

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: December 2, 2010

Screener: Michael Stocking and Ravi Ravindranath

Panel member validation by: Michael Stocking and Ravi Ravindranath

I. PIF Information

Project Title: Sustainable land and forest management in the Greater Caucasus landscape

Country(ies): Azerbaijan GEF Project ID: **4332**

GEF Agency(ies): UNDP GEF Agency Project ID: 4418

Other Executing Partner(s): Ministry of Ecology and Natural Resources Submission Date: September 29, 2010

GEF Focal Area (s): MULTI FOCAL AREA Project Duration: 60 months

Name of parent program: For SFM/REDD+

Agency Fee: 568,00

Full size project GEF Trust Fund

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 this project with its focus on carbon accounting and investments in forest and rangeland in a 'landscape' setting. These aspects of the project should not only draw policy and public attention to carbon but also highlight the associated benefits in, for example, reduced erosion, protection of biodiversity and support for human livelihoods. STAP notes favourably that the objective of the GEF funded alternative is the sustainable land and forest management in the Greater Caucasus Landscape securing the flow of multiple ecosystem services, including carbon storage and sequestration and water provisioning services, while ensuring ecosystem resilience to climate change. One of the aims of this project, implicit only at present, should be to show how a focus on LULUCF and REDD will achieve multiple benefits. Monitoring and impact assessment must be prominent in the project design in order to capture the importance of a carbon focus for such wide-ranging benefits, and to provide the evidence-base for wider uptake of the project approach.

STAP notes that several scientific and technical issues have already been highlighted by the GEF Secretariat and revised in the PIF by UNDP. STAP has a number of issues which it would like to see addressed in the full Project Brief:

(1) Of key importance to this project is the establishment of robust and verifiable baselines. One of the activities during project preparation should be to re-examine some of the baseline data cited in the PIF. It is difficult fully to understand what the following statement means: "In 1990, the carbon storage in LULUCF category was 3,509 Gt". It is mentioned that this figure reduced by 70% in four years from deforestation. Presumably, these figures do not capture *total* carbon storage: i.e. including that in the soil. Revisiting these and other important baseline measures, such as current rates of soil loss (see further point below), will be essential.

There also is a need to develop the baseline, or reference scenario, where the baseline scenario CO₂ emissions, or carbon stock changes, need to be projected into the future on forest loss or degradation of forests and pastures keeping in mind the future policies and pressures.

(2) In the light of the above comment on soil loss and the mention in the PIF of the potential of increased protection to forest cover to enhance carbon storage, the project proponents are urged to pay attention to soil organic carbon. There is no reference in the PIF to this aspect. However, in the broadleaved sub-tropical-type mountain forests typical of the Caucasus Mountains, soil organic matter is not only easily volatilised but it is also

translocated in water erosion. Yet, at the same time, arguably the soil provides a far larger ‘sink’ for carbon than does the increase in forest cover – and possibly also co-benefits in aspects such as increased soil water-holding capacity, reduction in floods and greater reliability of streamflow. The project proponents are urged to take into account soil carbon, its potential, monitoring and role in deriving multiple benefits, especially GEBs. The work of FAO¹ and TSBF² on ‘soil biodiversity’ may help in this regard.

(3) The project rightly addresses the lack of robust (but practical) monitoring protocols and practices for carbon flows and the absence of AZ-tailored methodological approaches for carbon stock field assessment. STAP suggests close liaison by the professionals in the project with the GEF-financed *Carbon Benefits Project: Modeling, Measurement and Monitoring*,³ which will have a prototype carbon tracking system available by March 2011. Following the guidelines being developed by CBP will provide a cost-efficient protocol for undertaking the necessary measurements, including most importantly the tracking of soil carbon.

(4) A further key component of the carbon budget at landscape level is the carbon entrained in soil erosion. The PIF mentions ADB estimates of 100 to 500 cubic metres of erosion per hectare. This equates to about 130 to 650 tonnes per hectare. This upper end of the range seems very unlikely and figures as high as this have only been recorded under very specific circumstances on small plots (in Indonesia, for example, where all vegetation had been removed and slopes were of the order of 25%). However, there is no doubt that 130 tonnes of erosion can happen; maybe not every year but certainly in years of very intense rainfall on steep mountain slopes. With an enrichment ratio of 2.5 (typical under these conditions) and a soil carbon of 2% (a conservative estimate), over 6 tonnes of carbon may be removed annually from each hectare by water erosion. The scale of this loss overshadows some of the estimates of potential carbon sequestration cited in the PIF table on pages 6 and 7. The project is urged to take account of the full carbon balance, and the key flows, not just the carbon in vegetation. This will require some additional monitoring and possibly acquiring further professional skills in the project.

(5) On the development of SFM and SLM practices package, how would the SFM and SLM practices be developed? Are there well tested practices and measures? A few typical alternatives and measures are listed but there is a need for a scientific approach to develop and evaluate the different approaches aimed at delivering the proposed objectives. There also is a need to address any leakage of carbon benefits due to shifting of grazing pressures and wood collection. How would closure of grazing or reduction of grazing rate be achieved? What are the opportunity costs of such measures?

(6) A systematic approach is recommended in order to identify the drivers of deforestation and forest degradation, and the response measures.

(7) Resilience is mentioned in the overall objective, but an approach and the methods for promoting resilience are not presented in the proposal. There is a need to consider and understand the climate change risks on forests and pastures, and to define measures that enhance resilience.

<i>STAP advisory response</i>	<i>Brief explanation of advisory response and action proposed</i>
1. Consent	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.
2. Minor revision required.	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: (i) Opening a dialogue between STAP and the proponent to clarify issues (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 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 revision required	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.

¹ <http://www.fao.org/ag/agl/agll/soilbiод/default.stm>

² <http://www.bqbd.net>

³ <http://carbonbenefitsproject-compa.colostate.edu>