

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: September 24, 2014

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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: 6960

PROJECT DURATION : 5

COUNTRIES : Turkmenistan

PROJECT TITLE: Supporting Climate Resilient Livelihoods in Agricultural Communities in Drought-prone Areas

GEF AGENCIES: UNDP

OTHER EXECUTING PARTNERS: Ministry of Nature Protection

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 issues to be considered during project design

III. Further guidance from STAP

STAP welcomes UNDP's proposal "Supporting climate resilient livelihoods in agricultural communities in drought-prone areas of Turkmenistan". The components are described clearly along with the adaptation benefits and the additional cost reasoning. In particular, STAP appreciates the efforts in the project towards mainstreaming and building capacity for long-term adaptation. The following suggestions may be considered during project development:

1. Component 1 of the project targets four communities – it would be helpful to select communities in a manner that can support learning and further scaling up or replication of the interventions. For example, will communities be selected on the basis of a vulnerability assessment? If so, how would that be carried out? While selecting intervention targets, it would be important to ensure inclusion of marginalized groups such as migrants, and religious minorities, and ensuring that marginalized communities are not further affected even as the wider community builds resilience.

2. Paragraph 18 of the PIF identifies a number of "no-regret" options for reducing water demand and increasing water availability. How does the project intend to ensure sustainability and viability of these options beyond the project's life? Some reflection of the reasons why such technologies are not considered in baseline would be helpful while addressing mainstreaming issues. What is the strategy for community / household ownership of the options?

3. Explicit consideration of the limits of adaptation would be helpful, given the rather large range of possible climate change outcomes for this region (see, for example, Lutz et al (2013)). Specifically, the project could consider explicitly situations where only "no-regrets" options may not be adequate. Some pointers to some recent literature on climate scenarios and impacts for the region are provided below.

4. Paragraphs 22 and 25 describe the strategy for mainstreaming and capacity-building. STAP appreciates the efforts to build on existing policies and platforms for coordination. STAP recommends including aspects related to strengthening scientific and technical capacity and the science-policy interface as an essential element of mainstreaming and capacity-building. While the reference to a National Adaptation Planning process is welcome, it would be helpful if the project could specifically target establishing / strengthening some of the key building blocks of the NAP's. Modeling of agro-ecological zones is a useful activity, but it

should be complemented by actions that include generation and use of climate information, establishing more carefully the baselines in terms of current vulnerability and the adaptation deficit, etc.

5. Finally, STAP encourages the project developers to use the open-access database, World Overview Conservation Approaches and Technologies (WOCAT) to access, and share, technologies and tools on sustainable land management and climate resilience planning. The database has several resources for Turkmenistan, as well as for similar agro-ecological systems as the target areas:
<https://www.wocat.net/en/knowledge-base.html>

Some recent sources of relevant scientific / technical information:

Lioubimtseva, E., Kariyeva, J., & Henebry, G. M. (2014). Climate change in Turkmenistan. In *The Turkmen Lake Altyn Asyr and Water Resources in Turkmenistan* (pp. 39-57). Springer Berlin Heidelberg. Sommer, R., Glazirina, M., Yuldashev, T., Otarov, A., Ibraeva, M., Martynova, L., ... & De Pauw, E. (2013). Impact of climate change on wheat productivity in Central Asia. *Agriculture, Ecosystems & Environment*, 178, 78-99. Lioubimtseva, E. (2013). A multi-scale assessment of human vulnerability to climate change in the Aral Sea Basin. *Environmental Earth Sciences*, 1-11.

Thevs, N., Ovezmuradov, K., Zanjani, L. V., & Zerbe, S. (2013). Water consumption of agriculture and natural ecosystems at the Amu Darya in Lebap Province, Turkmenistan. *Environmental Earth Sciences*, 1-11.

Lutz, A. F., Immerzeel, W. W., Gobiet, A., Pellicciotti, F., & Bierkens, M. F. P. (2013). Comparison of climate change signals in CMIP3 and CMIP5 multi-model ensembles and implications for Central Asian glaciers. *Hydrology and Earth System Sciences*, 17(9), 3661-3677.

<i>STAP advisory response</i>	<i>Brief explanation of advisory response and action proposed</i>
1. Concur	STAP acknowledges that on scientific or technical grounds the concept has merit. 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 issues to be considered during project design	STAP has identified specific scientific /technical suggestions or opportunities that should be discussed with the project proponent as early as possible during development of the project brief. The proponent may wish to: (i) Open a dialogue with STAP regarding the technical and/or scientific issues raised. (ii) Set a review point at an early stage during project development, and possibly agreeing to 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 issues to be considered during project design	STAP proposes significant improvements or has concerns on the grounds of specified major scientific/technical methodological issues, barriers, or omissions in the project concept. If STAP provides this advisory response, a full explanation would also be provided. The proponent is strongly encouraged to: (i) Open a dialogue with STAP regarding the technical and/or scientific issues raised. (ii) Set a review point at an early stage during project development including an independent expert as required. 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.