

# 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 11, 2017  
Screener: Guadalupe Duron  
Panel member validation by: Michael Anthony Stocking  
Consultant(s):

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

<b>FULL-SIZED PROJECT</b>	<b>GEF TRUST FUND</b>
<b>GEF PROJECT ID:</b>	9593
<b>PROJECT DURATION:</b>	4
<b>COUNTRIES:</b>	Regional (Mozambique, Zimbabwe)
<b>PROJECT TITLE:</b>	Management of Competing Water Uses and Associated Ecosystems in Pungwe, Busi and Save Basins
<b>GEF AGENCIES:</b>	IUCN
<b>OTHER EXECUTING PARTNERS:</b>	Ministry of Public Work, Housing and Water Resources of Mozambique and the Ministry of Environment, Water and Climate Change of Zimbabwe
<b>GEF FOCAL AREA:</b>	International Waters

### 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):  
**Concur**

### III. Further guidance from STAP

STAP welcomes IUCN's proposed project entitled "Management of competing water uses and associated ecosystems in Pungwe, Busi and Save Basins". It has an ambitious objective in attempting to cover simultaneously three vital aspects of river basin management: water security, climate change resilience and sustainable livelihoods. The project aims to improve water management across the three river basins through a flood and drought risk management framework. Through an integrated river basin planning approach, the project also will strengthen the resilience of both ecosystems and livelihoods to projected changes in climate. The use of remote sensing to define a baseline for assessing and monitoring groundwater is an important contribution of the project. STAP looks forward to the results, and encourages IUCN to detail the opportunities, lessons learned, and circumstances for scaling up the application of this technology for monitoring groundwater. A focus on knowledge management will be necessary in order to track the outcomes of project components and inform future interventions.

To further strengthen the project during its design, STAP recommends addressing these points:

1. To complement the thorough description of the biophysical factors being threatened by environmental degradation and climate change, STAP recommends describing the socio-economic context of the affected populations living along the Beira Corridor. This information is important in order to understand the population's abilities to cope with climate change, adopt, or adapt, practices that are drought and flood resilient.
2. STAP suggests detailing the impact of climate variability on the water, energy, food nexus, which the project aims to use as a framework for improving ecosystem based management across the three river basins. This includes highlighting the role of climate change as a driver in the nexus, and identifying actions based on the linkages between climate variability, and resource management. In this respect, STAP also

suggests providing details of climate change projections in the target area, or in the region. IUCN may want to refer to the following paper on the connections between climate and the water, energy, food nexus in southern Africa: Conway, D. et al. (2015). "Climate and southern Africa's water- energy- food nexus". DOI:10.1038/NCLIMATE2735 [print publication: Nature Climate Change 5, 837-846 (2015)]. The authors of this paper argue convincingly that in southern Africa the physical and socioeconomic exposure to climate impact is especially significant and is crucial in local economies and livelihoods.

3. An aspect of the project that will need to be addressed more fully as the project is developed is the role of indigenous (local) technical knowledge. This is more specific than the stakeholder and community 'involvement' mentioned in the proposal. The Institute for Poverty, Land and Agrarian Studies in South Africa estimates, for example, that indigenous farmer-saved seeds which farmers have been improving and adapting to local conditions over many years, currently constitute about 70% of seeds used in Mozambique. Top-down 'modernisation' of agricultural development rarely includes the livelihood (and often climate resilience) of local practices; yet attention to local knowledge encourages farmer participation and support to conservation of ecosystems. This will be especially critical in the project achieving its ambitious target of 120 million hectares in sustainable land management in production systems (agriculture, rangelands, and forest). Advice especially on the importance in southern Africa rangelands of addressing local economies in transiting from land degradation to sustainable land management has been published and could give a useful guide to developing project components: Reed, M.S. et al (2015) Reorienting land degradation towards sustainable land management: Linking sustainable livelihoods with ecosystem services in rangeland systems. Journal of Environmental Management 151:472-485. <https://doi.org/10.1016/j.jenvman.2014.11.010>

4. It is unclear what contributions the project will make towards addressing water pollution in the Beira Corridor. Conflicts between local farmers and artisanal miners have already occurred in Manicaland and along the borders between Mozambique and Zimbabwe. STAP recommends that the project contribute towards a baseline measuring the contaminants in the rivers, doing so will improve ecosystem functioning in the three river basins, and therefore, the project's effectiveness in addressing the water, food, energy nexus.

5. STAP recommends that the project detail how the project will contribute towards addressing the knowledge gap on the impact of climate change on drought, or water availability. One possibility is for component 2 to focus on acquiring baseline data on hydrological responses to climate. Learning generated in this regard should be included under knowledge management. The following paper highlights knowledge gaps and research needs on understanding further the impacts of climate change on water resources in Mozambique and Zimbabwe: Kusangaya, S. et al. (2014). "Impacts of climate change on water resources in southern Africa: a review". Physics and Chemistry of the Earth 67-69 (2014) 47-54.

<i>STAP advisory response</i>	<i>Brief explanation of advisory response and action proposed</i>
<b>1. Concur</b>	In cases where STAP is satisfied with the scientific and technical quality of the proposal, a simple "Concur" response will be provided; the STAP may flag specific issues that should be pursued rigorously as the proposal is developed into a full project document. At any time during the development of the project, the proponent is invited to approach STAP to consult on the design prior to submission for CEO endorsement.
<b>2. Minor issues to be considered during project design</b>	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.
<b>3. Major issues to be considered during</b>	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:

<b>project design</b>	<p>(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.</p> <p>The GEF Secretariat may, based on this screening outcome, delay the proposal and refer the proposal back to the proponents with STAP's concerns.</p> <p>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.</p>
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