

## STAP guidelines for screening GEF projects

Part I: Project Information	Response
<b>GEF ID</b>	10353
<b>Project Title</b>	The Global Greenchem Innovation and Network Programme
<b>Date of Screening</b>	09 May 2020
<b>STAP member screener</b>	Jamidu Katima
<b>STAP secretariat screener</b>	Sunday Leonard
<b>STAP Rating</b>	<b>Minor issues to be considered during project design</b>
<b>STAP Overall Assessment of the project proposal</b>	<p>STAP welcomes the Global Greenchem Innovation and Network Programme, which aims to scale up green chemistry applications for POPs (HBCD, SCCPs, and PFOs), mercury, and microplastics replacement through capacity building and innovation globally, starting with six developing countries. The project will create a network of green chemistry researchers and practitioners in the participating countries, build their capacity, and link them to relevant organizations and stakeholders.</p> <p>STAP has the following comments on the proposed project:</p> <ul style="list-style-type: none"> <li>• The project objective on page 4 of the PIF is to scale up green chemistry for POPs, mercury and microplastics replacement through capacity building and innovation, and creation of a global unifying green chemistry network for implementation and uptake. However, paragraph 81 states that the project aims to prevent exposure of POPs, mercury, and microplastics in humans and the environment through the implementation of conscious design for inherently nonhazardous alternatives using green chemistry principles. It is suggested that these should be reconciled, and the objective and aim of the project should be consistent throughout the project document.</li> <li>• Barriers: The PIF listed several barriers, including financial, regulatory, organizational, and cultural. Some of these barriers are significant. The project developer should provide information on how these barriers will be overcome.</li> <li>• It is good that a theory of change was included; however, the current version does not provide all of the necessary information expected in a functional theory of change. For example, the key assumptions, planned interventions, causal pathways, and outcomes are not clearly defined. Please see STAP's theory of change primer for further guidance on theory of change preparation (<a href="https://stapgef.org/sites/default/files/publications/STAP%20ToC%20Primer_webposting.pdf">https://stapgef.org/sites/default/files/publications/STAP%20ToC%20Primer_webposting.pdf</a>).</li> <li>• While the proposed intervention of establishing a mechanism for consistent networking within the GGINP program is useful, the project should consider how small-scale businesses and the informal sectors will be engaged in the proposed network. It is also important to consider how the MOOCs can be designed to be accessible to these sectors. These actors are sometimes a major part of the chemical industries in many developing countries. Yet, they may not necessarily have the technical tools, financial capacity, and academic know-how to participate or access the useful information to be provided.</li> </ul>

- The idea of green chemistry alternative to microplastic is vague in the proposal. Microplastics are "mostly" byproduct and with a few intentionally produced in specific sectors: synthetic fibers, toothpaste, and skincare products. Hence, there is a need for clarity on what green chemistry alternatives are being considered: which specific sector will be targeted? What are the green chemistry alternatives that will help prevent microplastics introduction into the environment? Will this focus on redesigning products that currently release microplastics as part of their wear and tear or deterioration or decomposition process, or will these focus on replacing these products with green chemistry alternatives? The proposal needs to be clear on what is termed "green chemistry alternative to microplastics," what intervention falls under this category, the expected output/outcome, and how it will be achieved.
- The success of this project will depend significantly on national and regional policies needed for providing an enabling environment for the adoption of green chemistry. However, there is limited planned intervention in the PIF related to policy or governance actions. If the enabling policies are already in place in the intended pilot countries, this needs to be made clear in the PIF. If not, some form of activities needs to be included to create the required enabling environment at the policy level.
- Financing: the PIF states that industries will be incentivized to take up green chemistry technologies. Source of funds beyond the life of the project to ensure continuity and durability are not discussed. There is limited discussion on involving local financial institutions. There are also no planned interventions to create policies to ensure the sustainability of the project, e.g., through fiscal policies. See also the point made above on the lack of policy-related interventions.
- While the project is focused on the chemicals and waste focal area, if successful, it will also deliver environmental benefits in other focal areas, especially international waters (by prevention of microplastics into the aquatic environment). This co-benefit needs to be reflected in the project's expected global environment benefits.
- The estimation of the expected GEBs from the project needs to be clarified. On page 25 of the PIF, GEB estimate was a reduction of 9,908 kg PFOS/year, 25,582 kg HBCD/year; or 66,359 ton/year PFOS contaminated fibers; 2553 ton/year HBCD contaminated materials; and 2.248 million tons/year SCCPs-associated metals products. These numbers are, however, different from what was presented on page 10 under core indicators. Also, a consistent unit of measurement should be used throughout in presenting the GEBs.
- It is acknowledged that the benefits of mercury and microplastics avoidance have not been estimated at this stage. However, the approach and timing of the estimation need to be clarified. On the one hand, the PIF indicates that it will be evaluated at the PPG stage; on the other hand, it says it will be evaluated to have potential demonstration project deployments and upscaling (see page 13).
- The overall GEBs from the project should be updated as the project progresses and as more knowledge on green chemistry solutions in different sectors is identified during the PPG and project lifetime.

	<ul style="list-style-type: none"> <li>• Many of the entities listed as civil society in the stakeholder section of the PIF are not civil society. Please review the stakeholder section accordingly.</li> <li>• Although the PIF acknowledges the importance of universities in the participating countries – it is not clear on how these will be engaged.</li> <li>• Climate risk: it is important that green chemistry solutions are assessed for possible contribution to global warming. A detailed life cycle assessment and environmental impact analysis should be carried out to ensure that solutions do not end up with unintended consequences, including for climate change. The possible impact of climate change, if any, on the proposed interventions also needs to be considered.</li> <li>• The PIF contained only annex A. All other annexes referred to in the PIF are missing.</li> </ul>	
<b>Part I: Project Information</b> <b>B. Indicative Project Description Summary</b>	<b>What STAP looks for</b>	<b>Response</b>
Project Objective	Is the objective clearly defined, and consistently related to the problem diagnosis?	Yes
Project components	A brief description of the planned activities. Do these support the project's objectives?	Yes – however there a need to synchronize the objective and aim of the project
Outcomes	A description of the expected short-term and medium-term effects of an intervention. Do the planned outcomes encompass important global environmental benefits?	Yes (although not defined as such - short term will be done in component 1, medium term during component 2 and long-term during component 3)  Yes – however PPG phase will provide more details on the global environmental benefits to be achieved
	Are the global environmental benefits/adaptation benefits likely to be generated?	This will depend on the success of Outcome 3.1 of the project i.e. Green Chemistry alternatives for POPs, mercury and microplastics implementation and upscaling of successful demonstrations
Outputs	A description of the products and services which are expected to result from the project. Is the sum of the outputs likely to contribute to the outcomes?	Yes  Yes
<b>Part II: Project justification</b>	A simple narrative explaining the project's logic, i.e. a theory of change.	Yes – the theory of change diagram has been provided. See comment on the quality of the theory of change in the overall STAP assessment above.
<b>1. Project description. Briefly describe:</b>	Is the problem statement well-defined?	Yes

1) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed (systems description)		
	Are the barriers and threats well described, and substantiated by data and references?	Narrative description of barriers is discussed without data to substantiate them and without explanation on how these will be overcome.
	For multiple focal area projects: does the problem statement and analysis identify the drivers of environmental degradation which need to be addressed through multiple focal areas; and is the objective well-defined, and can it only be supported by integrating two, or more focal areas objectives or programs?	This project focusses on a single focal area, however there is potential benefit for the international waters focal area. See detailed comments in STAP's overall assessment of the PIF.
2) the baseline scenario or any associated baseline projects	Is the baseline identified clearly?	Narrative description of baseline is provided
	Does it provide a feasible basis for quantifying the project's benefits?	The baseline analysis does not provide basis for quantifying the project benefits
	Is the baseline sufficiently robust to support the incremental (additional cost) reasoning for the project?	More clarity should be provided
	For multiple focal area projects:	N/A
	are the multiple baseline analyses presented (supported by data and references), and the multiple benefits specified, including the proposed indicators;	NA
	are the lessons learned from similar or related past GEF and non-GEF interventions described; and	NA
	how did these lessons inform the design of this project?	
3) the proposed alternative scenario with a brief description of expected outcomes and components of the project	What is the theory of change?	The theory of change is to construct an ecosystem of open collaboration by establishing strong networks for capacity building, technology transfer, and a collective environment of entrepreneurial creativity

	What is the sequence of events (required or expected) that will lead to the desired outcomes?	Implementation of Capacity building programmes Implementation of accelerator programme Implementing GC demonstration project
	What is the set of linked activities, outputs, and outcomes to address the project's objectives?	Creation of GC network Creation of Regional Accelerator Implementation of GC demonstration projects and replication mechanism
	Are the mechanisms of change plausible, and is there a well-informed identification of the underlying assumptions?	Yes, however the underlying assumption are not explicit
	Is there a recognition of what adaptations may be required during project implementation to respond to changing conditions in pursuit of the targeted outcomes?	No
5) incremental/additional cost reasoning and expected contributions from the baseline, the GEF trust fund, LDCF, SCCF, and co-financing	GEF trust fund: will the proposed incremental activities lead to the delivery of global environmental benefits?	Yes
	LDCF/SCCF: will the proposed incremental activities lead to adaptation which reduces vulnerability, builds adaptive capacity, and increases resilience to climate change?	NA
6) global environmental benefits (GEF trust fund) and/or adaptation benefits (LDCF/SCCF)	Are the benefits truly global environmental benefits/adaptation benefits, and are they measurable?	Yes
	Is the scale of projected benefits both plausible and compelling in relation to the proposed investment?	Yes – however more details are needed
	Are the global environmental benefits/adaptation benefits explicitly defined?	Yes (19,908 kg PFOS/year, 25,582 kg HBCD/year; or 66,359 ton/year contaminated fibers with PFOS 2,553 ton/year contaminated material with HBCD and 2.248 million). But no values for mercury and microplastics. See more comments on project GEBs in the overall STAP assessment above.
	Are indicators, or methodologies, provided to demonstrate how the global environmental benefits/adaptation benefits will be measured and monitored during project implementation?	The PIF provides indicator, however, methodologies to demonstrate how the global environmental benefits will be measured are not shown

	What activities will be implemented to increase the project's resilience to climate change?	NA
7) innovative, sustainability and potential for scaling-up	Is the project innovative, for example, in its design, method of financing, technology, business model, policy, monitoring and evaluation, or learning?	Yes – if the network of GC innovators will be created, CG technologies innovations shared and replicated. However the involvement of academia and research institutions in participating countries is not clearly elaborated
	Is there a clearly-articulated vision of how the innovation will be scaled-up, for example, over time, across geographies, among institutional actors?	Yes – replicable case studies will be available in open source for adoption in different regions. Network members will be invited to adopt the technology. These will receive finances to replicates Loan facility will be created to assist investors in GC to support uptake. However, the source of finances after the project is not clearly stated  However, linking this activity with local financial institutions, with proper fiscal incentives such tax holidays, preferential lending rates, should also be considered
	Will incremental adaptation be required, or more fundamental transformational change to achieve long term sustainability?	No
<b>1b. Project Map and Coordinates.</b> Please provide geo-referenced information and map where the project interventions will take place.		The map is provided
<b>2. Stakeholders.</b> Select the stakeholders that have participated in consultations during the project identification phase: Indigenous people and local communities; Civil society organizations; Private sector entities. If none of the above, please explain why. In addition, provide indicative information on how stakeholders,	Have all the key relevant stakeholders been identified to cover the complexity of the problem, and project implementation barriers?	This needs to be reworked – for example the PIF under Civil Society engagement is talking of Government Institutions.  Engagement of private sector is included – their role is implied through linking them into the network – without stating on whether they will be required to provide willingly their GC technologies  Involvement of academia apart from Yale University no other University in the participating countries is mentioned

<p>including civil society and indigenous peoples, will be engaged in the project preparation, and their respective roles and means of engagement.</p>		
	<p>What are the stakeholders' roles, and how will their combined roles contribute to robust project design, to achieving global environmental outcomes, and to lessons learned and knowledge?</p>	<p>The PPG should provide details on roles of stakeholders</p>
<p><b>3. Gender Equality and Women's Empowerment.</b> Please briefly include below any gender dimensions relevant to the project, and any plans to address gender in project design (e.g. gender analysis). Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment? Yes/no/ tbd. If possible, indicate in which results area(s) the project is expected to contribute to gender equality: access to and control over resources; participation and decision-making; and/or economic benefits or services. Will the project's results framework or logical framework include gender-sensitive indicators? yes/no /tbd</p>	<p>Have gender differentiated risks and opportunities been identified, and were preliminary response measures described that would address these differences?</p>	<p>The project identifies low participation of female in global researchers</p> <p>The project has provided measures to address this gap</p>
	<p>Do gender considerations hinder full participation of an important stakeholder group (or groups)? If so, how will these obstacles be addressed?</p>	<p>No</p>
<p><b>5. Risks.</b> Indicate risks, including climate change, potential social and environmental risks that might prevent the project objectives from</p>	<p>Are the identified risks valid and comprehensive? Are the risks specifically for things outside the project's control?</p>	<p>Yes Yes No environmental risk has been identified</p>

<p>being achieved, and, if possible, propose measures that address these risks to be further developed during the project design</p>	<p>Are there social and environmental risks which could affect the project? For climate risk, and climate resilience measures:</p> <ul style="list-style-type: none"> <li>• How will the project's objectives or outputs be affected by climate risks over the period 2020 to 2050, and have the impact of these risks been addressed adequately?</li> <li>• Has the sensitivity to climate change, and its impacts, been assessed?</li> <li>• Have resilience practices and measures to address projected climate risks and impacts been considered? How will these be dealt with?</li> <li>• What technical and institutional capacity, and information, will be needed to address climate risks and resilience enhancement measures?</li> </ul>	<p>Climate resilience is not discussed</p>
<p><b>6. Coordination.</b> Outline the coordination with other relevant GEF-financed and other related initiatives</p>	<p>Are the project proponents tapping into relevant knowledge and learning generated by other projects, including GEF projects?</p>	<p>The project coordination is explained</p>
	<p>Is there adequate recognition of previous projects and the learning derived from them?</p>	<p>No previous project sited</p>
	<p>Have specific lessons learned from previous projects been cited?</p>	<p>No specific lesson from previous projects</p>
	<p>How have these lessons informed the project's formulation?</p>	<p>None</p>
	<p>Is there an adequate mechanism to feed the lessons learned from earlier projects into this project, and to share lessons learned from it into future projects?</p>	<p>None</p>
<p><b>8. Knowledge management.</b> Outline the "Knowledge Management Approach" for the project, and how it will contribute to the project's overall impact, including plans to learn from relevant projects, initiatives and evaluations.</p>	<p>What overall approach will be taken, and what knowledge management indicators and metrics will be used?</p>	<p>Data will be stored in a computer and mobile readable format to allow API integration, scraping, and contributions from the member network.</p> <p>However indicators are not shown</p>



	What plans are proposed for sharing, disseminating and scaling-up results, lessons and experience?	Creating a "Green Chemistry Technology Compendium", which will be an open source database of case studies and other technical information.
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Notes

STAP advisory response	Brief explanation of advisory response and action proposed
<p><b>1. Concur</b></p>	<p>STAP acknowledges that on scientific or technical grounds the concept has merit. 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.</p>
	<p>* In cases where the STAP acknowledges the project has merit on scientific and technical grounds, the STAP will recognize this in the screen by stating that <i>"STAP is satisfied with the scientific and technical quality of the proposal and encourages the proponent to develop it with same rigor. At any time during the development of the project, the proponent is invited to approach STAP to consult on the design."</i></p>
<p><b>2. Minor issues to be considered during project design</b></p>	<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;</p>
	<p>(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>

<p><b>3. Major issues to be considered during project design</b></p>	<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. 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>