Local consultants	71300	59,000				*0*	
Contractual Services - Individ	71400			10,342	13,501	*23,843*	
Contractual Services - comp	72100	4,000		3,077	586	*3,663*	
Foreign Exchange Currency Loss	76100			51		*51*	
Subtotal		63,000		13,470	14,088	*27,557*	***35,443***
TOTAL GEF		***966,850***	***1,591***	***176,855***	***182,618***	***361,064***	***605,786***
UNDP			33,575	*1,344,160*	*44,920*	*1,422,655*	*170,000*

Considering the achievements of the Project to date, *the cost effectiveness of the Project has been adequate*. Financial and procurement procedures are in line with UNDP Standard Operating Procedures, ensuring that best value for money is obtained. Additionally, adaptive management has been promoted through careful budget revisions, monitored by RTA, CO programme team and both Project Advisory and Project Boards.

Confirmed co-financing leveraged by the Project is USD 1,422,655 from SRRP[17]. Co-financing from other agencies and private sector will be confirmed towards the end of the Project. With the disappearance of co-financing from "Narodno Grijanje" in the ProDoc, the Project has had to find new co-financing sources for boiler installations; this has included the aforementioned SRRP.

2.5 Evaluation of Project

Table 4 provides an evaluation of the current outcomes of each Project output. Each output was evaluated against individual criterion of:

- *Relevance* – the extent to which the activity is suited to local and national development priorities and organizational policies, including changes over time.
- *Effectiveness* – the extent to which an objective has been achieved or how likely it is to be achieved.
- *Efficiency* – the extent to which results have been delivered with the least costly resources possible.
- *Results/impacts* – the positive and negative, and foreseen and unforeseen, changes to and effects produced by a development intervention. In GEF terms, results include direct project outputs, short-to medium term outcomes, and longer-term impact including global environmental benefits, replication effects and other, local effects.
- *Sustainability* – the likely ability of an intervention to continue to deliver benefits for an extended period of time after completion. Projects need to be environmentally as well as financially and socially sustainable.

The Project outputs were rated based on the following scale:

- *Highly Satisfactory (HS)*: The project has no shortcomings in the achievement of its objectives;
- *Satisfactory (S)*: The project has minor shortcomings in the achievement of its objectives;
- *Moderately Satisfactory (MS)*: The project has moderate shortcomings in the achievement of its objectives;
- *Moderately Unsatisfactory (MU):* The project has significant shortcomings in the achievement of its objectives;
- *Unsatisfactory (U)* The project has major shortcomings in the achievement of its objectives;
- *Highly Unsatisfactory (HU):* The project has severe shortcomings in the achievement of its objectives.

The overall rating of the Project is S, mainly due to the Project achieving most of its intended mid-term targets and laying a strong foundation for biomass installations in 2012 and towards the end of the Project. The outcomes of the tenders in the next 4 months for biomass installation and biomass fuel supply, however, are pivotal in determining the overall outcomes

[17] UNDP is co-financing this project using funds from SRRP for activities related to: i) programme staff administrative costs with regards to the project document preparations and approval in 2009; ii) training in the forestry sector by SRRP as well as monitoring and programme support in 2010; and iii) SRRP support to the cleaning and repair of 6 heating radiators for 6 elementary schools in Srebrenica in 2011. The remaining UNDP co-financing is for the procurement of biomass boilers in 2012 and 2013.

of the project. The remaining project resources will need to focus on ensuring timely and effective delivery of biomass energy systems for 10 schools.

Table 4: Summary Evaluation of Project

Project Strategy	Relevance	Efficiency	Effective-ness	Overall Rating
Outcome 1: Market demand for biomass energy is increased	HS	S	S	S
Outcome 2: Sustainable biomass fuel supply markets strengthened and expanded	MS	S	Unable to rate	Unable to rate
Outcome 3: Relevant stakeholders are convinced of benefits and market opportunities for biomass energy	S	S	S	S
Monitoring and Evaluation	S	S	HS	S
Overall Rating				**S**

2.6 Sustainability and Replicability

2.6.1 Sustainability

In assessing the sustainability of the project, we asked "how likely will Project outcomes (from the 2009 Prodoc and revised log-frame from the May 2010 Inception Report) be sustained after termination of the Project". Sustainability of these objectives was evaluated in the context of financial resources, socio-political risks, institutional framework and governance and environmental factors, using a simple ranking scheme:

- *Likely (L):* very likely to continue and resources in place;
- *Moderately Likely (ML):* model is viable, but funding or resources may not be in place;
- *Moderately Unlikely (MU):* model is not viable or needs changing; and/or resources not in place; and
- *Unlikely (U):* model is not viable and resources are not in place

The evaluation for sustainability is shown on Table 5. It is important to note that the index is simply to facilitate an assessment of future sustainability and is not a rating of project management and their consultants. Instead, it is a rating of the project design and viability going forward, including availability of budget and resources for continuation.

Project sustainability is likely L with the proviso that there is a positive response to the wood chip supply tender to be issued by the various schools within the next 4 months. The recommendations of this evaluation are targeted to reduce the risks of non-responsive tenders, and to increase the likelihood an outcome of 3 operational biomass heating systems by the end of 2012. The Evaluation team notes that the Project's efforts to achieve the outcome of "increased demand for biomass energy" are limited by the Project design which only provides project resources to demonstrate the viability biomass energy that will ultimately

Table 5: Assessment of Sustainability for Objectives

Outcome	Assessment of Sustainability	Dimensions of Sustainability
Outcome 1: Market demand for biomass is increased. This includes: • support for the installation of biomass boilers for 10 schools • business model for heat service contracting replicated in 2 other regions	• *Financial Resources*: The Project is reliant on its own financial contribution and co-financing from SRRP to finance the 10 pilot biomass boilers for Srebrenica Region schools. To date, there are financial resources confirmed for an estimated 6 biomass boilers. The Evaluation Team observes that most schools in Srebrenica do not have the budget for conversion of their boilers to biomass and cannot implement a heat service contract model due to RS public procurement policy. While this has been successfully implemented in municipalities in the Federation of BiH, more work is required in the RS to avail financial resources for heat service contracting. • *Socio-Political Risks*: There is strong community and political support for the biomass boiler installations. There are risks that biomass projects will be resisted by current suppliers of fossil fuels to these schools. However, the rising cost of oil reduces this risk; • *Institutional Framework and Governance*: The MOU with RS Ministry of Education and Culture ensures high level support and cooperation in the installation of biomass boilers in RS schools; • *Environmental Factors*: Positive environmental changes from biomass boiler conversions are acceptable to host communities. ***Overall Rating***	ML L L L **L**
Outcome 2: Sustainable biomass fuel supply markets are strengthened and expanded. This includes: • 250 tonnes or 900 m3 of sustainably sourced and certified biomass fuel supplied to boilers at competitive price • Competition in fuel supply for 10 boilers where actual offers cover 150% of the required needs	• *Financial Resources*: Schools have fuel supply budgets that are awarded annually to fuel suppliers; • *Socio-Political Risks*: The sustainability of this outcome will depend in large part to the response to the biomass fuel tender where the Project has facilitated the formation of a "biomass supplier group" that would conform to RS public procurement policy, respond to the tender and catalyze the formation of a sustained wood chip business in Srebrenica. • *Institutional Framework and Governance*: Public sector procurement policy does not permit multi-year fuel supply contracts. This needs to be overcome or resolved to interest potential entrepreneurs in forming a wood chip supply business. • *Environmental Factors*: The positive environmental changes resulting from a conversion to biomass boilers are acceptable to host communities. ***Overall Rating***	L Unable to rate ML L **Unable to rate**
Outcome 3: Policymakers, financial sector, fuel and technology suppliers and niche markets are convinced of benefits and market opportunities for biomass energy. This would include surveys that indicate an increased level of awareness and knowledge on biomass energy amongst all relevant stakeholders.	• *Financial Resources*: The National Biomass Association (NBA) will sustain awareness raising activities through their membership; • *Socio-Political Risks*: With strong domestic and international investor interest in SHPP development, the growth of operational SHPPs will likely be sustained; • *Institutional Framework and Governance*: The NBA will be registered at the State level and be able to work at various government levels to sustain awareness and education of biomass energy • *Environmental Factors*: Use of biomass leads to positive environmental changes acceptable to all stakeholders. ***Overall Rating***	L L L L **L**

reduce the energy costs of schools. With UNDP funds being used to finance the first 3 biomass boilers on this Project in 2012, more efforts are required for Project sustainability in the RS by having an RS government commitment for budgetary allocations to install biomass boilers in public buildings. The Project appears to have catalyzed biomass boiler installations in the Federation of Bosnia and Herzegovina (FBiH) where there are firm commitments and FBiH government budgetary locations for the use of biomass for heating in public buildings.

One of the positive outcomes from the Project has been the formation of the BiH National Biomass Association (NBA) that should serve to strengthen another Project outcome, raising awareness of the benefits and business opportunities of biomass energy. Through the Project's efforts to strengthen the NBA, the NBA will be able to promote and lobby for resolution of the aforementioned budgetary issues that hinder widespread development of biomass energy for heating in BiH, notably with the RS government.

2.6.2 Replicability

The Project has provided indirect assistance, through the Bihac regional UNDP office, for setting up biomass boilers for 6 other public buildings, all within the FBiH. This includes:

- Bihać City Cultural Center: replacement of heating system from fossil fuel to biomass pellets with financial support from UNDP, USAID, Bihać Municipality and Government of Unsko-sanski Canton;
- Bihać City Higher School for Arts (Umjetnička srednja škola): biomass heating system boilers for cultural monument and a museum;
- Bihać City Resource Center (formerly the Bureau of Sanitation Building) where 21 institutions are located: heating system which is not centralized that draws energy from the electricity grid, fossil fuel and pellets, will be replaced by one biomass pellet boiler;
- City Bosanska Krupa Dom Zdravlja (Ambulance) Bosanska Krupa: replacement of on fossil fuel boiler with biomass pellet boiler with financial support from the Municipality of Bosanska Krupa, Government of Una-Sana Canton, the Federal Ministry for Spatial Planning, and UNDP;
- City Bosanski Petrovac High School: replacement of old 1973 wood stove by biomass pellet boiler with financial support from UNDP, Municipality of Bosanski Petrovac and Government of Una-Sana Canton; and
- City Velika Kladuša kindergarten school: The fossil fuel heating system has been replaced by a biomass pellet boiler through a heating service contract between the kindergarten and a private sector ESCO. using the same model replacements of boilers on fossil fuels with biomass boilers (pellets) was done in Elementary school in MZ Gata (Cazin Municipality), building where part of USK Government is placed, some of the public institutions existing in the territory of USK, and currently under negotiations are replacement of boilers in other kindergartens in USK municipalities

While the ESCO business model has been replicated in the FBiH public sector, there are challenges to its replicability in RS jurisdictions. RS public procurement policy only allows supplies and services to be procured through yearly tenders, a condition unfavorable to the ESCO business model. This has resulted in the lack of any recent biomass boiler installations in the RS. The Project will need to review possible strategies to facilitate ESCO formation in RS jurisdictions through close collaboration with the NBA and then review its budget to assess if it can provide adequate support. The NBA could lobby the RS government for changes that allow heat service contracts that ESCOs can manage.

3. CONCLUSIONS AND RECOMMENDATIONS

3.1 Conclusions

The Project has made substantial progress towards the goals set out in the log-frame. It has raised awareness and knowledge of critical stakeholders on biomass energy for heating. It has facilitated the formation of a National Biomass Association that broadens the network of biomass stakeholders who can strengthen and sustain promotion and raise the profile of biomass energy. It has developed a wealth of good biomass resource materials to convince stakeholders of the benefits of biomass energy. *The Evaluation Team concludes, however, that it is critical for the Project to focus on having an operational biomass boiler for heating in these schools as early as late 2012*.

The Team notes that the current conditions for the procurement of the initial biomass boilers in the three schools in the Srebrenica region should lead to a responsive tender for engineering services of the boiler installation in Q1 of 2012, and the contract for boiler supply and installation in Q2 of 2012. With UNDP financing the boiler installations, UNDP will be issuing these tenders using UNDP procurement guidelines.

The tender for wood chip supplies to be issued by the school boards by late Q2 of 2012, however, has a higher risk of being non-responsive: public procurement policy of the RS allows the tendering for wood chip supply for more than one school for one year. The issue is that the tender may not interest any businesses, most notably in the Srebrenica area, unless there is confidence that there is a critical demand that interest an entrepreneur in starting a wood chip supply business. The Project has expended some efforts to mitigate this risk through facilitation of the formation of “a biomass purchaser group” (this group would be tasked with securing the biomass supply for 3 schools for one year that should reduce the risk of a non-responsive tender). The outcome of the 2012 wood chip supply tender, however, is crucial in determining if further work is required to ensure sustained supply of wood chips to biomass boilers. In the short term, the NBA can play a positive role through informing RS policymakers on current constraints to the formation of a profitable wood chip supply business, and in the long term, lobbying for improved business models such as ESCOs that can accelerate the installation of biomass boilers in RS public buildings.

Another issue is the time remaining to meet the Project target of 10 biomass boiler installations. With 3 planned for a 2012 installation, another 7 would be needed to be planned for 2013. More time is likely required to meet this target for the following reasons:

- Despite the obvious benefits of biomass heating conversions, sufficient time for discussions with school administrators is still required to resolve various technical issues on the biomass boiler installations;
- Since the Project is reliant on co-financing for boiler installations, more time is required to secure these co-financing sources. Currently, there is sufficient GEF financing and co-financing from UNDP for an estimated 6 boilers. If the demonstrations are well managed with reportable energy savings, co-financing sources will likely increase.

Finally, the Project is only designed with resources to demonstrate the benefits of biomass heating for public buildings. If the Project succeeds in meeting its target of 10 operational biomass boiler installations, the benefits of improved energy performance of biomass boilers

needs to be clearly reported. This will improve the confidence of government to set aside firm budgetary allocations for biomass boilers for other public buildings, and increase the replication of biomass boiler installations in other public and private sectors after completion of the Project.

3.2 Recommendations

Recommendation 1: Ensure that the 2012 biomass boiler installations in Srebrenica are operational with sufficient and sustainable supplies of biomass. There are no dedicated local wood chip suppliers in Srebrenica and the school board tenders are being prepared for a one-year supply of wood chips for three schools. There is a high risk of non-responsive tenders for the supply of wood chips for 3 biomass boilers as there is not a critical demand for wood chips (a demand sufficient for an entrepreneur to start-up a wood chip business). A non-responsive tender would result in 2012 biomass boiler installations without any biomass for fuel. As a backup plan to reduce this risk, the Project should get approval from the PAB on the use of pellets for the first year of operation of the 2012 biomass boiler installations in the event a wood chip supply is not secured. Pellets are likely to be a cheaper fuel than oil but not wood chips. In 2013, there will be a demand for wood chips for 6 biomass boilers that will likely result in a responsive tender; this demand is deemed sufficient for an entrepreneur to invest in a viable wood chip business.

Recommendation 2: Allocate a significant portion of resources to strengthen involvement of the National Biomass Association in activities that support biomass energy system development for public buildings and other sectors. The Project can support and strengthen NBA efforts to:

- strengthen the regulatory framework for biomass energy system development in the RS and FBiH;
- inform policy for government energy and industrial regulators. This can include frequent dialogue with RS policymakers on current constraints to forming profitable wood chip supply businesses and possible solutions to overcome these constraints;
- remove administrative blockages that hinder widespread development of biomass energy systems in the public sector, notably in the RS;
- lobby for the ESCO model of energy service provision for all of BiH. Currently, the ESCO model is used for heating service contracts in the FBiH. However, the ESCO model does not exist in the RS due to its procurement policy of not awarding multi-year supply contracts.

Recommendation 3: Set aside sufficient resources for the design of an MRV system for biomass heating conversions based on best international practices on reporting the energy and cost savings resulting from biomass boilers installed in 2012 and 2013. The MRV system will provide more confidence to public officials of the benefits of biomass based on systems operational in the public sector. The system should incorporate a substantial degree of rigor in the manner to which the energy consumption and baselines are determined. The credibility of the reported energy savings should catalyze further interest in developing biomass energy systems in the public sector throughout BiH. In addition, the use of an improved MRV system for reporting energy usage and GHG reductions will better position BiH in a post-2012 climate change regime (potentially allowing the country to formulate Nationally Appropriate Mitigation Actions, NAMAs), and would serve as a model for other carbon reduction projects in BiH. On a macro-scale, the intention of an improved MRV system is to

boost the confidence of international institutions in the carbon reductions generated in BiH. This increased confidence in BiH may attract carbon finance to augment current financing levels of low carbon energy systems in the public sector.

The commencement of the FAO project (see Section 2.3.1) in 2013 will also provide an opportunity for this Project to access improved baseline data on the use of biomass for heating in individual houses mostly in rural areas throughout BiH. The FAO Project amongst other activities will be undertaking field surveys on the household and district heating systems in BiH as well as collection of data on the consumption of energy products for heating. With an improved baseline on energy consumption for heating in BiH, the Project can position its stakeholders at the conclusion of the Project, to setup programs to improve the efficiency of the heat generation in a number of sectors including the residential and public sector. FAO is well known for its experience in conducting such baseline energy studies globally. A similar forestry project was completed in Serbia that included an energy component.

Recommendation 4: Promote energy efficiency with the development of future biomass energy projects in BiH (and similar projects in the region) to enhance the adoption biomass energy and reduce the cost of biomass energy. With the Project facilitating the cleaning of school radiators throughout Srebrenica, it also promoted energy efficiency of the heating system will have the impact of reducing biomass fuel consumption and costs. There should be an emphasis of promoting EE for all future UNDP-GEF biomass projects. Other EE measures that may provide reduced biomass consumption for heating applications may include energy efficient windows and insulation for walls and heat ducts.

Recommendation 5: Extend the project terminal date from December 2013 to December 2014 to allow sufficient time for the Project to obtain approvals, source co-financing, and complete 10 biomass boiler installations. The recommended extension of the terminal date takes into consideration the required preparation time for planning, designing the biomass heating systems, and the annual window for biomass boiler installations during the July to September period. The December 2014 terminal date will also allow for sufficient data collection of the energy performance of all biomass boiler installations. For the 2012 installations, two years of energy savings can be reported, and one year for the 2013 installations. These data can be presented in a well-organized MRV format to be setup under this Project as in Recommendation 3.

3.3 Lessons Learned

Key lessons from this project include:

- For the numerous GEF energy-related projects where there is weak or even absent baseline data, project designs should contain substantial efforts to collect such data that will contribute towards confident estimates of the benefits of RE or EE investments. Without such data, it will very difficult to convince stakeholders (public or private) to invest in any EE or RE interventions. The poor baseline likely contributed to the Project's estimate of 20 biomass boilers with an average power of 20 kW which had to be revised downwards to 10 biomass boilers at an average of 150 kW. The cost of the 150 kW boilers on average is much more costly;
- Tendering for services that are not readily available in a particular location requires careful design. Failure to do so may result in procurement delays that may cause

critical delays in the overall delivery schedule of the project. On this Project, insufficient TA resources were allocated to the design of the first tender process. As a result, the first tender for boiler design and installation was dropped, fortunately without an adverse consequence to the project schedule. Notwithstanding the substantial effort and time required to design an effective tender, an improved approach to tendering design would need to involve the assessment of the capacities of the vendors available to provide such services, and assembling a roster of vendors (this would require project personnel to visit a number of vendors to assess their capabilities).

APPENDIX A – MISSION TERMS OF REFERENCE

PROJECT MID-TERM EVALUATION

Title: International Mid Term Evaluation Consultant
Project: BiH Biomass Energy for Employment and Energy Security - BIOMASS
Cluster: Energy and Environment
Reporting to: GEF Project Manager
Duty Station: Srebrenica/Sarajevo/Banja Luka, BiH
Duration: November 2011 - February 2012. (maximum 20 working days)

BACKGROUND

a. Purpose

The scope of work encompasses midterm evaluation of the GEF project BiH Biomass energy for employment and energy security and shall identify potential project design problems, assess progress towards the achievement of objective, identify and document lessons learned (including lessons that might improve design and implementation of other UNDP-GEF projects), and to make recommendations regarding specific actions that might be taken to improve the project. It is expected to serve as a tool of validating or filling the gaps in the initial assessment of relevance, effectiveness and efficiency obtained from monitoring. The MTE provides the opportunity to assess early signs of project success or failure and prompt necessary adjustments.

b. Objective

The objectives of this project are to remove market barriers to the adoption of sustainable biomass energy services in rural areas of Bosnia and Herzegovina through market transformation, enhance job creation, community poverty reduction and local energy security, to increase market demand for biomass energy, to convince policy makers, financial sector, fuel and technology suppliers and niche markets on benefits and market opportunities for biomass energy and sustainable biomass fuel, to enhance advocacy capacities in biomass energy, to strengthen and expand sustainable fuel supply markets. The proposed project will enhance local experience and awareness of biomass energy providing a firm foundation for these issues to be addressed in the context of larger initiatives to address energy, forest and business policies and legislation. In the long run this specific activity, among others will ensure that inputs, activities, and expected results of the project are timely and effectively implemented, assess progress in establishing the information baseline, reducing threats, and identifying any difficulties in project implementation and their causes, recommend corrective course of action and assist in resolution of potential project implementation risks and similar issues.

c. Background Information

The UNDP Bosnia and Herzegovina (within the Energy and Environment Cluster) has, in cooperation with the Government of Republika Srpska, started implementing activities of the Global Environment Facility (GEF) medium-sized project on BiH Biomass Energy for Employment and Energy Security. The key project objective is the reduction of greenhouse gas emissions, by installing or retrofitting biomass boilers. Project activities aim to support such installations by creating sustainable markets for biomass energy. Domestic benefits include job creation, reduced emissions, and improved quality of heating. At the outset, the project is targeting the education sector (primary schools) in the three municipalities of Srebrenica region (Srebrenica, Bratunac, Milići).

The proposed project plans to enhance local experience and awareness of biomass energy providing a firm foundation for these issues to be addressed in the context of larger initiatives to address energy, forest and business policies and legislation.

DESCRIPTION OF RESPONSIBILITIES

Scope of work

1. The Mid Term Evaluation MTE is initiated by UNDP Country Office in BiH in line with the UNDP-GEF M&E guidelines in order to asses and rate potential project design issues and implementation approach including logical framework, outcomes, targets, activities, baselines, risks, monitoring and evaluation system, project management structure, adaptive management, progress towards the achievement of objectives, and to identify and document lessons learned (including lessons that might improve design and implementation of other UNDP/GEF projects), and to make recommendations regarding specific actions that might be taken to improve the project's implementation. It is expected to serve as a means of validating or filling the gaps in the initial assessment of relevance, effectiveness and efficiency obtained from monitoring. It also provides an opportunity to assess early signs of project success or failure and prompt necessary adjustments and the basis for learning and accountability for managers and stakeholders. This evaluation is to be undertaken taking into consideration the GEF Monitoring and Evaluation policy that can be downloaded from:

   http://thegef.org/MonitoringandEvaluation/MEPoliciesProcedures/mepoliciesprocedures.html

   as well as the UNDP-GEF Monitoring and Evaluation policy that can be downloaded from:

   http://www.undp.org/gef/05/monitoring/policies.html

2. The evaluation will be undertaken by a team composed of an International Consultant (Evaluation Team Leader) and a Local Consultant. They will receive the support of UNDP Country Office and Project Management Team, and will be assisted by a translator/interpreter (when/if needed, even though the Local consultant can act as interpreter in most situations).

3. The international consultant is the team leader and will be responsible to deliver the expected output of the mission with the help of local consultant. Specifically, he/she will perform the following tasks:

   - Lead and manage the evaluation mission;
   - Design the detailed evaluation methodology and plan;

- Conduct desk-reviews, interviews and site-visits in order to obtain objective and verifiable data to substantive evaluation ratings and assessments, including:
- Verification and commenting of the Management Effectiveness Tracking Tool data, as collected and reported by the project;
- Detailed assessment of risks which are listed in project document and updated in inception reports.
- Draft the evaluation report and share with the key stakeholders for comments;
- Finalize the evaluation report based on the inputs from key stakeholders.

Deliverables and timelines

The consultant is responsible for the following deliverables:

Deliverables (outputs)	**Deadline**
Inception Report: Desk review, development of methodology, updating time table, preparing mission program	November 15, 2011
In-country field visits, interviews	December 10, 2011
Drafting report	January 10, 2012
Draft report circulation	January 25, 2012
Finalization of report	February 15, 2012

Each document will be presented as a draft version, to be finalized after interactive participatory discussions and clearance.

Additional Annexes to these ToRs will be distributed to the incumbent (general information, specific reference documents, etc.).

Competencies

Core values

- Demonstrates integrity and fairness by modeling UN values and ethical standards.
- Demonstrates professional competence and its conscientious and efficient in meeting commitments, observing deadlines and achieving results.
- Displays cultural, gender, religion, race, nationality and age sensitivity and adaptability.

Core competencies

- Results-Orientation: Plans and produces quality results to meet established goals, generates innovative, practical solutions to challenging situations.
- Quality of Work: Consistently ensures timeliness and quality of work.
- Communication: Excellent communication skills, including the ability to convey complex concepts and recommendations, both orally and in writing, in a clear and persuasive style tailored to match different audiences.
- Client orientation: Ability to establish and maintain productive partnerships with national partners and stakeholder. Ability to identify beneficiaries' needs, and to match them with appropriate solutions.

- Teamwork: Ability to interact, establish and maintain effective working relations with a culturally diverse team, both as a team member and as a team leader, to build trust, and to manage in a deliberate, transparent and predictable way.
- Building trust: Deals openly, honestly and transparently with issues, resources and people.

Qualifications

Education:	Advanced university degree in environmental field or related area
Experience:	Minimum 10 years experience and proven track record with policy advice and/or project development/implementation in biomass energy related projects in transition economies Proven track record of application of results-based approaches to evaluation of projects focusing on biomass energy (relevant experience in the region and within UN system would be an asset); Minimum 2 years of experience in monitoring and evaluation in environment field. Familiarity with priorities and basic principles of protected area management, biodiversity and sustainable development and relevant international best-practices; Knowledge of and recent experience in applying UNDP and GEF M&E policies and procedures; Proven ability and practical experience in monitoring and evaluation of international projects
Language Requirements:	Excellent knowledge of English language.

Award Criteria: The award will be based on the lowest financial offer of the technically suitable candidates.

Applicants are required to submit an application including:

- Letter of interest/ Proposal;
- Explaining why do you consider yourself the most suitable for the work
- Provide a brief methodology, if applicable, on how you will approach and conduct the work
- Personal CV including past experience in similar projects and contact details (e-mail addresses) of referees
- Financial proposal indicating the breakdown of your consultancy fee with a lump sum (including travel expenses and all other applicable fees, depending on the nature and complexity of the assignment). It should be noted that transportation on the field (only within BiH) and accommodation costs within BiH will be organized and directly paid by the project (and should not be included in the consultant's fee).

ANNEXURES

- Annex 1: GEF Terminology and Project Review Criteria
- Annex 2: Scope and Methodology of Evaluation
- Annex 3: Mid Term Evaluation Report Structure
- Annex 4: List of Documents to be Reviewed by the Evaluators
- Annex 5: Revised Project Logical Framework
- Annex 6: Rate Tables
- Annex 7: Co-financing Tables

Annex 1. GEF terminology and project review criteria

Implementation Approach includes an analysis of the project's logical framework, adaptation to changing conditions (adaptive management), partnerships in implementation arrangements, changes in project design, and overall project management.

Some elements of an effective implementation approach may include:
- The logical framework used during implementation as a management and M&E tool
- Effective partnerships arrangements established for implementation of the project with relevant stakeholders involved in the country/region
- Lessons from other relevant projects (e.g., same focal area) incorporated into project implementation
- Feedback from M&E activities used for adaptive management.

Country Ownership/Driveness is the relevance of the project to national development and environmental agendas, recipient country commitment, and regional and international agreements where applicable. Project Concept has its origin within the national sectoral and development plans

Some elements of effective country ownership/driveness may include:
- Project Concept has its origin within the national sectoral and development plans
- Outcomes (or potential outcomes) from the project have been incorporated into the national sectoral and development plans
- Relevant country representatives (e.g., governmental official, civil society, etc.) are actively involved in project identification, planning and/or implementation
- The recipient government has maintained financial commitment to the project
- The government has approved policies and/or modified regulatory frameworks in line with the project's objectives

For projects whose main focus and actors are in the private-sector rather than public-sector (e.g., IFC projects), elements of effective country ownership/driveness that demonstrate the interest and commitment of the local private sector to the project may include:
- The number of companies that participated in the project by: receiving technical assistance, applying for financing, attending dissemination events, adopting environmental standards promoted by the project, etc.
- Amount contributed by participating companies to achieve the environmental benefits promoted by the project, including: equity invested, guarantees provided, co-funding of project activities, in-kind contributions, etc.
- Project's collaboration with industry associations

Stakeholder Participation/Public Involvement consists of three related and often overlapping processes: information dissemination, consultation, and "stakeholder" participation. Stakeholders are the individuals, groups, institutions, or other bodies that have an interest or stake in the outcome of the GEF-financed project. The term also applies to those potentially adversely affected by a project.

Examples of effective public involvement include:

Information dissemination
- Implementation of appropriate outreach/public awareness campaigns

Consultation and stakeholder participation
- Consulting and making use of the skills, experiences and knowledge of NGOs, community and local groups, the private and public sectors, and academic institutions in the design, implementation, and evaluation of project activities

Stakeholder participation
- Project institutional networks well placed within the overall national or community organizational structures, for example, by building on the local decision making structures, incorporating local knowledge, and devolving project management responsibilities to the local organizations or communities as the project approaches closure
- Building partnerships among different project stakeholders
- Fulfillment of commitments to local stakeholders and stakeholders considered to be adequately involved.

Sustainability measures the extent to which benefits continue, within or outside the project domain, from a particular project or program after GEF assistance/external assistance has come to an end. Relevant factors to improve the sustainability of project outcomes include:

- Development and implementation of a sustainability strategy**.**
- Establishment of the financial and economic instruments and mechanisms to ensure the ongoing flow of benefits once the GEF assistance ends (from the public and private sectors, income generating activities, and market transformations to promote the project's objectives).
- Development of suitable organizational arrangements by public and/or private sector**.**
- Development of policy and regulatory frameworks that further the project objectives**.**
- Incorporation of environmental and ecological factors affecting future flow of benefits.
- Development of appropriate institutional capacity (systems, structures, staff, expertise, etc.) **.**
- Identification and involvement of champions (i.e. individuals in government and civil society who can promote sustainability of project outcomes)**.**
- Achieving social sustainability, for example, by mainstreaming project activities into the economy or community production activities**.**
- Achieving stakeholders consensus regarding courses of action on project activities.

Replication approach, in the context of GEF projects, is defined as lessons and experiences coming out of the project that are replicated or scaled up in the design and implementation of other projects. Replication can have two aspects, replication proper (lessons and experiences are replicated in different geographic area) or scaling up (lessons and experiences are replicated within the same geographic area but funded by other sources). Examples of replication approaches include:

- Knowledge transfer (i.e., dissemination of lessons through project result documents, training workshops, information exchange, a national and regional forum, etc).
- Expansion of demonstration projects.
- Capacity building and training of individuals, and institutions to expand the project's achievements in the country or other regions.
- Use of project-trained individuals, institutions or companies to replicate the project's outcomes in other regions.

Financial Planning includes actual project cost by activity, financial management (including disbursement issues), and co-financing. If a financial audit has been conducted the major findings should be presented in the TE.

Effective financial plans include:
- Identification of potential sources of co-financing as well as leveraged and associated financing[18].
- Strong financial controls, including reporting, and planning that allow the project management to make informed decisions regarding the budget at any time, allows for a proper and timely flow of funds, and for the payment of satisfactory project deliverables
- Due diligence due diligence in the management of funds and financial audits.

Co-financing includes: grants, loans/concessional (compared to market rate), credits, equity investments, in-kind support, other contributions mobilized for the project from other multilateral agencies, bilateral development cooperation agencies, NGOs, the private sector and beneficiaries. Please refer to Council documents on co-financing for definitions, such as GEF/C.20/6.

Leveraged resources are additional resources—beyond those committed to the project itself at the time of approval—that are mobilized later as a direct result of the project. Leveraged resources can be financial or in-kind and they may be from other donors, NGO's, foundations, governments, communities or the private sector. Please briefly describe the resources the project has leveraged since inception and indicate how these resources are contributing to the project's ultimate objective.

Cost-effectiveness assesses the achievement of the environmental and developmental objectives as well as the project's outputs in relation to the inputs, costs, and implementing time. It also examines the project's compliance with the application of the incremental cost concept. Cost-effective factors include:
- Compliance with the incremental cost criteria (e.g. GEF funds are used to finance a component of a project that would not have taken place without GEF funding.) and securing co-funding and associated funding.
- The project completed the planned activities and met or exceeded the expected outcomes in terms of achievement of Global Environmental and Development Objectives according to schedule, and as cost-effective as initially planned.
- The project used either a benchmark approach or a comparison approach (did not exceed the costs levels of similar projects in similar contexts)

Monitoring & Evaluation. Monitoring is the periodic oversight of a process, or the implementation of an activity, which seeks to establish the extent to which inputs, work schedules, other required actions and outputs are proceeding according to plan, so that timely action can be taken to correct the deficiencies detected. Evaluation is a process by which program inputs, activities and results are analyzed and judged explicitly against benchmarks or baseline conditions using performance indicators. This will allow project managers and planners to make decisions based on the evidence of information on the project implementation stage, performance indicators, level of funding still available, etc, building on the project's logical framework.

Monitoring and Evaluation includes activities to measure the project's achievements such as identification of performance indicators, measurement procedures, and determination of baseline conditions. Projects are required to implement plans for monitoring and evaluation with adequate funding and appropriate staff and include activities such as description of data sources and methods for data collection, collection of baseline data, and stakeholder participation. Given the long-term nature of many GEF projects, projects are also encouraged to include long-term monitoring plans that are sustainable after project completion.

[18] Please refer to Council documents on co-financing for definitions, such as GEF/C.20/6. The following page presents a table to be used for reporting co-financing.

ofinancing (Type/Source)	IA own Financing (mill US$)		Government (mill US$)		Other* (mill US$)		Total (mill US$)		Total Disbursement (mill US$)	
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual
– Grants										
– Loans/Concessional (compared to market rate)										
– Credits										
– Equity investments										
– In-kind support										
– Other (*)										
Totals										

ANNEX 2: SCOPE AND METHODOLOGY OF EVALUATION

A. SCOPE OF EVALUTION

The evaluation will focus on the range of aspects described below. In addition to a descriptive assessment, all criteria marked with (R) should be rated using the following divisions: *Highly Satisfactory, Satisfactory, Marginally Satisfactory, Marginally Unsatisfactory, Unsatisfactory, Highly Unsatisfactory.* All ratings given should be properly substantiated:

1. Project concept/design, relevance and strategy

1.1 Project relevance, country ownership/drivenness (R): the extent to which the project is suited to local and national development priorities and organizational policies, including changes over time as well as the extent the activities contribute towards attainment of global environmental benefits:

a. Is the project concept in line with the sectoral and development priorities and plans of the country?
b. Are project outcomes contributing to national development priorities and plans?
c. How and why project outcomes and strategies contribute to the achievement of the expected results.
d. Examine their relevance and whether they provide the most effective way towards results.
e. Do the outcomes developed during the inception phase still represent the best project strategy for achieving the project objectives (in light of updated underlying factors)? *Consider alternatives.*
f. Were the relevant country representatives, from government and civil society, involved in the project preparation?
g. Does the recipient government maintain its financial commitment to the project? Has the government approved policies or regulatory frameworks in line with the project's objectives?

1.2 Preparation and readiness:

a. Are the project's objective and components clear, practicable and feasible within its timeframe?
b. Were the capacities of executing institution and counterparts properly considered when the project was designed?
c. Were lessons from other relevant projects properly incorporated in the project design?
d. Were the partnership arrangements properly identified and the roles and responsibilities negotiated prior to project approval?
e. Were counterpart resources (funding, staff, and facilities), enabling legislation, and adequate project management arrangements in place at project entry?

1.3 Stakeholder involvement (R):

a. Did the project involve the relevant stakeholders through information-sharing, consultation and by seeking their participation in the project's design?
b. Did the project consult and make use of the skills, experience and knowledge of the appropriate government entities, NGOs, community groups, private sector, local governments and academic institutions in the design of project activities?

1.4 Underlying factors/assumptions:

a. Assess the underlying factors beyond the project's immediate control that influence outcomes and results. Consider the appropriateness and effectiveness of the project's management strategies for these factors.
b. Re-test the assumptions made by the project management and identify new assumptions that should be made.
c. Assess the effect of any incorrect assumptions made by the project.

1.5 Management arrangements (R):

a. Were the project roles properly assigned during the project design?
b. Are the project roles in line with UNDP and GEF programming guidelines?
c. Can the management arrangement model suggested by the project be considered as an optimum model? If no, please come up with suggestions and recommendations.

1.6 Project budget and duration (R):

a. Assess if the project budget and duration were planned in a cost-effective way?

1.7 Design of project M&E system (R):

a. Examine whether or not the project has a sound M&E plan to monitor results and track progress towards achieving project objectives.
b. Examine whether or not the M&E plan includes a baseline (including data, methodology, etc.), SMART indicators and data analysis systems, and evaluation studies at specific times to assess results and adequate funding for M&E activities.
c. Examine whether or not the time frame for various M&E activities and standards for outputs are specified.

1.8 Sustainability:

a. Assess if project sustainability strategy was developed during the project design?
b. Assess the relevance of project sustainability strategy

2. Project implementation

2.1 Project's adaptive management (R):

a. Monitoring systems
   - Assess the monitoring tools currently being used:
     - Do they provide the necessary information?
     - Do they involve key partners?
     - Are they efficient?
     - Are additional tools required?
   - Assess the use of the logical framework as a management tool during implementation and any changes made to it.
   - What impact did the retro-fitting of impact indicators have on project management, if such?
   - Assess whether or not M&E system facilitates timely tracking of progress towards project's objectives by collecting information on chosen indicators continually; annual project reports are complete, accurate and with well justified ratings; the information provided by the M&E system is used to improve project performance and to adapt to changing needs.

b. Risk Management
   - Validate whether the risks identified in the project document and PIRs are the most important and whether the risk ratings applied are appropriate. If not, explain why.
   - Describe any additional risks identified and suggest risk ratings and possible risk management strategies to be adopted.
   - Assess the project's risk identification and management systems:
     - Is the UNDP-GEF Risk Management System[19] appropriately applied?
     - How can the UNDP-GEF Risk Management System be used to strengthen the project management?

c. Work Planning
   - Assess the use of routinely updated work plans.
   - Assess the use of electronic information technologies to support implementation, participation and monitoring, as well as other project activities.
   - Are work planning processes result-based[20]? If not, suggest ways to re-orientate work planning.

d. Financial management
   - Consider the financial management of the project, with specific reference to the cost-effectiveness of interventions. (Cost-effectiveness: the extent to which results have been delivered with the least costly resources possible.). Any irregularities must be noted.
   - Is there due diligence in the management of funds and financial audits?
   - Did promised co-financing materialize (please fill out the co-financing form provided in Annex 1)?

e. Reporting
   - Assess how adaptive management changes have been reported by the project management.
   - Assess how lessons derived from the adaptive management process have been documented, shared with key partners and internalized by partners.

f. Delays

[19] UNDP-GEF's system is based on the Atlas Risk Module. See the UNDP-GEF Risk Management Strategy resource kit, available as Annex XII at http://www.undp.org/gef/05/monitoring/policies.html

[20] RBM Support documents are available at http://www.undp.org/eo/methodologies.htm

- Assess if there were delays in project implementation and what were the reasons.
- Did the delay affect the achievement of project's outcomes and/or sustainability, and if it did then in what ways and through what causal linkages?

2.2 Contribution of Implementing and Executing Agencies:

a. Assess the role of UNDP and RS Ministries (Ministry of Agriculture, Forestry and Water – management, Ministry of Education and Culture, Ministry for Industry, Energy and Mining, Ministry for Spatial Planning, Civil engineering and Ecology) against the requirements set out in the UNDP Programme and Operations Policies and Procedures[21]. Consider:
   - Field visits
   - Participation in Steering Committees
   - Project reviews, PIR preparation and follow-up
   - GEF guidance
   - Operational support

b. Consider the new UNDP requirements outlined in the UNDP Programme and Operations Policies and Procedures, especially the Project Assurance role, and ensure they are incorporated into the project's adaptive management framework.
c. Assess the contribution to the project from UNDP and RS Ministries (Ministry of Agriculture, Forestry and Water – management, Ministry of Education and Culture, Ministry for Industry, Energy and Mining, Ministry for Spatial Planning, Civil engineering and Ecology) in terms of "soft" assistance (i.e. policy advice & dialogue, advocacy, and coordination).
d. Suggest measures to strengthen UNDP's soft assistance to the project management.

2.3 Stakeholder participation, partnership strategy (R):

a. Assess whether or not and how local stakeholders participate in project management and decision-making. Include an analysis of the strengths and weaknesses of the approach adopted by the project and suggestions for improvement if necessary.
b. Does the project consult and make use of the skills, experience and knowledge of the appropriate government entities, NGOs, community groups, private sector, local governments and academic institutions in the implementation and evaluation of project activities?
c. Consider the dissemination of project information to partners and stakeholders and if necessary suggest more appropriate mechanisms.
d. Identify opportunities for stronger partnerships.

2.4 Sustainability:

a. Assess the extent to which the benefits of the project will continue, within or outside the project scope, after it has come to an end; commitment of the government to support the initiative beyond the project.
b. The evaluators may look at factors such as mainstreaming project objectives into the broader development policies and sectoral plans and economies.

- The sustainability assessment will give special attention to analysis of the risks that are likely to affect the persistence of project outcomes. The sustainability assessment should also

[21] Available at http://content.undp.org/go/userguide/results/project/

explain how other important contextual factors that are not outcomes of the project will affect sustainability. The following four dimensions or aspects of sustainability will be addressed:

- *Financial resources:* Are there any financial risks that may jeopardize sustenance of project outcomes? What is the likelihood of financial and economic resources not being available once the GEF assistance ends (resources can be from multiple sources, such as the public and private sectors, income generating activities, and trends that may indicate that it is likely that in future there will be adequate financial resources for sustaining project's outcomes)?
- *Socio-political:* Are there any social or political risks that may jeopardize sustenance of project outcomes? What is the risk that the level of stakeholder ownership (including ownership by governments and other key stakeholders) will be insufficient to allow for the project outcomes/benefits to be sustained? Do the various key stakeholders see that it is in their interest that the project benefits continue to flow? Is there sufficient public / stakeholder awareness in support of the long term objectives of the project?
- *Institutional framework and governance:* Do the legal frameworks, policies and governance structures and processes pose risks that may jeopardize sustenance of project benefits? While assessing this parameter, also consider if the required systems for accountability and transparency, and the required technical know-how are in place.
- *Environmental:* Are there any environmental risks that may jeopardize sustenance of project outcomes? The terminal evaluation should assess whether certain activities will pose a threat to the sustainability of the project outcomes.

- On each of the dimensions of sustainability of the project outcomes will be rated as follows:
  - *Likely* (L): There are no or negligible risks that affect this dimension of sustainability.
  - *Moderately Likely* (ML): There are moderate risks that affect this dimension of sustainability.
  - *Moderately Unlikely* (MU): There are significant risks that affect this dimension of sustainability
  - *Unlikely* (U): There are severe risks that affect this dimension of sustainability.

3. Project results (outputs, outcomes and objectives)

3.1 Progress towards achievement of intended outputs, outcomes/measurement of change:
Progress towards results should be based on a comparison of indicators before and after (so far) the project intervention.

- To determine the level of achievement of project outcomes and objectives following three criteria should be assessed:
- *Relevance*: Are the project's outcomes consistent with the focal areas/operational program strategies and country priorities?
- *Effectiveness*: Are the actual project outcomes commensurate with the original or modified project objectives? In case the original or modified expected results are merely outputs/inputs then the evaluators should assess if there are any real outcomes of the project and if yes then whether these are commensurate with the realistic expectations from such a project.
- *Efficiency*: Is the project cost effective? Is the project the least cost option? Is the project implementation delayed and if it is, then does that affect cost-effectiveness? Wherever possible, the evaluator should also compare the cost-time vs. outcomes relationship of the project with that of other similar projects.

- Outcomes and the whole project should be rated as follows for relevance, effectiveness, efficiency:
- *Highly Satisfactory (HS):* The project has no shortcomings in the achievement of its objectives.
- *Satisfactory (S):* The project has minor shortcomings in the achievement of its objectives.
- *Marginally Satisfactory (MS):* The project has moderate shortcomings in the achievement of its objectives.
- *Marginally Unsatisfactory (MU)*: The project has significant shortcomings in the achievement of its objectives.
- *Unsatisfactory (U):* The project has major shortcomings in the achievement of its objectives.
- *Highly Unsatisfactory (HU):* The project has severe shortcomings in the achievement of its objectives.

* Other is referred to contributions mobilized for the project from other multilateral agencies, bilateral development cooperation agencies, NGOs, the private sector and beneficiaries.

Leveraged Resources
Leveraged resources are additional resources—beyond those committed to the project itself at the time of approval—that are mobilized later as a direct result of the project. Leveraged resources can be financial or in-kind and they may be from other donors, NGO's, foundations, governments, communities or the private sector. Please briefly describe the resources the project has leveraged since inception and indicate how these resources are contributing to the project's ultimate objective

B. EVALUATION METHODOLOGY

An outline of an evaluation approach is provided below; however it should be made clear that the evaluation team is responsible for revising the approach as necessary. Any changes should be in-line with international criteria and professional norms and standards (as adopted by the UN Evaluation Group[22]). They must be also cleared by UNDP before being applied by the evaluation team.

The evaluation must provide evidence-based information that is credible, reliable and useful. It must be easily understood by project partners and applicable to the remaining period of project duration.

Evaluators should seek guidance for their work in the following materials, which could be found at (www.undp.org/gef):

- UNDP Handbook on Monitoring and Evaluation for Results
- UNDP/GEF M&E Resource Kit
- Measuring Results of the GEF Biomass Projects

It is recommended that the evaluation methodology include the following:

- Documentation review (desk study), to include Project Document, Project CEO Approval Document, Inception Report, GEF Project Implementation Reviews, Minutes of the Project Steering Committee meetings, GEF quarterly project updates;
- Interviews with Project Management Unit and key project stakeholders, including UNDP Country Office in BiH, GEF Regional Coordination Unit in Bratislava, relevant ministries, project local management unit and other stakeholders, as necessary;

[22] See http://www.uneval.org/

- In-country field visits.

ANNEX 3: Mid-Term Evaluation Report Structure

The core product of the Mid-Term Evaluation will be the Mid-Term Evaluation Report that includes:

- Findings with the rating on performance;
- Conclusions drawn;
- Recommendations for improving delivery of project outputs;
- Lessons learned concerning best and worst practices in producing outputs;
- A rating on progress towards outputs.

The report is proposed to adhere to the following basic structure:

1. Executive summary
   - Brief description of project
   - Context and purpose of the evaluation
   - Main conclusions, recommendations and lessons learned

2. Introduction
   - Project background
   - Purpose of the evaluation
   - Key issues to be addressed
   - The outputs of the evaluation and how will they be used
   - Methodology of the evaluation
   - Structure of the evaluation

3. The project and its development context
   - Project start and its duration
   - Implementation status
   - Problems that the project seeks to address
   - Immediate and development objectives of the project
   - Main stakeholders
   - Results expected
   - Analysis of the situation with regard to outcomes, outputs and partnership strategy

4. Findings and Conclusions
   - 4.1 Project formulation
     - Project relevance
     - Implementation approach
     - Country ownership/Driveness
     - Stakeholder participation
     - Replication approach
     - Cost-effectiveness
     - Sustainability
     - Linkages between project and other interventions within the sector
     - Management arrangements
   - 4.2 Project implementation
     - Financial management
     - Monitoring and evaluation
     - Management and coordination
     - Identification and management of risks (adaptive management)
   - 4.3 Results

- Attainment of outputs, outcomes and objectives
- Project Impact
- Prospects of sustainability

5. Conclusions and recommendations
   - Findings
   - Corrective actions for the design, duration, implementation, monitoring and evaluation of the project
   - Actions to strengthen or reinforce benefits from the project
   - Proposals for future directions underlining main objectives
   - Suggestions for strengthening ownership, management of potential risks

6. Lessons learned
   - Good practices and lessons learned in addressing issues relating to effectiveness, efficiency and relevance

7. Annexes
   - Evaluation TOR
   - Itinerary
   - List of persons interviewed
   - Summary of field visits
   - List of documents reviewed
   - Questionnaire used (if any) and summary of results
   - Comments by stakeholders (only in case of discrepancies with evaluation findings and conclusions)
   - Management Effectiveness Tracking Tool

The Report will be supplemented by Rate Tables, attached in Annex 6 of this TOR.

The Report will include a table of planned vs. actual project financial disbursements, and planned co-financing vs. actual co-financing in this project, according the table attached in Annex 7 of this TOR.

The expected length of the report is around 50 pages in total. The first draft of the report is expected to be submitted to the UNDP Country Office in BiH within 2 weeks of the in-country mission for subsequent circulation to the key project stakeholders for comments. Any discrepancies between the interpretations and findings of the evaluator and the key project stakeholders will be explained in an annex to the final report.

ANNEX 4: LIST OF DOCUMENTS TO BE REVIEWED BY THE EVALUATORS

General Documentation

- UNDP Programme and Operations Policies and Procedures
- UNDP Handbook for Monitoring and Evaluating for Results
- GEF Monitoring and Evaluation Policy

Project Documentation

- Project Document
- Project CEO Approval Document
- Inception Report
- Annual Project Reports

- Project Implementation Review
- Quarterly Reports
- Steering Committee Meeting Minutes
- Management Effectiveness Tracking Tool (METT midterm)

ANNEX 5: RATE TABLES

Table: Status of objective / outcome delivery as per measurable indicators

OBJECTIVE	MEASURABLE INDICATORS FROM PROJECT LOGFRAME	END-OF-PROJECT TARGET	STATUS OF DELIVERY*	RATING**
Objective:				
OUTCOMES	**MEASURABLE INDICATORS FROM PROJECT LOGFRAME**	**END-OF-PROJECT TARGET**	**STATUS OF DELIVERY**	**RATING**
Outcome 1:				
Outcome 3:				
Outcome 3:				

Status of delivery coloring codes:
Green / completed – indicator shows successful achievement
Yellow – indicator shows expected completion by the end of the project
Red – Indicator show poor achievement - unlikely to be complete by end of Project

*** Ratings code as are detailed in Annex 2.*

APPENDIX B – MISSION ITINERARY (FOR JAN 31 – FEB 8, 2012)

The mid-term evaluation mission was conducted by Mr. Roland Wong, International Consultant in accordance with the objectives of the evaluation and obtained data relevant for making judgments regarding Project success and lessons learned.

***January 31, 2012** (Tuesday)*			
#	**Activity**	**Stakeholder involved**	**Place**
	Arrival of Mr. Roland Wong		Sarajevo
1	Briefing on Project with UNDP Country Office, Ms. Amila Selmanagic-Bajrovic, Project Manager; and Ms. Fadila Sarajlic, Project Associate	UNDP	Sarajevo
***February 1, 2012** (Wednesday)*			
2	Meeting with Mr. Senad Oprasic, GEF Focal Point and Head of Environmental Dept.	MoFTER	Sarajevo
3	Briefing of MTE with UNDP Senior Management including Mr. Armin Sirco, Assistant Resident Representative, and Ms. Arnela Ojvan, Programme Associate	UNDP	Sarajevo
4	Meeting with Mrs. Biljana Trivanovic, Project Board Member and Head of Department of Secondary Energy Sources	MoFTER	Sarajevo
***February 2, 2012** (Thursday)*			
5	Meeting with Mr. Jovan Nikolic, Director and Mr. Dragan Zivanovic, School Caretaker, Mr. Fahir Cimic, Local Liaison Officer	Elementary School "Branko Radicevic"	Bratunac, Srebrenica Region
6	Meeting with Mr. Dragi Jovanovic Assistant Director, Mr. Milisav Stojanovic School Caretaker, and Mr. Fahir Cimic, Local Liaison Officer	Elementary School "Petar Petrovic Njegos"	Srebrenica, Srebrenica Region
7	Meeting at SRRP Office with Mr. Alexandre Prieto, Project Manager, and Mr. Bojan Kovacevic, UNDP Project Engineer	SRRP Office	Srebrenica, Srebrenica Region
***February 3, 2012** (Friday)*			
8	Meeting with Mr. Peter Van Ruysseveldt, Deputy Resident Representative	UNDP	Sarajevo

February 4, 2012 *(Saturday)*			
	Preparation of Report		Sarajevo
February 5, 2012 *(Sunday)*			
	Preparation of Report		Sarajevo
February 6, 2012 *(Monday)*			
	Cancellation of field trip to Banja Luka due to snowstorm		Sarajevo
February 7, 2012 *(Tuesday)*			
9	Meeting with Mr. Semin Petrovic, National ME consultant	UNDP Expert	Sarajevo
10	Meeting with Ceteor's Mr. Sanjin Avdic, Project Manager, Ms Anela Rodic, Enova company, and Mr. Azrudin Husika, Teaching Assistant at the Mechanical Engineering Faculty of University of Sarajevo (REIC Expert on biomass supply and demand)	Consortium facilitating National Biomass Association	Sarajevo
11	Meeting with DvokutPro, Mr. Jesenko Tais and Ms. Maja Taslidzic Saciragic	UNDP Experts	Sarajevo
February 8, 2012 *(Wednesday)*			
12	Debriefing of Evaluation Mission with Project Staff, Ms. Amila Selmanagic-Bajrovic, Project Manager; and Ms. Fadila Sarajlic, Project Associate and UNDP Senior, Ms. Arnela Ojvan, Programme Associate	UNDP	Sarajevo
February 9, 2012 *(Thursday)*			
	Departure of Mr. Roland Wong		

Total number of meetings conducted: **12**

APPENDIX C – LIST OF PERSONS INTERVIEWED AND DOCUMENTS REVIEWED

This is a listing of persons contacted in Sarajevo and Srebrenica (unless otherwise noted) during the Evaluation Period for the MTE only. The Evaluation Team regret any omissions to this list.

1) Ms. Amila Selmanagic-Bajrovic, Project Manager, PIU, UNDP;
2) Ms. Fadila Sarajlic, Project Associate, PIU, UNDP;
3) Mr. Fahir Cimic, Local Liaison Officer, UNDP Biomass Project;
4) Mr. Armin Sirco, Assistant Resident Representative; UNDP;
5) Mr. Peter Van Ruysseveldt, Deputy Resident Representative, UNDP;
6) Ms. Arnela Ojvan, Energy and Environment Cluster Programme Associate, UNDP;
7) Mr. Alexandre Prieto, Programme Manager of the Srebrenica SRRP;
8) Mr. Bojan Kovacevic, Project Manager of SRRP;
9) Mr. Senad Oprasic, GEF Focal Point and Head of Environmental Dept., MoFTER;
10) Mrs. Biljana Trivanovic, Project Board Member and Head of Department of Secondary Energy Sources, MoFTER;
11) Mr. Semin Petrovic, Project National ME Consultant, UNDP;
12) Mr. Sanjin Avdic, UNDP Expert, and Ceteor Project Manager;
13) Ms. Anela Rodic, Enova Company, NBA facilitator and Assistant Project Manager;
14) Mr. Azrudin Husika, UNDP Expert and Teaching Assistant at the Mechanical Engineering Faculty of University of Sarajevo; Regional Center for Education and Information from Sustainable Development, REIC expert;
15) Mr. Jesenko Tais, DvokutPro;
16) Ms. Taslidzic Saciragic, DvokutPro.

Documents reviewed for this evaluation includes:

1) UNDP-GEF Bosnia and Herzegovina “Biomass Energy for Employment and Energy Security Project”, 2006, Project Document;
2) UNDP Annual Progress Reports, Project Implementation Review Reports, Project Board Meetings, PIRs and QPRs;
3) Various correspondence between Project and Stakeholders (i.e. Council of Ministers, Entity Governments and School Boards);

4) UNDP-GEF Final Report on “Awareness, risk and capacity surveying in the B&H biomass sector with a special focus on Srebrenica region”, by DVOKUT pro, March 2011;

5) UNDP-GEF Report on “Facilitation of biomass association development and enhancement of advocacy capacities within the woody Biomass sector of B&H“, by Ceteor and Enova, December 2011;

6) UNDP-GEF Report on “Implementation of the Study Trip” by Dvokut pro, December 2010;

7) UNDP-GEF Report on “Cost/benefit analysis in the B&H biomass sector – with a special focus on Srebrenica region“, by Dvokut pro, June 2011;

8) UNDP-GEF Report on “Analysis of Wood Residue Supply and Demand in the Territory of Srebrenica, Bratunac and Milići Municipalities by Ahusika, March 2011;

9) UNDP-GEF Report on “Reduction in the Emission of Greenhouse Gases in Six Elementary Schools in Srebrenica Region” by Ismar Jamaković, dipl. ing maš, November 2011;

10) UNDP-GEF Report on “Analysis of Existing Supply System for Heat Energy of Elementary Schools in the Territory of Muncipalieis Srebrenica, Milici and Bratunac” by Dr Petar M. Gvero, November 2010;

11) Ministry of Foreign Trade and Economic Relations of Bosnia and Herzegovina Report on “Security of Energy Supply in Bosnia and Herzegovina”, by Ms Mubera Bičakčić, , September 2010;

12) REIC Report on “Biomass Energy Resources in Bosnia and Herzegovina” by Azrudin Husika, November 2010;

13) UNDP Report on “External Evaluation of SRRP” by Ahmed Abou-El-Yazeid, Stephanie J. Hodge and John F. A. Krijnen, September 2008;

14) UNDP Report on “Outputs and Outcomes of the ‘Forestry for Bosnian Returnee’ Activity of SRRP” by Dr. Gavin Jordan, June 2009.