

### STAP guidelines for screening GEF projects

Part I: Project Information	Response
<b>GEF ID</b>	10720
<b>Project Title</b>	Combating Climate Change through the Promotion and Application of Sustainable Biomass Energy Technologies in Pakistan (PASBET)
<b>Date of Screening</b>	November 17, 2020
<b>STAP member screener</b>	Saleem H. Ali
<b>STAP secretariat screener</b>	Sunday Leonard
<b>STAP Rating</b>	Minor issues to be considered during project design
<b>STAP Overall Assessment of the project proposal</b>	<p>This project considers the potential for woody biomass in furthering Pakistan's transition to renewable energy while also providing productive use for agricultural wastes and finding synergies with afforestation programs that the country has been promoting. The project has some innovative features and could be synergistic with existing afforestation programs in the country. However, there are some areas where methodological clarity is needed, as suggested below.</p> <p>IRENA's report on Renewables Readiness Assessment Pakistan (<a href="https://irena.org/publications/2018/Apr/Renewables-Readiness-Assessment-Pakistan">https://irena.org/publications/2018/Apr/Renewables-Readiness-Assessment-Pakistan</a>) indicates that the country has tremendous renewable energy potential, including hydro, wind, solar, as well as biomass feedstocks. Given the diverse option for renewable pathways in the country and considering that the biomass option could negatively impact food production and security, it is essential to justify why the project is selecting only this renewable energy option. A comparative analysis showing why biomass renewable is the best option for rural Pakistan is encouraged as the project is developed further.</p> <p>Furthermore, there is substantial agricultural residue availability in the country (see: <a href="https://irena.org/publications/2018/Apr/Renewables-Readiness-Assessment-Pakistan">https://irena.org/publications/2018/Apr/Renewables-Readiness-Assessment-Pakistan</a>), which could be a better option that may not compete with crop production; why is this not also prioritized?</p> <p>A key concern is around the upscaling of this technology. The proponents of the project stated the following on page 20 of PIF: <i>"it is estimated that agricultural waste materials could generate 56% of Pakistan's electricity, and woody biomass could sustainably generate 9.5% of the peak demand."</i> However, there is no citation provided for this assertion, which seems highly exaggerated. A citation and some further details are needed for this quoted amount.</p> <p>A narrative and diagram of the project theory of change were provided in the PIF, but the diagram is not legible because of the image's low resolution. Further, the theory change narrative and diagram only</p>

present the project output, outcomes, and desired impacts. It doesn't show or explain the needed elements of an adequate theory of change. The underlying assumptions, pathways, alternative plans, and medium- and long-term impacts required for a complete theory of change were missing. We suggest that the theory of change should be redone and re-evaluated by the GEF secretariat. We refer the project proponent to STAP's theory of change primer (<https://stapgef.org/theory-change-primer>) for more information on developing ToCs.

The project follows a fairly typical route involving 4 components with policy framework, utilization analysis, prototyping, and training. The two key partners – Pakistan Tobacco and Independent Power Producers – hold much responsibility for the potential upscaling of the project work.

In Component 1, the project intends to mainstream woody biomass production into the agriculture and forestry sector. It is essential to show how doing this will not impact food security and the livelihoods of people. Apart from the competition for land between energy wood and crop production, biomass energy production's economic attractiveness may divert farmers away from food production. Also, how will energy wood production on farmland impact farm biodiversity, negatively or positively? How will the project manage these concerns? We refer the project proponent to relevant publications related to these issues:

- Dauber and Mikaye 2016: <https://link.springer.com/article/10.1186/s13705-016-0089-5>;
- WRI, 2015: <https://www.wri.org/publication/avoiding-bioenergy-competition-food-crops-and-land>)

We recommend that the project consider the possibility of producing wood on lands that may not be suitable for crops, such as contaminated soils and arid lands.

The calculation of the greenhouse gas emissions mitigation benefits of this project is not adequately described. The following assertion needs a methodology:

*"Based on the preliminary line up of demonstration woody biomass-based electricity production as presented in Annex D, the quantity of direct and consequential GHG emission reduction that can potentially be realized from the barrier removal activities of the project is about 3.1million tons of CO2 by the end of the project's 10-years influence period. It is estimated that about 64,633 tons of direct GHG emission reduction."* (page 32 of PIF)

Annex D was not included in the PIF – GEF secretariat should check and verify as the net calculations for such biomass fuel generation are critically important to understand if the Global Environmental Benefits will credibly accrue. The proponents should particularly review the following papers, which caution on

	<p>calculating benefits from biomass energy production. Please refer to this resource page to inform your calculations accuracy:</p> <ul style="list-style-type: none"> <li>• <a href="https://www.ieabioenergy.com/iea-publications/faq/woodybiomass/">https://www.ieabioenergy.com/iea-publications/faq/woodybiomass/</a></li> <li>• <a href="https://www.climatehubs.usda.gov/hubs/northern-forests/topic/carbon-and-wood-based-bioenergy">https://www.climatehubs.usda.gov/hubs/northern-forests/topic/carbon-and-wood-based-bioenergy</a></li> </ul> <p>If well designed and properly implemented, the project should deliver other benefits aside from climate change mitigation. Air pollution, biodiversity, land degradation, and job creation co-benefits are possible from the project. But the project could also negatively impact air pollution, biodiversity, land degradation, and food security if not well designed. These need to be considered as the project is designed further.</p> <p>The effect of climate change was noted, but a detailed climate risk addressing climate projection for the project's location and how climate change may impact the specific project interventions was not done. Given that this project will involve crop production and energy infrastructure, climate change is a significant risk factor. We recommend that the project proponent carry out a detailed climate risk assessment based on the prevailing and projected climate change situation in Pakistan and develop measures to mitigate the identified risks.</p> <p>Additional references:</p> <ul style="list-style-type: none"> <li>• Favero, A., Daigneault, A., &amp; Sohngen, B. (2020). Forests: Carbon sequestration, biomass energy, or both? <i>Science Advances</i>, 6(13), eaay6792. <a href="https://doi.org/10.1126/sciadv.aay6792">https://doi.org/10.1126/sciadv.aay6792</a></li> <li>• Walker, T., Cardellichio, P., Gunn, J. S., Saah, D. S., &amp; Hagan, J. M. (2013). Carbon Accounting for Woody Biomass from Massachusetts (USA) Managed Forests: A Framework for Determining the Temporal Impacts of Wood Biomass Energy on Atmospheric Greenhouse Gas Levels. <i>Journal of Sustainable Forestry</i>, 32(1–2), 130–158. <a href="https://doi.org/10.1080/10549811.2011.652019">https://doi.org/10.1080/10549811.2011.652019</a></li> </ul>	
<b>Part I: Project Information</b> <b>B. Indicative Project Description</b> <b>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?	The project aims to leverage existing programs in afforestation alongside agricultural waste management to promote woody biomass energy in rural areas with priority for non-electrified

		regions. This would help the country meet its climate change mitigation targets as well as
Outcomes	A description of the expected short-term and medium-term effects of an intervention. Do the planned outcomes encompass important global environmental benefits?	Partially met – see summary comments
	Are the global environmental benefits/adaptation benefits likely to be generated?	Yes
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?	Most of the outputs are in the form of policy frameworks, analyses and capacity building.
<b>Part II: Project justification</b>	A simple narrative explaining the project's logic, i.e. a theory of change.	Diagram presented but not legible
<b>1. Project description. Briefly describe:</b> 1) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed (systems description)	Is the problem statement well-defined?	Partially
	Are the barriers and threats well described, and substantiated by data and references?	Decent risk assessment is provided, including COVID's impact on overall mobility and economic development.
	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?	Some reference to how degraded land is being afforested and the ways in which project activity would be synergistic with restoration.
2) the baseline scenario or any associated baseline projects	Is the baseline identified clearly?	Yes - in earlier parts of the PIF with details on metrics.

	Does it provide a feasible basis for quantifying the project's benefits?	Detailed addendum and noted in PIF as well
	Is the baseline sufficiently robust to support the incremental (additional cost) reasoning for the project?	Yes
	For multiple focal area projects:	
	are the multiple baseline analyses presented (supported by data and references), and the multiple benefits specified, including the proposed indicators;	Yes they are presented.
	are the lessons learned from similar or related past GEF and non-GEF interventions described; and	Yes - presented
	how did these lessons inform the design of this project?	Well-incorporated in design.
3) the proposed alternative scenario with a brief description of expected outcomes and components of the project	What is the theory of change?	Yes – presented in detail.
	What is the sequence of events (required or expected) that will lead to the desired outcomes?	Theory of change diagram not legible
	What is the set of linked activities, outputs, and outcomes to address the project's objectives?	Each outcome in components 1-4 is adequately linked to outputs.
	Are the mechanisms of change plausible, and is there a well-informed identification of the underlying assumptions?	Yes – with careful monitoring
	Is there a recognition of what adaptations may be required during project implementation to respond to changing conditions in pursuit of the targeted outcomes?	Yes
5) incremental/additional cost reasoning and expected contributions from the baseline,	GEF trust fund: will the proposed incremental activities lead to the delivery of global environmental benefits?	Yes

the GEF trust fund, LDCF, SCCF, and co-financing		
	LDCF/SCCF: will the proposed incremental activities lead to adaptation which reduces vulnerability, builds adaptive capacity, and increases resilience to climate change?	Yes
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
	Are the global environmental benefits/adaptation benefits explicitly defined?	Yes
	Are indicators, or methodologies, provided to demonstrate how the global environmental benefits/adaptation benefits will be measured and monitored during project implementation?	Yes
	What activities will be implemented to increase the project's resilience to climate change?	Yes
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 – the partnership with Pakistan Tobacco in using the woody biomass for curing of leaves and boilers is innovative feature of project.
	Is there a clearly-articulated vision of how the innovation will be scaled-up, for example, over time, across geographies, among institutional actors?	Yes
	Will incremental adaptation be required, or more fundamental transformational change to achieve long term sustainability?	Refer to the articles provided and referenced in summary comments.
<b>1b.</b> Project Map and Coordinates. Please provide geo-referenced information and map where the		Yes

<p>project interventions will take place.</p>		
<p><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, including civil society and indigenous peoples, will be engaged in the project preparation, and their respective roles and means of engagement.</p>	<p>Have all the key relevant stakeholders been identified to cover the complexity of the problem, and project implementation barriers?</p>	<p>Yes</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>Provided in supplementary material</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:</p>	<p>Have gender differentiated risks and opportunities been identified, and were preliminary response measures described that would address these differences?</p>	<p>Yes, noted in summary though a larger gender plan will be presented at CEO signing according to the PIF.</p>

<p>access to and control over resources; participation and decision-making; and/or economic benefits or services.</p> <p>Will the project's results framework or logical framework include gender-sensitive indicators? yes/no /td</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>Accounted for</p>
<p><b>5. Risks.</b> Indicate risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the project design</p>	<p>Are the identified risks valid and comprehensive?  Are the risks specifically for things outside the project's control?  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>Yes noted</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>Well-coordinated</p>

	Is there adequate recognition of previous projects and the learning derived from them?	Yes
	Have specific lessons learned from previous projects been cited?	Partially noted in descriptions
	How have these lessons informed the project's formulation?	Described
	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?	
<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.	What overall approach will be taken, and what knowledge management indicators and metrics will be used?	Good coverage in these sections
	What plans are proposed for sharing, disseminating and scaling-up results, lessons and experience?	Standard reporting

## Notes

STAP advisory response	Brief explanation of advisory response and action proposed
1. <b>Concur</b>	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.
	* 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 <b><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></b>
2. <b>Minor issues to be considered during project design</b>	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. <b>Major issues to be considered during project design</b>	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 proponent should provide a report of the action agreed and taken, at the time of submission of the full project brief for CEO endorsement.