

# Scientific and Technical Advisory Panel

The Scientific and Technical Advisory Panel, administered by UNEP, advises the Global Environment Facility



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

Date of screening: 18<sup>th</sup> May 2009

Screener: Lev Neretin

Panel member validation by: N.H. Ravindranath

### I. PIF Information

**Full size project**      **GEF Trust Fund**

**GEF Project ID: 3937**

**Country:** The Republic of Sierra Leone

**Project Title:** Promoting Mini Grids Based on Small Hydropower for Productive Uses in Sierra Leone

**GEF Agency:** UNIDO

**Other Executing partners:** Ministry of Electricity and Power, Ministry of Lands Planning and Environment.

**GEF Focal Area:** Climate Change.

**GEF-4 Strategic program:** CC-SP3: Promoting Market Approaches for Renewable Energy

**Name of parent program/umbrella project:** GEF Programmatic Approach on Access to Energy in West Africa

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

1. Based on this PIF screening, STAP's advisory response to the GEF Secretariat and GEF Agency(ies):  
**Consent**

### III. Further guidance from STAP

1. The PIF states that the decentralized mini-grid based on renewable energy sources is the most cost effective technology for rural electrification. STAP acknowledges that the statement is correct, but recommends conducting a cost-benefit analysis of renewable alternatives and providing a rationale for selecting small hydropower (SHP).
2. Depending on the annual variability of water flow, other than SHP alternative renewable sources need to be considered. How the project will build capacity for the promotion other than SHP renewable energy sources?
3. STAP recommends using a systematic approach to identifying locations of SHP systems and capacity of the systems in relation to the demand or load centre. The PIF states that construction of 2MW SHP plant would be completed. Will this be a single 2MW unit or multiple units adding up to 2MW? The capacity of the SHP system should be determined after assessing the volume and seasonal variability of water flow.
4. How will planning for SHP and other project interventions address the impact of annual and seasonal rainfall changes on stream flows (including climatic variability)?

| <i>STAP advisory response</i>      | <i>Brief explanation of advisory response and action proposed</i>  |
|------------------------------------|--|
| 1. <b>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.   |
| 2. <b>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:<br>(i) Opening a dialogue between STAP and the proponent to clarify issues<br>(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<br>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. |
| 3. <b>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.<br>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.   |