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 29, 2016
Screener:	Guadalupe Duron
Panel member validation by:	Annette Cowie
Consultant(s):	

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

FULL-SIZED PROJECT	**GEF TRUST FUND**
GEF PROJECT ID:	9537
PROJECT DURATION:	5
COUNTRIES:	Morocco
PROJECT TITLE:	Revitalising Oasis Agro-ecosystems through a Sustainable, Integrated and Landscape Approach in the DraÃ¢-Tafilalet Region (OASIL)
GEF AGENCIES:	FAO
OTHER EXECUTING PARTNERS:	Ministry of Environment, Ministry of Agriculture and Maritime Fisheries, ANDZOA and INRA
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): **Concur**

III. Further guidance from STAP

STAP welcomes FAO's proposal "Revitalising Oasis Agro-ecosystems through a Sustainable, Integrated and Landscape Approach in the DraÃ¢-Tafilalet Region". STAP believes the project aligns with Morocco's National Sustainable Development Strategy (2015-20120) and its priorities on strengthening oases agro-ecosystems and the livelihoods that depend on them. The proposal identifies the fragility of oases ecosystems in Morocco, and the need to strengthen their management through a landscape approach. Groundwater management should be a central focus of the landscape approach, given the increased risk for water scarcity and salinity. STAP looks forward to the inclusion of integrated groundwater management in the project as a means to contributing to the sustainability of oasis management. In addition, ensuring that approaches and technologies are soundly based on stakeholders' knowledge of agro-silvo-pastoral practices, soil and water management and biodiversity conservation will be important throughout the project design and implementation. Therefore, STAP is pleased the project emphasizes cross-sectoral exchanges between stakeholders, and the creation of knowledge/information platforms to disseminate learning on oases ecosystem management. STAP is also pleased to see the intentions to coordinate with other current relevant projects.

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

1. STAP appreciates the comprehensive list of baseline activities and projects that indicates how the project will build on previous GEF and non-GEF projects in the region. The PIF identifies many past projects that have apparently had limited success. Learning from the past programs now nearing completion will be valuable. STAP encourages FAO to specify how knowledge from these projects, and from other sources (e.g. peer reviewed papers), support the activities and knowledge gaps the project aims to address. Providing this information will strengthen the project's theory of change, which should be made more explicit, and help identify the barriers and risks that need to be managed to meet the objective.

2. It would be useful to consider linking the project to the GEF's Great Green Wall Initiative, and its emerging lessons on oases ecosystem management.
http://www.greatgreenwallinitiative.org/sites/default/files/publications/OasisEN-5_0.pdf
It was not clear whether the links between this project and the Great Green Wall Initiative were included in section 1.5, or elsewhere in the document.

3. Some strategies seem potentially counter-productive. For example, intensification could diminish sustainability in fragile ecosystems. Please explain "reconversion". It will be important to develop strong understanding of the underlying bio-physical processes and relationships to identify the capacity constraints. In addition, quantifying limitations to groundwater extraction based on recharge now and under future climate scenarios, will be important. Sustainability of agricultural enterprises will likely depend on improved irrigation practices, and building soil organic matter.

4. Salinity and water scarcity are described as drivers of degradation. STAP encourages the project proponents to strengthen the focus on groundwater management, given the fragility of the oasis ecosystem and its increased dependence on limited water resources. One resource the project may consider for developing an approach to groundwater management is Jakeman, A. et al. "Integrated Groundwater Management": http://link.springer.com/book/10.1007/978-3-319-23576-9

5. Consider whether there is adequate capacity and skills and governance structure to undertake stakeholder engagement and to implement identified strategies. Provide a description of the current situation, including land tenure, scale of holdings, ownership, capacity â€“ expertise and financial, community structure - and therefore readiness for this approach. What is the situation with respect to agricultural extension? (e.g. is there an existing network of farmer groups? Are there government-funded extension officers?) Identify the barriers to implementation. Describe also the traditional social structure, land management, including agro-silvopastoral practices, to identify those aspects that should be reinforced.

6. To further inform the description of the oasis ecosystems (forest, agriculture, grazing) and its services to the local population, the drivers of environmental degradation, and the socio-economic characteristics of the oasis, the project developers may consider the Arab Millennium Ecosystem Assessment, Synthesis Report focused on the Tafilalet Oasis in Morocco:
http://www.ebasouth.org/sites/default/files/attachments/MA_final%20full%20Report_Low_0.pdf

STAP encourages the project developers to specify how the results of the Assessment will be addressed in this project, and used to strengthen the environmental management and socio-economic attributes of the target sites. In particular, STAP recommends considering the section on "Protecting Biodiversity" on how to integrate biodiversity and natural resource management, assessing and monitoring biodiversity in oases ecosystems (see page 165-166).

7. In part II (project justification), STAP is pleased to see reports cited to support the descriptions of the drivers of degradation. If there are more recent studies on salinity and sand encroachment, please also add these resources. For example, this paper may be relevant "Sustainability of the Moroccan Oasean System (Case study: Middle Draa Valley)": http://www.omicsonline.com/open-access/sustainability-of-the-moroccan-oasean-system-case-study-middle-draa-valley-2229-8711.1000170.php?aid=38319

8. Several threats to agrobiodiversity are described on page 8. To understand further the multiple benefits of, and threats to, agro-silvo-pastoral practices from commercial agriculture (e.g. dates), STAP recommends describing further the agro-silvo-pastoral system in the target sites. The information will assist in understanding the interactions between the economic, social and ecological functions of an agro-silvo-pastoral system, and crop cultivation (e.g. dates) in order to define and implement landscape management. Generating alternative income sources will be key. Genetic resources are valuable to the world â€“ innovative approaches will be required to attract funding for conservation.

9. Once the target sites are identified, STAP recommends describing how their social-ecological systems dealt with these shocks and stresses (e.g., through adaptive capacity strategies), and how the project would require integration between biodiversity conservation and sustainable land and water management to address them. Describing these shocks and stresses, would assist in identifying the features that are important to the stakeholders in meeting the project objective.

10. STAP is pleased the project aims to strengthen oases agro-ecosystem management through a landscape and multi-stakeholder approach. STAP recommends applying the Resilience, Adaptation Pathways and Transformation Assessment (RAPTA) Framework to implement an integrated-multi-

stakeholder approach. Guidelines for applying the RAPTA can be downloaded at: http://www.stapgef.org/stap/wp-content/uploads/2016/05/RaptaGuidelines-A4-WEB-FINAL.pdf

The RAPTA will be useful in designing the project by defining the scope and scale of the social-ecological system with the participation of stakeholders. This will assist in characterizing the oases agro-ecosystems, and describing its social, economic and environmental aspects.

In addition, the RAPTA will assist in identifying the key influences that control the social-ecological system. Identifying the key controlling variables (e.g. influences) will be important in understanding the changes that adapt, or transform, a social-ecological system â€“ including threshold effects that can influence the project's sustainability, such as salinity.

11. Once the two sub-drainage basins are identified, STAP recommends identifying the drivers of environmental degradation and inadequate livelihoods. It also will be useful to describe the criteria that will identify the basins. Salinity is cited as a one of the drivers of land degradation in Morocco's oases ecosystems. Is salinity a result of poor irrigation practices, or upstream hydrological imbalance? It will be important to determine the cause, and implement strategies to mitigate salinity, and monitor groundwater levels aimed at improving sustainable land and water management in order to reduce the potential of salinity and desertification. As stated previously, RAPTA process can assist in identifying the controlling variables, such as groundwater levels, and devise strategy to track any threshold effects.

12. STAP is pleased that the project will use GIS for spatial analysis (component 2). In developing further this intervention, the project developers may wish to refer to the following paper on the use of remote sensing to monitor changes in land cover and assessing threats (including salinization) to drylands: King, C. and Thomas, D. "Monitoring environmental change and degradation in the irrigated oases of the Northern Sahara". Journal of Arid Environments. 103 (2014) 36-45.

13. STAP recommends providing the full reference to the study mentioned on page 13 in the footnote. The study seems relevant to the project, and to the dryland and climate adaptation community.

14. One minor detail â€“ please make sure to define all acronyms â€“ for example, "SPI".

STAP advisory response	*Brief explanation of advisory response and action proposed*
1. Concur	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.
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 GEF Secretariat may, based on this screening outcome, delay the proposal and refer the proposal back to the proponents with STAP's concerns. 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.