

# Scientific and Technical Advisory Panel

The Scientific and Technical Advisory Panel, administered by UNEP, advises the Global Environment Facility  
(Version 5)

## STAP Scientific and Technical screening of the Project Identification Form (PIF)

Date of screening: January 26, 2012

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### I. PIF Information *(Copied from the PIF)*

**FULL SIZE PROJECT    GEF TRUST FUND**

**GEF PROJECT ID:** 4517

**PROJECT DURATION :** 4

**COUNTRIES :** Serbia

**PROJECT TITLE:** Reducing Barriers to Accelerate the Development of Biomass Markets in Serbia

**GEF AGENCIES:** UNDP

**OTHER EXECUTING PARTNERS:** Ministry of Environment and Spatial Planning, Ministry of Mining and Energy, Ministry of Agriculture, Forestry, and Water Management

**GEF FOCAL AREA:** Climate Change

### II. STAP Advisory Response *(see table below for explanation)*

Based on this PIF screening, STAP's advisory response to the GEF Secretariat and GEF Agency(ies): **Minor revision required**

### III. Further guidance from STAP

STAP welcomes this project, which aims at promoting biomass energy and biomass markets in Serbia. There are a number of critical gaps in the PIF, however, that should be addressed in the project formulation stage - e.g. whether biomass combustion or gasification route will be adopted, and also whether the biomass power is for feeding to the centralized grid or for decentralized applications (off-grid)? These issues will have significant implications for project viability. Some of the following issues could be addressed during project preparation:

1. There is a large baseline of existing policies, programs and incentives to promote biomass power in Serbia. It is necessary to analyze the limitations of these existing policies, programs and conduct a systematic barrier analysis. This analysis should inform development of secondary legislation requirements.
2. STAP recommends conducting a technical and economic assessment of technologies: biomass combustion or gasification and biomethanation. What is the source of technologies? Are mature off the shelf technologies available or they will be imported?
3. Economic or financial analysis of biomass energy options is critical. Financial viability depends on: installed capacity, cost of biomass feedstock, price of electricity, plant load factor, transportation cost of biomass and electricity.
4. It is not clear whether biomass power will be used for feeding the national grid or for decentralized applications. The financial viability depends on this issue and has to be addressed at the CEO endorsement stage.
5. Estimating biomass power or energy potential is recognized in the PIF. STAP further suggests to prepare a spatial biomass map and database, which should assist decision-making processes on determining an optional capacity of the biomass power plant and siting of the utility within the country.
6. Life cycle analysis of energy and CO<sub>2</sub> emissions is necessary in the case of dedicated biomass production. In other words an energy or CO<sub>2</sub> balance calculation is necessary to ensure the net CO<sub>2</sub> benefits of the project and should be demonstrated in the full project document.
7. The capacity and optimal location of demonstration projects is necessary to ensure minimization of the cost of biomass and maximization of plant load factor for a given biomass resource.

8. Among several measures promoting biomass energy development in Serbia, the project proponents propose support for "energy crops" on marginal lands. Because of the controversial nature of energy crops and significant potential for adverse environmental impacts as well as potential for negative or rather neutral GHG mitigation potential, STAP recommends presenting a detailed description and justification for environmental and social safeguards - possibly using EU technical standards as proposed. Furthermore, specific safeguard enforcement measures have to be described at the CEO endorsement stage.

9. Serbia might have sufficient stock of biomass residues from agricultural and forestry activities including animal manure. Before supporting dedicated energy plantations, STAP recommends caution and assurance that sustainable biomass production practices are adopted. These issues have to be addressed with a sufficient level of detail during project preparation.

10. The project focuses on the promotion of biomass energy sources for small farming communities. In addition to biomass energy, STAP recommends exploring other RE sources such as solar and wind that could be complementary and used in particular locations and circumstances. Feasibility analysis of other alternative sources would be beneficial.

<i>STAP advisory response</i>	<i>Brief explanation of advisory response and action proposed</i>
<b>1. Consent</b>	STAP acknowledges that on scientific/technical grounds the concept has merit. However, STAP may state its views on the concept emphasising any issues that could be improved and the proponent is invited to approach STAP for advice at any time during the development of the project brief prior to submission for CEO endorsement.
<b>2. Minor revision required.</b>	STAP has identified specific scientific/technical suggestions or opportunities that should be discussed with the proponent as early as possible during development of the project brief. One or more options that remain open to STAP include: <ul style="list-style-type: none"> <li>(i) Opening a dialogue between STAP and the proponent to clarify issues</li> <li>(ii) Setting a review point during early stage project development and agreeing terms of reference for an independent expert to be appointed to conduct this review</li> </ul> The proponent should provide a report of the action agreed and taken, at the time of submission of the full project brief for CEO endorsement.
<b>3. Major revision required</b>	STAP proposes significant improvements or has concerns on the grounds of specified major scientific/technical omissions in the concept. If STAP provides this advisory response, a full explanation would also be provided. Normally, a STAP approved review will be mandatory prior to submission of the project brief for CEO endorsement. The proponent should provide a report of the action agreed and taken, at the time of submission of the full project brief for CEO endorsement.