

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 08, 2015

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Panel member validation by: Ralph E. Sims
Consultant(s):

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

FULL SIZE PROJECT GEF TRUST FUND

GEF PROJECT ID: 9042

PROJECT DURATION : 4

COUNTRIES : Moldova

PROJECT TITLE: Moldova Sustainable Green Cities – Catalyzing Investment in Sustainable Green Cities in the Republic of Moldova Using a Holistic Integrated Urban Planning Approach

GEF AGENCIES: UNDP

OTHER EXECUTING PARTNERS: Ministry of Environment, Municipality of Chisinau, Ministry of Regional Development Construction, Ministry of Economy, Ministry of Transport

GEF FOCAL AREA: Climate Change

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

The project aim is to create and define an integrated urban planning approach for sustainable green cities, attract new investment and reduce GHG emissions. The capital city of Chisinau has been selected and three additional cities were proposed for replication. Component 1 is to develop an "Innovation hub"; component 2 is waste-to-energy; component 3 is city transport initiatives; component 4 is creation of an energy demand database for public buildings; and component 5, the establishment of an urban development sustainability council to encourage wider deployment.

1. This project will be running in parallel with the Sustainable Cities IAP that has 23 cities with variable population levels (from about 250,000 to 15 million) in the pilot. Therefore it will not have access to the same staff training, interactions, learning from other experiences etc. STAP strongly recommends project proponents to establish links to the Cities IAP and consider STAP screen of the IAP during project preparation. Particularly, it concerns comments related to capacity building and collective impact, urban metabolism, indicators of success and other issues that are largely applicable to both, this proposal and IAP.

2. The project aim is to reduce GHG emissions by 200,000t CO₂-eq but how was that target number determined? Based on the statement "an estimated amount of approximately 200,000 tonnes of CO₂ direct GHG emission reductions from the projects realized by the innovation hub in the City of Chisinau and later by the innovation hubs created in other towns and cities in Moldova" it seems the target is just a "guesstimate" with a little analysis behind it. What if the innovation hub only raises half of the target finance? Does that imply the GHG emissions target will also drop by a half? In the same paragraph 19 on page 12 it states transport projects in Chisinau will result in an estimated 50,000 tCO₂-eq avoided (even though the GEF Transport methodology was not used) and the capture and flaring of landfill gas will result in 150,000 t CO₂-eq avoided. So this begs the questions: Are the "200,000 t of CO₂ direct GHG emission reductions" only from Chisinau or also from the other towns and cities as was implied?

3. In the municipal solid waste landfill site the gas is to be collected and flared to avoid methane emissions. This is acceptable but why is the methane gas not to be used to provide heat and power for the city which is a well-established technology in many countries?

4. Several initiatives have already been taken in Moldova to promote green urban planning and several policies and activities are already in place. Therefore how the actual and measurable baseline data will be

determined, and the additional progress made as a result of this GEF project, is not clear. A section on "Lessons learned" as well as a detailed assessment of the baseline initiatives is recommended during project preparation with the evidence provided in the CEO endorsement.

5. STAP raises the issue of sustainability and "fit-for purpose" launch of innovation hub(s) in the City of Chisinau and elsewhere in Moldova. As stated in the PIF, an Innovation Hub will help to identify and secure financing for the development of activities under all but one of the project components. It will be staffed by 3-4 people. It does not look like there is any innovation element in this activity other than fund raising. Research information about innovation hubs is abundant and there are multiple examples of innovation hubs that supported establishment of "smart cities" (e.g., innovation districts established in Barcelona, Boston, Singapore, Philadelphia, Skolkovo and others). As an example, most recent results point towards four major features of successful innovation hubs that:

- build collaborative communities with entrepreneurial individuals at the centre;
- attract diverse members with heterogeneous knowledge;
- facilitate creativity and collaboration in physical and digital space; and
- localize global entrepreneurial culture (1).

Regrettably, these features are not considered in the PIF. Therefore STAP recommends that project proponents review existing literature on city innovation hubs with a particular emphasis on the role of these hubs in driving smart city development and consider revising the proposal in the PIF modality focused exclusively on finance mobilization.

6. Developing the Innovation Hub may help Moldova in its international profile and to raise finance, but it is not clear how this will result in direct GHG emission reductions. This needs to be specified. What will be the outcome if only limited finance is raised? This seems to be a major risk to the success of the project. It is identified as such in Table 1.3 but the mitigation measure of training the Innovation hub staff will not overcome the risk of limited funding becoming available. The statement "If co-financing fails to materialize for green urban development projects in Chisinau then the project can also switch its attention to the development of green urban development projects in other cities and towns in Moldova" is cause for concern. How exactly would that happen and would the GHG emission target still be met?

7. The cost target of <\$10/t CO₂-eq avoided by each activity is commendable, but given the range of activities planned how will this be achieved in practice? Developing an abatement cost curve (2) at an early stage of the project is recommended simply to provide some guidance as to how to best meet the target by giving priority to projects that return emission reductions for less than \$10 /t CO₂-eq. But it should be noted that producing a marginal abatement cost curve is a complex process if it is to be undertaken with any useful degree of accuracy.

8. In estimating GHG impacts of the project, STAP recommends using Guidelines for GHG accounting and reporting of GEF projects to be released at the GEF Council meeting in June 2015. Recommended in the guidelines are Urban Project Methodologies (UPMs) for GHG accounting that include: The GHG Protocol Policy and Action Standard (WRI Standard); Global Protocol for Community-Scale Greenhouse Gas Emission Inventories (GPC); PAS 2070:2013, Specification for the assessment of greenhouse gas emissions of a city – Direct plus supply chain and consumption-based methodologies; and (iv) 1996/2006 IPCC Guidelines for National Greenhouse Gas Inventories, (IPCC Guidelines).

9. What indicators will be used to assess whether or not the waste-to-energy component and the transport activity have been successful? For the 4 other cities it states: "Appropriate sustainability indicators will also be adopted by these cities as part of their Green Urban Development Plan". But what exactly are these indicators? Impact indicators should be developed for the entire project that would be able to measure success of project activities in an integrated way. There are multiple matrices available to measure impact of green cities, including European Green City index (3) developments by the Global Cities Indicators Facility and others.

10. When developing Component 3 further, and prioritizing certain interventions supporting sustainable low-carbon transport planning, STAP recommends using the Avoid-Shift-Improve framework (4). The project document should specify explicitly the choice of specific interventions in terms of their GHG mitigation potential.

REFERENCES USED:

1. http://www.ssireview.org/blog/entry/time_to_define_what_a_hub_really_is

2. http://www.mckinsey.com/client_service/sustainability/latest_thinking/greenhouse_gas_abatement_cost_curves
3. <http://www.economistinsights.com/energy/analysis/european-green-city-index/methodology>
4. <https://www.thegef.org/gef/sites/thegef.org/files/publication/STAP-Sustainable%20transport.pdf>.

<i>STAP advisory response</i>	<i>Brief explanation of advisory response and action proposed</i>
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	<p>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:</p> <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, and possibly agreeing to terms of reference for an independent expert to be appointed to conduct this review.</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>
3. Major issues to be considered during project design	<p>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:</p> <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>