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 04, 2015 Screener: Guadalupe Duron

Panel member validation by: Annette Cowie
Consultant(s):

I. PIF Information *(Copied from the PIF)*
FULL SIZE PROJECT GEF TRUST FUND
GEF PROJECT ID: 9051
PROJECT DURATION : 7
COUNTRIES : Regional
PROJECT TITLE: Moringa Agro-forestry Fund for Africa (non-grant)
GEF AGENCIES: AfDB
OTHER EXECUTING PARTNERS: Moringa Agro Forestry Fund
GEF FOCAL AREA: Land Degradation

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 issues to be considered during project design

III. Further guidance from STAP

STAP acknowledges the African Development Bank's (AfDB) proposal "Moringa Agro-forestry fund for Africa" funded under the non-grant instrument pilot. STAP believes the proposal has potential in being innovative and demonstrating impact on agro-forestry's contribution to ameliorating land degradation in Africa, given the comprehensive institutional presence and outreach of the AfDB along with its multiple relationships with private and public partners in this domain. The proposal requires further work to understand better the possible contributions of the Moringa fund to agro-forestry and global environmental benefits. Additionally, there are a number of risks that need to be addressed before STAP can be certain of, and reasonably comment on, the technical validity of the project. Below, STAP describes these risks. STAP encourages AfDB to seek advice from agro-forestry experts in addressing these technical matters. STAP would be happy to provide suggestions of suitable experts.

Below, STAP provides recommendations on how the proposal can be strengthened.

1. STAP suggests providing a general description of agro-forestry in Africa. This includes describing the socio-economic and ecological conditions that help influence farmers' agro-forestry management decisions. One source the project developers may wish to consult is Garrity D.P. et al. "Evergreen agriculture: a robust approach to sustainable food security in Africa" (2010). Food Security 2:197-214. The paper describes agro-forestry experiences across Africa, providing examples of how agro-forestry has influenced livelihoods and has the potential to contribute towards climate mitigation and adaptation.

2. Furthermore, a general description of agro-forestry is missing, detailing the following aspects: agro-forestry's potential contributions to food security and ecosystem services, information and knowledge needs of agro-forestry, and the challenges related to sustainable adoption of agro-forestry. The document makes broad statements on the multiple benefits of agro-forestry without citing evidence, and fails to acknowledge that different tree species deliver benefits to different extents, and that no single tree species will provide simultaneously all the benefits claimed. Providing this information will assist to: 1) strengthen the baseline of the project; 2) strengthen the rationale for the proposed components on improving agro-ecosystems and scaling-up successful practices; 3) define more clearly how the proposed activities support the project objective; and 4) improve the description of the global environmental benefits and the project's incremental reasoning. Currently, the proposal does not present logical reasoning in these four aspects.

3. Strengthening the baseline of the project (as recommended in #2), will assist in defining the incremental reasoning. STAP encourages strongly, therefore, for the AfDB to develop further the baseline so the global environmental benefits are defined clearly.

4. Additionally, STAP recommends detailing the agro-forestry practices in the target areas when these regions are defined. The agro-ecological zones should be described so the characteristics influencing the selection of agroforestry systems, and the adoption and management of agro-forestry are better understood in each target region. Factors influencing agro-forestry at each site, such as social, economic and cultural values, will likely be scale and time dependent; therefore, understanding better these factors will assist in developing appropriate agro-forestry technologies and practices.

5. STAP strongly encourages the AfDB to address the following issues which appear to be missing in the document:

i. Address the catchment-scale hydrological impacts of the proposed agro-forestry systems â€“ a critical issue in dryland or irrigated lands in Africa.

ii. Indicate how the competition for resources â€“ nutrients and water â€“ between trees and crops be recognized and managed in the project. The proposal appears to assume that synergistic responses will always occur. However, published evidence of synergies in dry environments is limited, and competition is likely in many tree/crop configurations, especially involving eucalypts. Nevertheless carefully designed agro-forestry systems, using appropriate species and planting configuration, can deliver synergies.

iii. Comment on the challenges, and expense, of establishing any crop, including trees, in degraded lands. Are the economics based on realistic figures for costs and growth rates in challenging environments?

iv. Indicate what safeguards will be put in place to ensure that communities' interests are considered and protected in the development and implementation. The document refers to various social safeguards, and sensitivity to land ownership issues and to biodiversity conservation, yet also states (page18) that the fund will primarily target "partners who have already acquired land rights" (raising concerns over livelihoods and land tenure), and potentially invest in eucalypts grown for power poles (incompatible with agro-forestry and biodiversity enhancement). These statements appear inconsistent with the proposed environmental benefits and the safeguards.

v. Indicate how learning and recommendations from experience with Jatropha will be considered in the proposed project. There are a number of risks (social, food security, and agro-ecological) to consider when planting Jatropha. The project developers could refer to the following assessment done by the Netherland's Ministry of Economic Affairs, Agriculture and Innovation:
http://english.rvo.nl/sites/default/files/2013/12/Report%20Jatropha%20assessment%20-%20Copernicus%20-%20NPSB.pdf

vi. Indicate what techniques will be used for reforestation, avoided deforestation and land degradation. The document refers to state of the art techniques on these topics (page 12), but is silent on what techniques are referred to.

Currently, it does not appear that Moringa will be used in any of the proposed projects. If this is the case, STAP questions why Moringa will not be planted, given it is a suitable agro-forestry tree species.

6. STAP recommends for the AfDB to consider how the projects will contribute to knowledge generation and management, and how the AfDB will be a repository for this learning. The current description of knowledge management (section 7) does not appear to detail how the project will learn from other projects, or similar initiatives. Furthermore, STAP recommends for the AfDB and its partners to contribute to the following learning gaps identified by researchers and practitioners of agro-forestry systems in Africa:

- What tree species work best under given site conditions?
- Which tree-crop site combinations are complementary and what are the trade-offs?
- How can agro-forestry support ecosystem services and what methods can be used to measure the impact of agro-forestry on ecosystem services?

These and other learning questions are identified by C. Mbow et al. (2014) in "Agroforestry solutions to address food security and climate change challenges in Africa". Environmental Sustainability 6:61â€“67. Helping to answer these questions will strengthen knowledge about agroforestry â€“ particularly, contribute to learning of what systems work where, under what conditions and for whom.

7. As the project developers design the proposal, STAP recommends considering a conceptual framework that helps understand the characteristics (ecological and socio-economic) influencing farmers' agro-forestry management decisions, and their potential impact on ecosystem services. One framework the project developers may wish to consider is in J. Ordonez et al. (2014) "Constraints and opportunities for tree diversity management along the forest transition curve to achieve multifunctional agriculture". Environmental Sustainability (2014) 6:54-60. The framework relies on a multi-stakeholder analysis and helps to identify knowledge and data needs, which can help strengthen the learning from interventions and their potential for replication and up-scaling across areas.

8. For the section on gender, STAP recommends for the AfDB to draw from its Gender Strategy http://www.afdb.org/fileadmin/uploads/afdb/Documents/Policy-Documents/2014-2018_-_Bank_Group_Gender_Strategy.pdf Additionally, the project developers may wish to refer to the following document on gender and agro-forestry: Kiptot, E. et al. "Gender, agroforestry and food security in Africa". Environmental Sustainability 2014, 6:104â€“109.

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.