

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, 2017
Screener: Sunday Leonard
Panel member validation by: Ralph E. Sims
Consultant(s):

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

FULL-SIZED PROJECT	GEF TRUST FUND
GEF PROJECT ID:	9038
PROJECT DURATION:	4
COUNTRIES:	El Salvador
PROJECT TITLE:	San Salvador Low-emission Urban Development Path
GEF AGENCIES:	UNDP
OTHER EXECUTING PARTNERS:	Ministry of Environment and National Resources (MARN), acting as leader partner together with the Ministry of Public Works, Transport, Housing and Urban Development (MOP), Council of Majors of the Metropolitan Area of San Salvador municipalities (COAMSS), and the National Energy Council (CNE)
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):
Concur

III. Further guidance from STAP

San Salvador is one of 14 divisions in the country of El Salvador, and is the capital and largest city with almost one third of the total population of 6.7M. This project on urban development within the Greater Metropolitan Area of San Salvador gives emphasis to improving urban transport and energy efficiency of public transport systems to provide good mobility for a densely populated region. Improved energy efficiency in municipal buildings is also a goal. The key overall aim is to enable development of a more coherent sustainable and low-emission urban development pathway. Funding for the municipalities, including San Salvador, comes, in part, directly from the national budget.

A BRT route has been proposed but requires greater analysis of how the public can access it without increasing local congestion. Staff at the city's SITRAMSS (Transport System) should evaluate other BRT systems from the many currently operating around the world (see: https://en.wikipedia.org/wiki/List_of_bus_rapid_transit_systems) to gain knowledge from previous experiences, such as the one operating in Bogota since 2000.

The energy efficiency of public buildings will be improved by staff training and encouraging procurement of more efficient appliances (such as air-conditioners and lighting) by municipalities. This would be achieved using a combination of funds from GEF and the private sector.

Like many other rapidly growing cities, urban growth is rapid and unstructured; planning is poor; traffic congestion is high; many of the younger population are unemployed; and crime prevails in the informal

settlements and particularly on public transport. Vulnerability of infrastructure to climate change impacts is also high.

In some regards the project is similar to other transport-related projects under the Sustainable Cities IAP. Sustainable best practices and methodologies developed by the GEF Global Platform for Sustainable Cities, are being incorporated into the San Salvador urban planning design. It is therefore imperative for the project managers to continue to observe developments within the Cities IAP, liaise with other participating cities wherever possible, and keep track of the use of indicators for MRV. It is good that some funding has been set aside for this purpose but it is not clear what the formal approach will be to enable this liaison to happen. The GEF has funded a number of city projects currently underway in addition to the IAP's child projects so is there a mechanism to enable liaison between them all?

The barriers to planning and implementing a low-emission, climate-resilient, development path have been identified using a participatory approach. How best to overcome these barriers was not included in the PIF and remains a work-in-progress. The risks to the project have been identified and appear to be acceptable.

Capacity building and public awareness are key components, so it is hoped any lessons learned from the project will be able to be communicated to other municipalities in the country so they can also become more sustainable in a similar way. But who exactly will be charged with undertaking the training of the local government groups yet to be formed; how many will there be; and what basic skill levels will those involved need to have?

A mitigation potential of 17,000 t CO₂-eq/yr is claimed from replacing some public transport by the BRT but no mention is made of the opportunity to also attract car and motor-bike drivers to the BRT. It is not clear how the potential was assessed nor how the numbers in paragraphs 45 and 46 were calculated. It is good that the GEF Transport emissions calculator was used but the assumptions made are not provided, such as how many large- and mini-buses will be displaced and what is the typical annual CO₂ emissions from one bus unit?

Local air pollution from the poorly maintained bus fleet (and LPG rickshaws) produce around half of PM₁₀ emissions. Potential reductions in CO and NO_x are stated but the local environmental and climate benefits from reducing these black carbon emissions should be calculated into the project proposal (see: <http://www.stapgef.org/taxonomy/term/394>).

The National Policy on Climate Change and the 5 year and long term National Development Plans are noted but it is not clear how these, or this specific proposal, link to the El Salvador's NDC.

Overall this is a well-constructed proposal for a somewhat ambitious project given the barriers as noted.

Some specific comments that should be considered during the preparation of the full project include:

1. As mentioned above, the project provides an opportunity to mitigate not only CO₂ but also black carbon – a very potent climate forcing and air-polluting agent – from the transportation sector (please see previous citations as well as UNEP report on near term climate protection and clean air benefits - <http://www.ccacoalition.org/es/file/914/download?token=dkVP64Ls>). Effort should be made to incorporate this into the expected climate benefits from this project. Also, black carbon emissions reduction would also provide clean air benefits which would consequently yield human health benefits. Hence this should also be included in the expected benefits from the project. Furthermore, in considering diesel engine buses, the project should recognize recent concerns with diesel engines (see for example: <http://www.bbc.com/news/business-34257424>; and http://www.ucsusa.org/clean_vehicles/why-clean-cars/air-pollution-and-health/trucks-buses-and-other-commercial-vehicles/diesel-engines-and-public.html#.WQ8hQIWGPIU) due to emissions of pollutants (see for example: <https://link.springer.com/article/10.1007/s10098-014-0793-9>). In order to achieve transformational change and a real low-carbon pathway, the project should seek to implement more ambitious climate- and environment-friendly alternatives such as electric or hybrid engines.
2. Furthermore, the climate benefits from this project can be significantly increased by taking into consideration the possibility of mitigating HCFCs and HFCs from air conditioners. The adoption of low-GWP air conditioners combined with energy efficient air conditioners, apart from helping in mitigating HFCs – a powerful greenhouse gas – can significantly reduce energy use and consequently CO₂ emissions from power plants (see: Shah N., et al. 2015 - Benefits of leapfrogging to super-efficiency and low global warming potential refrigerants in air conditioning, Ernest Orlando Lawrence Berkeley National Laboratory. https://eetd.lbl.gov/sites/all/files/lbnl-1003671_0.pdf). Taking this into consideration in the implementation of this project would therefore provide climate benefit as well as benefits of reduced emissions of power plant-

related air pollutants such as sulphates, while also contributing to achieving the recent Kigali Amendment to the Montreal Protocol on HFCs.

<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>