

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: May 12, 2010

Screeners: Lev Neretin

Panel member validation by: Nijavalli H. Ravindranath
Consultant(s):

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

FULL SIZE PROJECT **GEF TRUST FUND**

GEF PROJECT ID: 4160

PROJECT DURATION : 4

COUNTRIES : Tajikistan

PROJECT TITLE: Technology Transfer and Market Development for Small-Hydropower in Tajikistan

GEF AGENCIES: UNDP

OTHER EXECUTING PARTNERS: Ministry of Industry and Energy

GEF FOCAL AREA: Climate Change

GEF-4 STRATEGIC PROGRAMS: CC-3;

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): **Consent**

III. Further guidance from STAP

The project aims at developing SHP and avoid the use of conventional biomass and fossil fuels for power and other energy needs. The PIF, although well constructed, does not indicate where fossil fuels and biomass energy are used and how they will be substituted by hydro-power. The project concept addresses adequately major barriers for SHP development such as lack of policy and regulatory support, technical and information barriers, financial and investment barriers. SHP mainstreaming into community development is an added value and an important factor of success. STAP suggest that the following questions and comments are addressed by CEO endorsement stage.

1. GHG emissions and Baseline energy scenario: The project objective is about substitution of biomass and fossil fuel for power and other energy needs for hydropower. However, over 95% of Tajikistan's power generation is based on Large Hydro Power Systems. Thus in the baseline scenario, apparently no GHG emissions are occurring, since all the electricity comes from renewable hydrological resources and no estimate is given of GHG emissions from other sources. In this case, what are net GHG benefits in this project?
2. Micro hydro potential mapping: STAP suggests, after a review is conducted of the First and Second National Communications of the Republic of Tajikistan to the UNFCCC, the option of conducting a national level study to identify and locate potential sites for installing SHP units along with potential installed capacity. A micro hydro potential map could be generated for the country. This would help replication of projects in other regions.
3. Seasonality of SHP systems: In most locations, water resources for SHP systems may be inadequate to provide power supply all year round. How will the risk of seasonality of water and power supply be addressed? Will there be a back-up system based on other sources of energy and what will be cost implications? This information should be provided in the project document.
4. Grid connected or off-grid: The project although focusing on remote rural communities should explore the economic rationale for grid-connected as well as off-grid systems and adopt an appropriate strategy. Off-grid systems would also depend on the sustained demand for electricity near the location of power generation. STAP recommends conducting such an analysis during project preparation.

<i>STAP advisory response</i>	<i>Brief explanation of advisory response and action proposed</i>
1. Consent	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.
2. Minor revision required.	<p>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:</p> <ul style="list-style-type: none"> (i) Opening a dialogue between STAP and the proponent to clarify issues (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 <p>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.</p>
3. Major revision required	<p>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.</p> <p>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.</p>