

# 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: March 04, 2014

Screeener: Guadalupe Duron

Panel member validation by: Anand Patwardhan  
Consultant(s):

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

**FULL SIZE PROJECT SPECIAL CLIMATE CHANGE FUND**

**GEF PROJECT ID:** 5685

**PROJECT DURATION :** 5

**COUNTRIES :** Morocco

**PROJECT TITLE:** Increasing Productivity and Adaptive Capacities in Mountain Areas of Morocco (IPAC-MAM)

**GEF AGENCIES:** IFAD

**OTHER EXECUTING PARTNERS:**

**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 IFAD's proposal on "Increasing productivity and adaptive capacities in mountain areas of Morocco (IPAC-MAM)." The proposal targets building climate resilience in a region with high sensitivity to climate change and aims at increasing community resilience. Focusing on these approaches can assist Morocco further address the significant challenges in the agricultural and livestock sector caused by climate change.

Although the STAP recommendation is for "minor revision", given the importance of climate resilience for Morocco and the substantial comments and observations of STAP as mentioned in the screen, STAP strongly recommends that they be fully addressed during the course of project development, and that STAP wishes to review the full project document prior to CEO endorsement.

1. In the project overview, STAP recommends describing the agricultural and livestock sectors in the target areas, and the barriers they face as a result of climate change in achieving sustainable agricultural production, land use/livestock management, and food security. This information will help define explicitly the problem statement, and describe the vulnerability context of the targeted beneficiaries. A discussion of key aspects of future climate change in Morocco may be helpful (see, for example: Trambly, Y., Badi, W., Driouech, F., El Adlouni, S., Neppel, L., & Servat, E. (2012). Climate change impacts on extreme precipitation in Morocco. *Global and Planetary Change*, 82, 104-114., and Driouech, F., D'Amico, M., & Sánchez-Gómez, E. (2010). Weather regimes—Moroccan precipitation link in a regional climate change simulation. *Global and Planetary Change*, 72(1), 1-10.)

2. In presenting more clearly the information in section A.1, STAP recommends including sub-headings on the following: i) a description of each component; ii) description of the additional cost reasoning; and, ii) the definition of the adaptation benefit(s) along with the indicators that will be used to monitor and track each benefit. Currently, this section is not well structured, and it is difficult to understand the proposed activities and assess the validity of the additional cost reasoning/adaptation benefits, and the causal relationships between the interventions and the project objectives.

3. In component 2, STAP recommends considering conservation agriculture measures. There are opportunities for climate change adaptation and reduced variability through conservation agriculture, especially in dryland countries, like Morocco, that depend heavily on a combination of rainfed and irrigated systems for agriculture — the mainstay of the country's economy. Research findings also reveal that

dryland countries (such as Morocco) can benefit from conservation agriculture to address land management constraints (heavy erosion, poor soil fertility, water scarcity) that can be exacerbated further by climate change. The following paper may provide guidance on conservation agriculture in dryland climates: Kassam, A. et al. "Conservation agriculture in the dry Mediterranean climate". *Field Crops Research*. (2012). 132: 7-17. It is also useful to consider potential limits to adaptation and stakeholder preferences in determining preferred response strategies (see, for example: Freier, K. P., Bruggemann, R., Scheffran, J., Finckh, M., & Schneider, U. A. (2012). Assessing the predictability of future livelihood strategies of pastoralists in semi-arid Morocco under climate change. *Technological Forecasting and Social Change*, 79(2), 371-382.)

4. The proposal indicates that adaptive irrigation techniques will be introduced. STAP recommends defining further these techniques, and how they will not deplete further scarce groundwater resources, or increasing salinization. Additionally, it will be useful to list the irrigation techniques as a potential risk in section A.3, given the extent of salinization (in part as a result of irrigation) in Morocco.

5. J. Schilling et al. (2012) provides a useful analysis of the impacts of climate change on socio-economic and agricultural development in the North Africa “ with a focus on Morocco. This includes an analysis of Morocco's adaptive capacity based on generic, and impact specific, indicators. The study also considers adaptation options in the farming and livestock sectors “ identifying adaptation pathways for pastoralists, farmers and policy-makers in Morocco. IFAD may wish to draw from this study for the proposal development. The full citation is as follows: Schilling, J. et al. "Climate change, vulnerability and adaptation in North Africa with focus on Morocco". *Agriculture, Ecosystems and Environment* (2012). 156: 12-26.

6. As a minor observation, footnote 29 on SAGE is missing. Given that SAGE appears to be an important approach the project will rely on to define and implement climate adaptation and vulnerability reduction strategies, STAP suggests addressing this detail.

<i>STAP advisory response</i>	<i>Brief explanation of advisory response and action proposed</i>
<b>1. Consent</b>	<p>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.</p> <p>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.</p>
<b>2. Minor revision required.</b>	<p>STAP has identified specific scientific or technical challenges, omissions or opportunities that should be addressed by the project proponents during project development.</p> <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>
<b>3. Major revision required</b>	<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>