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: 29th September 2009 Screener: Lev Neretin

Panel member validation by: N.H. Ravindranath

I. PIF Information

GEFSEC PROJECT ID: 4089
COUNTRY(IES): KIRIBATI, PAPUA NEW GUINEA, SOLOMON ISLANDS, VANUATU
PROJECT TITLE: ENERGIZING THE PACIFIC REGIONAL PROJECT
GEF AGENCY(IES): World Bank
OTHER EXECUTING PARTNER(S): GOVERNMENTS OF PARTICIPATING COUNTRIES
GEF FOCAL AREA (S): Climate Change
GEF-4 STRATEGIC PROGRAM(S): - PROMOTING ENERGY EFFICIENCY IN THE INDUSTRIAL SECTOR, - PROMOTING MARKET APPROACHES FOR RENEWABLE ENERGY
NAME OF PARENT PROGRAM/UMBRELLA PROJECT: GEF PACIFIC ALLIANCE FOR SUSTAINABILITY (GPAS)

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

STAP welcomes this proposed comprehensive and gradual approach to promoting development of EE and RE markets in selected Pacific Island countries. This project is more like an energy sector development project for PICs. This project has long term goals in addition to short and medium term plans. The project aims to develop least cost energy sector plans for the PICs. STAP recommends this project. However, some of the following issues could be addressed in the next stage of the project.

- *Least Cost Energy Plans*: This is a very interesting concept for the energy sector, given the resource constraints. However, least cost energy plan may not always lead to maximization of GHG mitigation. Further renewable energy may or may not be an integral component of least cost energy mix. And even some of the energy efficient technologies may or may not be a part of the least cost energy mix. Thus it may be desirable to do modeling using a multiple objective optimization technique. The optimization technique can have multiple objectives with different scenarios giving different weightings or priorities such as
    - Energy security, GHG emission reduction, cost minimization, maximizing efficiency and local employment.
    - The outputs from different scenario runs can be compared and policy makers can decide the scenario most appropriate to the region (e.g., cost minimization or GHG emission reduction).
    - Criteria for investment support for particular RE technologies and/or specific EE measures in the industrial sector have to be justified using criteria consisting of cost, GHG emission, local availability of the resources etc.

- *Barrier Analysis*: Project proponents presented a wide range of barriers to grid-based RE supply and EE measures in PIF. It is expected that project document will systematically document generic and country-specific barriers and how project components will address them. Barriers need to be analyzed for different renewable energy and energy efficiency technological interventions from the perspective of different stakeholders.
- *Decentralized Power Generation:* Decentralized power generation for meeting local needs should also be part of the planning process. Renewable energy options such as SPV, biomass power, biogas power, wind energy should all be evaluated for cost and GHG emissions, before taking decisions on technological interventions.
- *Power Grids:* There is a need to distinguish between national, regional and local grids. There is also a need for modeling to compare the economics of national, regional and local grids especially for

renewable energy technologies. The transmission and distribution losses should be incorporated in the analysis of national versus local grids.

- *Modeling:* The proposal talks about data gathering and analysis. There is a need to enhance the capacity for modeling to develop energy plans with multiple objectives.
- *Energy Efficiency:* Energy efficient systems should obviously be an integral component of renewable energy plans or renewable energy based grid systems. Renewable electricity must be efficiently used to improve the economics of renewable energy based power generation systems.
- *Baseline Scenario:* There is a need to develop and project baseline scenario power generation mix and GHG emissions, to enable assessment of impacts of the project on GHG reduction.
- *Climate change risks***:** Climate change represents particular challenge for sustainability of project interventions, since many renewable energy sources are likely to be impacted by climate change. STAP expects that these risks will be treated systematically in the project document and evidence provided on how project interventions build long-term energy security in Pacific islands under climate change scenarios.
- *Dissemination Strategy***:** STAP recommends including results dissemination strategy for this project as its lessons may be of wider applicability for other SIDS and LDCs.

STAP advisory response	*Brief explanation of advisory response and action proposed*
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.	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: (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 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. Major revision required	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.