Scientific and Technical Advisory Panel

The Scientific and Technical Advisory Panel, administered by UNEP, advises the Global Environment Facility

(STAP Scientific and Technical screening of the Project Identification Form (PIF)

Date of screening: November 08, 2017
Screener: Sunday Leonard
Panel member validation by: Ricardo Orlando Barra Rios
Consultant(s):

I. PIF Information (Copied from the PIF)

<table>
<thead>
<tr>
<th>FULL-SIZED PROJECT</th>
<th>GEF TRUST FUND</th>
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<tbody>
<tr>
<td>GEF PROJECT ID:</td>
<td>9263</td>
</tr>
<tr>
<td>PROJECT DURATION:</td>
<td>5</td>
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<tr>
<td>COUNTRIES:</td>
<td>Cote d'Ivoire</td>
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<tr>
<td>PROJECT TITLE:</td>
<td>Sound Management of Unintentional Persistent Organic Pollutants (POPs) and Polychlorinated Biphenyl Ether (PBDEs) to Reduce their Emission from the Industrial Waste Sector</td>
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<td>GEF AGENCIES:</td>
<td>UNIDO</td>
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<tr>
<td>OTHER EXECUTING PARTNERS:</td>
<td>Ministry of Environment, Urban Hygiene, and Sustainable Development, Centre Ivorian Antipollution (CIAPOL)</td>
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<td>GEF FOCAL AREA:</td>
<td>Chemicals and Waste</td>
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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):
Minor issues to be considered during project design

III. Further guidance from STAP

1. This project aims to establish a system for effective management of polybrominated diphenyl ethers (PDBEs) and unintended Persistent Organic Pollutants (uPOPs) in Cote d'Ivoire, with a particular focus on e-wastes and end-of-life vehicles.


3. NOTE: The title of the proposal was mistakenly stated as "Sound management of unintentional persistent organic pollutants (POPs) and [polychlorinated biphenyl ethers (PBDEs)] to reduce...." instead of "Sound management of unintentional persistent organic pollutants (POPs) and [POLYBROMINATED
DIPHENYL ethers (PBDEs)] to reduce.... These are two different chemicals, so this should be corrected when developing the proposal further. It is also suggested to delete "possibly" from the project title as there is sufficient information in the baseline data, as well as in related science, which confirm the presence of POPs in the targeted waste types: the project will definitely reduce POPs.

4. According to the proposal, about one-third of the 10,000 to 25,000 tons of the electrical/electronic products imported into Cote d’Ivoire are second hand and are of variable quality, including some that are dysfunctional (e-waste). It is estimated that about 5000 end-of-life vehicles are received every month at the main e-waste and end-of-life recycling center. The amount of e-waste and end-of-life vehicles continues to grow.

5. The project seeks to manage the challenge through multiple interventions targeted at strengthening legal and institutional framework in the country, upgrading e-waste and end-of-life vehicle dismantling sector, and by establishing economic and investment opportunities in the sector. It is envisaged that these activities would lead to the disposal of 1000 tons of PDBEs containing waste and help avoid the emission of uPOPs.

6. However, the interventions are geared only towards downstream aspects of the problem; that is, solutions that address the management of already generated wastes (end-of-pipe solutions). However, for a sustainable solution, it is also important to target the upstream; that is, to address the issue of indiscriminate importation of dysfunctional electrical and electronic products, without which the problem will persist even if all existing waste today is successfully managed. It is therefore advised that activities that can help ensure that only usable products are imported into the country are included in the project. Example of such activities includes: introducing policies and legislation on the importation of used electrical/electronic products and second-hand vehicles, developing guidance on criteria and standards for accepting used electrical/electronic products and vehicles into the country, and the training of customs officers on effective monitoring of imported goods.

7. On page 12 of the proposal, under the subtitle "PBDEs in End of Life Vehicles," the lack of a data tracking system for end-of-life vehicle was noted but a solution to this was not included in the project activities. STAP advises that the creation of a data tracking system should be included in the capacity building and training aspects of the project if resource constraints allow.

8. Component 3 of the project aims to encourage plastic recycling to create pellets. While this is a good initiative and aligns with the concept of a circular economy, this need to be implemented using state-of-the-art knowledge and expertise, and with caution. This is because some plastics contain several hazardous chemicals which may be released into the environment during recycling (see, for example, Hopewell et al., 2009: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2873020/; Lithner et al., 2011: http://www.sciencedirect.com/science/article/pii/S0048969711004268; Martinho et al., 2012: http://www.sciencedirect.com/science/article/pii/S0956053X12000700; Sepúlveda et al., 2010: http://www.sciencedirect.com/science/article/pii/S0195925509000651. It is therefore important that waste plastics are characterized to determine their chemical content before they are recycled.

9. Furthermore, no information was presented on the final use of recycled plastic pellet. Overall, this will depend on the chemical content and physical properties of the plastics and the desired properties of the final product. It is advised that an analysis of the desired end product should be carried out once the baseline data on the type of plastic waste in this project has been determined. The Plastic Europe 2016 publication provides some indications of the potential end products from recycled plastics: http://www.plasticseurope.org/documents/document/20161014113313-plastics_the_facts_2016_final_version.pdf.

10. STAP believes that this project has the potential to provide an opportunity to manage other hazardous chemicals and waste if implemented holistically. For example, refrigerators and cooling systems are part of the wastes that are dismantled in Cote d’Ivoire, which presents an opportunity for managing refrigerants present in this equipment, possibly HCFC, with benefits for climate change and ozone depletion avoidance. Similarly, lead, a hazardous metal, is also extracted from vehicle batteries at the vehicle dismantling center; this project also presents an opportunity to manage this process effectively. It is therefore advised that the project should be designed to provide sustainable and holistic solutions that incorporate all possible hazardous substances that may be encountered in the targeted wastes.

11. Some experiences and guidelines exist in developed and developing countries on managing e-waste and end-of-life vehicles, and it is recommended that some of these experiences should be explored while developing this project further. Examples include India: http://www.moef.nic.in/divisions/hsmd/guidelines-e-waste.pdf; BRS.
12. Outcome 4 focuses on monitoring and evaluation. STAP believes that this project, if well implemented, would generate knowledge, information, and data that will be useful especially in sub-Saharan African countries where e-waste and end-of-life vehicle management are significant challenges. It is therefore advised that a broader and more rigorous knowledge management component should be included in the project. The project should also seek to align with similar GEF-supported (for example, EHPMP - Environmental Health and Pollution Management Program in Africa https://www.thegef.org/project/ehpmp-environmental-health-and-pollution-management-program-africa) and non-GEF projects elsewhere to learn, share and disseminate knowledge.

<table>
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<tr>
<th>STAP advisory response</th>
<th>Brief explanation of advisory response and action proposed</th>
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<tr>
<td><strong>1. Concur</strong></td>
<td>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.</td>
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| **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. |