

# 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 09, 2013

Screener: Guadalupe Duron

Panel member validation by: Anand Patwardhan; Brian Huntley  
Consultant(s):

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

**FULL SIZE PROJECT MULTI TRUST FUNDS**

**GEF PROJECT ID:** 5384

**PROJECT DURATION :** 6

**COUNTRIES :** Regional (Bolivia, Colombia, Ecuador, Peru)

**PROJECT TITLE:** Adaptation to the Impact of Climate Change in Water Resources for the Andean Region

**GEF AGENCIES:** World Bank

**OTHER EXECUTING PARTNERS:**

**GEF FOCAL AREA:** Multi Focal Area

### 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): **Major revision required**

### III. Further guidance from STAP

STAP welcomes the World Bank's proposal "Adaptation to the impact of climate change in water resources for the Andean region". The STAP is pleased to see this proposal attempts to build on, and scale-up, the previous GEF funded and World Bank led project "Adaptation to the Impacts of Rapid Glacier Retreat in the Tropical Andes" (PRAA) as a means to strengthening climate change resilience in the region.

The proposal documentation (including the project information document, the project concept note and its annexes, and the additional information about the proposal (Annex 2)) states the components will be defined more thoroughly during the proposal development. The lack of detail regarding the proposed adaptation interventions, or the manner in which mainstreaming and long-term institutional capacity-building will be carried out, limits the extent to which a review of the scientific rationale of the initiative may be attempted at this time. In addition, the biodiversity element in component 3 for Ecuador appears disconnected from the overall thrust of the project. STAP believes this element is not well integrated into the proposal and certainly not as an activity representative of a regional project seeking to generate multiple global environmental benefits. For these reasons, STAP provides an overall recommendation of "major revision". It is hoped that these issues along with the recommendations below will be addressed during the course of the project development.

1. The proposed project targets an important climate-sensitive region, and seeks to develop a regional approach towards climate resilience, building on past interventions in the area. While these are all welcome features of the project, the concept note is unfortunately lacking the detail required to reasonably assess its feasibility and effectiveness at this stage. The problem statement itself is not fully specified. Glacial retreat will certainly have implications for downstream hydrology. But what are the expected implications? Will there be greater variability in streamflow? A rather sketchy description is provided in the section on sectoral and institutional context, which unfortunately does not capture the range of climate change outcomes to which adaptation is required.

2. Furthermore, it would be useful to strengthen this section further by providing data based on model projections of climate change in the tropical Andes, identifying possible implications for water resources. Perhaps literature used for the development and implementation of the PRAA also could be useful in this regard, as well as other recent published literature, such as: Vuille, M. et al. "Climate change and tropical Andean glaciers: Past, present and future. Earth Science Reviews (2008)79-96, Rabatel, A, "Current state of glaciers in the tropical Andes: a multi-century perspective on glacier evolution and climate change", Cryosphere 2013, Vol. 7 Issue 1, p81-102, 2013 and Seiler, C, "Climate Variability and Trends in Bolivia", Journal of Applied Meteorology & Climatology Jan2013, Vol. 52 Issue 1, p130-146, 2013.

3. The relationship between the project objective and the SCCF strategy is not clear – particularly with regard to the additional cost reasoning. For example, the concept note specifies the project objective as: The proposed objective of this project is to generate tools and knowledge to enable governments to promote resilient management of their water resources through the inclusion of climate change impacts into policy, planning and on the ground investments on selected sectors, and to promote south-south learning, collaboration and technology transfer. While this objective is quite laudable, how is it related to the strategic objectives of the SCCF? It is certainly important to improve the base of scientific knowledge pertaining to future climate change. On the other hand, many uncertainties are not, and will not be fully resolved. In such a situation, what are the robust outcomes to which responses are warranted? How will the tools and knowledge generated contribute towards long-term adaptation and resilience enhancement?

4. Component 3 of the project seeks to: finance climate adaptation investments, and it will include activities such as: (i) design and implementation of adaptation measures, on selected sectors, that incorporate technologies and approaches that have proven to work elsewhere and contribute to the increased resilience of the sector (which could include, inter alia, water supply, energy generation, food security, agriculture or biodiversity management). This is a rather broad and vague specification of the proposed interventions. What is the basis for selecting sectors? What kinds of adaptation measures are being considered? How will they be evaluated? In what way are they additional to the baseline activities in the region / countries?

5. Additionally, STAP encourages the project developers to specify the following during the proposal development – i) define more precisely the target areas in each country; ii) describe the socio-economic characteristics of the communities in the target areas ; iii) describe what impact climate change is posing in the target region (at the catchment level) related to glacier melting and its possible effects on water resources by relying on scientific documents and/or unpublished rigorous sources – including outputs from the PRAA; iv) define how each component will contribute to reducing the vulnerability of the communities to climate risks posed by glacier retreat to increase the sustainability of water resources for livelihood purposes (agriculture, water supply, food security), and for biodiversity conservation.

6. Many of the key results are proposed to be measured through publications in scientific journals – STAP questions whether this is appropriate as a results indicator in the GEF context. In general, the specification of indicators could be strengthened.

7. In doing so, STAP further encourages the World Bank to define explicitly the adaptation benefits and the global environmental benefits. Currently, it appears the adaptation benefits are initially described in Annex 2 based on a preliminary description of the components. Their description can be further detailed (per component) during the proposal development. Additionally, STAP recommends defining indicators to estimate and monitor the expected adaptation benefits – including social and economic indicators reflecting livelihood strategies developed to reduce vulnerabilities caused by hydrological changes due to glacier recessions. It also would be valuable to define the methods used to measure these indicators. This information will be valuable to define further the additional cost reasoning, which presently also is described in a preliminary manner in Annex 2.

8. Similarly, STAP encourages providing a baseline detailing further biodiversity in the target regions, and how the biodiversity status has changed as a result of climate change and glacier melting. In this regard, STAP encourages the project developers to use data to demonstrate the type, and abundance of, biodiversity in the target areas. (At a glance, it appears the proposal will only target biodiversity conservation in Ecuador. If so, it would be useful to indicate this more clearly in the project framework and in the narrative.) Additionally, STAP recommends defining explicitly the global environmental benefits to complement the basic description provided in Annex 2. To monitor the global environmental outcomes on biodiversity conservation, STAP encourages the project developers to define appropriately indicators on biodiversity conservation, detailing what methods will be used to measure and track these indicators.

<i>STAP advisory response</i>	<i>Brief explanation of advisory response and action proposed</i>
<b>1. Consent</b>	STAP acknowledges that on scientific or technical grounds the concept has merit. However, STAP may state its views on the concept emphasizing any issues where the project could be improved.  Follow up: The GEF Agency is invited to approach STAP for advice during the development of the project prior to submission of the final document for CEO endorsement.
<b>2. Minor revision required.</b>	STAP has identified specific scientific or technical challenges, omissions or opportunities that should be addressed by the project proponents during project development.

	<p>Follow up: One or more options are open to STAP and the GEF Agency:</p> <ul style="list-style-type: none"> <li>(i) GEF Agency should discuss the issues with STAP to clarify them and possible solutions.</li> <li>(ii) In its request for CEO endorsement, the GEF Agency will report on actions taken in response to STAP's recommended actions.</li> </ul>
<p><b>3. Major revision required</b></p>	<p>STAP has identified significant scientific or technical challenges or omissions in the PIF and recommends significant improvements to project design.</p> <p>Follow-up:</p> <ul style="list-style-type: none"> <li>(i) The Agency should request that the project undergo a STAP review prior to CEO endorsement, at a point in time when the particular scientific or technical issue is sufficiently developed to be reviewed, or as agreed between the Agency and STAP.</li> <li>(ii) In its request for CEO endorsement, the Agency will report on actions taken in response to STAP concerns.</li> </ul>