

# 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, 2012

Screener: Guadalupe Duron

Panel member validation by: Michael Anthony Stocking  
Consultant(s):

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

**FULL SIZE PROJECT**    **GEF TRUST FUND**

**GEF PROJECT ID:** 4939

**PROJECT DURATION :** 5

**COUNTRIES :** Chile

**PROJECT TITLE:** Supporting Civil Society and Community Initiatives to Generate Global Environmental Benefits using Grants and Micro Loans in the Mediterranean Ecoregion

**GEF AGENCIES:** UNDP

**OTHER EXECUTING PARTNERS:** Ministry of Environment

**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): **Consent**

### III. Further guidance from STAP

STAP welcomes UNDP's proposal "Supporting civil society and community initiatives to generate global environmental benefits using grants and micro loans in the Mediterranean ecoregion in Chile". The project objective is well understood and supported by the comprehensive problem statement, defining the multiple and intricate drivers of biodiversity loss, agroecosystem degradation, and poverty in Central Chile. STAP is pleased with the thorough characterization of Central Chile's flora (including forest flora), and with the preliminary estimates of forest carbon generated by some species. Similarly, STAP appreciates acknowledging specifically the lack of data on soil degradation, habitat loss, crop species loss, and other processes affiliated with agroecosystem degradation in Central Chile. There are, however, some scientific literature sources on land degradation that could have been used – see below. On livelihoods, STAP values the thorough context of the socioeconomic barriers and the proposal's intention to support global environmental benefits in tandem with socioeconomic opportunities. The various biodiversity and socioeconomic references (maps, published and unpublished documents) are particularly welcomed by STAP. Furthermore, STAP supports the use of gender disaggregated indicators to assess the project results, given women's significant roles in agriculture, community-based management of forests, and in non-timber forest products.

To strengthen the proposal further, STAP encourages project proponents to address the following points.

1. The background and justification of the proposal is reasonably well supported in terms of the scientific literature for biodiversity and habitat loss. However, Chile is among the countries in South America with some of the best soil and agriculture research, the results of some of which could have been used to support the proposal and to assist with the formulation of the baseline. For example, a recent paper has soil erosion estimates derived from the application of the Revised Universal Soil Loss Equation, and these are mapped on a GIS base [1]. Direct measurements of soil loss resulting from changes in agricultural practices are also available – see [2]. Chile and adjacent Latin American countries are world leaders in conservation agriculture, and this base of knowledge should be used to inform the proposal [3]. In general, STAP would like to see a greater use of previous scientific work undertaken in Chile to justify especially the two LD objectives of the proposal – innovative practices and integrated land management.

2. STAP recommends strengthening the incremental reasoning by explicitly defining the global environmental benefits during the project development. Currently, the benefits are only implicit in the incremental reasoning, or perhaps are not well-defined. For example, component 3 suggests the global environmental benefit as "avoided land degradation and increased resilience of agro-ecosystems to climate change". STAP would argue this is a means to contributing to global environmental benefits – mainly, carbon sequestration and biodiversity conservation.

3. STAP fully supports the project's intention to strengthen community based organizations' capacities for project design, monitoring indicators, and adaptive landscape management. (There is a mismatch in the component numbering between the project framework, and the component narrative in the proposal. For instance, "community capacity development and knowledge management is listed as component #4 in the project framework, and as component #3 in the narrative.) STAP also would highly encourage for the training to include identifying clearly global environmental benefits (for example " carbon sequestration and not sustainable land management). Additionally, in component 2 and 3, it will be valuable to describe the methodology that will be used to measure above and below ground carbon. One potential recommendation is the GEF Carbon Benefits Project methodology, which is currently being completed. UNDP may wish to inquire further about its status with the GEF Secretariat.

4. STAP appreciates the table defining the agro-climatic zones to be targeted by the project. Given the nature of the proposal to mainstream climate resilience in the various components, STAP recommends including rainfall and temperature data in this table. (A minor suggestion " translate the agro-climate zones to English, if possible.) This information also will be useful for designing climate resilience measures in the grants. STAP also suggests including climate projection, or trends, data. This information can be accessed at "

<http://www.geog.ox.ac.uk/research/climate/projects/undp-cp/> <http://sdwebx.worldbank.org/climateportal/index.cfm>

5. STAP encourages UNDP to refer to the STAP's advisory document on "Environmental Certification and the Global Environment Facility". The document summarizes the evidence base for the effectiveness of certification programs in generating local and global environmental benefits. It also summarizes the evidence related to the socioeconomic impacts on participants, and identifies four main threats to eco-certification effectiveness that should be minimized through project (grant) designs. The document can be found at " www.unep.org/stap

6. Microcredit and small grants feature prominently in the proposal. While SGP experiences will be important in designing these aspects of the project, there is a considerable body of generic information on which to build sustainable systems of micro-finance. These information sources should be consulted and used [4].

7. STAP acknowledges that non-timber forest products (NTFPs) have the potential to impact local livelihoods in ways that may contribute to the management of productive landscapes for biodiversity conservation (Component 1). Sustainable harvesting and marketing of NTFPs does, indeed, have potential to bring local benefits to people while protecting the larger ecosystem. Nonetheless, it is important to consider the comprehensive context of NTFPs to fully assess their viability, potential contributions to livelihoods and protected areas, as well as the constraints associated with harvesting and marketing NTFPs. Thus, STAP recommends for UNDP to specify further whether the project will conduct a market chain analysis of NTFPs, and, if so, to detail this analysis in the full proposal. Additionally, STAP recommends defining explicitly the risks affiliated with NTFPs, and the mitigation responses (e.g. overharvesting of NTFPs; hence, affecting the status of local biodiversity and livelihoods). Climate change also may impact the density of the species of interest for NTFP activities.

8. For component 2, the project developers may wish to refer to Schiappaccasse, I. et al. Assessing the benefits and costs of dryland forest restoration in central Chile. *Journal of Environmental Management* 97 (2012) 38-45. One of the article's key messages is the importance of obtaining comprehensive measures for market values and non-market values (ecosystem services) provided by dryland forest ecosystems in central Chile. The study findings reinforced a classical result of environmental economics: "when externalities are not internalized by the economic agent (landowner), the socially optimum level of services provision does not coincide with the private optimum" " as partly described in barrier #2. Thus, landowners may not invest willingly in forest restoration and enhancement of forest stocks because they do not perceive the benefits arising from ecosystem services. In this regard, STAP recommends highlighting the risk of ineffective results from land use, land use change and forestry interventions due to the lack of effective economic incentives for landowners to invest in restoration.

9. The proposal is unclear whether payment for ecosystem services (PES) will be used in component 2, or elsewhere in the project. If the project developers will be relying on PES (or are considering doing so), STAP recommends its advisory document on "Payment for Environmental Services in the Global Environment Facility". The document includes an evidence base for PES effectiveness and highlights main threats to PES effectiveness, which it encourages are addressed in project (grant) designs. The document can be found at " www.unep.org/stap

10. STAP recommends identifying the methodological challenges of measuring carbon in drylands (Stringer, L.C. et al. (2012): Challenges and opportunities in linking carbon sequestration, livelihoods and ecosystem service provision in drylands. *Environmental Science & Policy* 19-20:121-135.).

References

- [1] BONILLA, Carlos A; REYES, Jos   L y MAGRI, Antoni. 2010. Water Erosion Prediction Using the Revised Universal Soil Loss Equation (RUSLE) in a GIS Framework, Central Chile. Chilean J. Agric. Res. [online] vol.70, n.1, pp. 159-169. ISSN 0718-5839. doi: 10.4067/S0718-58392010000100017.
- [2] Schuller P, Walling DE, Sep  veda A, Trumper RE, Rouanet JL, Pino I, Castillo A. 2004. Use of 137Cs measurements to estimate changes in soil erosion rates associated with changes in soil management practices on cultivated land. Appl Radiat Isot. 60 (5):759-66.
- [3] See, for example, papers on CA jointly with FAO - <http://www.iica.int/foragro/documentos/relaco.pdf>
- [4] For general guidance and references to other sources, see Andrews, M. 2006. Microcredit and agriculture: how to make it work. [http://www.microcreditsummit.org/papers/Workshops/22\\_Andrews.pdf](http://www.microcreditsummit.org/papers/Workshops/22_Andrews.pdf)

<i>STAP advisory response</i>	<i>Brief explanation of advisory response and action proposed</i>
<b>1. Consent</b>	STAP acknowledges that on scientific/technical grounds the concept has merit. However, STAP may state its views on the concept emphasising any issues that could be improved and 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.
<b>2. Minor revision required.</b>	STAP has identified specific scientific/technical suggestions or opportunities that should be discussed with the proponent as early as possible during development of the project brief. One or more options that remain open to STAP include: <ul style="list-style-type: none"> <li>(i) Opening a dialogue between STAP and the proponent to clarify issues</li> <li>(ii) Setting a review point during early stage project development and agreeing terms of reference for an independent expert to be appointed to conduct this review</li> </ul> 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 revision required</b>	STAP proposes significant improvements or has concerns on the grounds of specified major scientific/technical omissions in the concept. If STAP provides this advisory response, a full explanation would also be provided. Normally, a STAP approved review will be mandatory prior to submission of the project brief for CEO endorsement. 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.