

STAP guidelines for screening GEF projects

PIF	What STAP looks for	Response
		<p>GEF ID: 10790 Project Title: Pathways to Decarbonizing Transport towards Carbon Neutrality in China Date of Screening: May 18, 2021 STAP member screener: Saleem H. Ali STAP secretariat screener: Sunday Leonard STAP's overall assessment: Concur</p> <p>This project targets the most rapidly growing carbon emissions sector in China – transport – with a comprehensive set of strategies in four components focusing on rural-urban connectivity in under-served areas. The project has considered GEF additionality in considerable detail and has also laid out a succinct theory of change which also links to the IBRD program for Results (PforR) operation "Green Mobility for City Clusters."</p> <p>The project has also provided a detailed emissions reduction inventory based on data collected by the China Academy of Transportation Science (CATS). Direct and indirect emissions reductions are also noted in the appendices, with detailed assumptions and estimates. This is commendable. We would recommend that the methodology for these calculations be streamlined with reference to established international procedures such as the WRI administered Greenhouse Gas Protocol (Scope 1 and 2 emissions).</p> <p>An innovative aspect of this project is the green hydrogen production for Jiangyin port, and connecting this to other upscaling opportunities across the project would be valuable. Linkages between this effort and Qingzhou Port Guangxi province in terms of comparative lessons would be useful.</p> <p>The project also has a defined knowledge transfer output which should be highlighted further for transference – "The Green Transport Development Index (GTI) as part of Subcomponent 1-C. The proponents should consider index development literature in this regard. An index widely used at a macro-level and has some components that may be applicable for this index is the Environmental Performance Index developed by Yale University and the World Economic Forum (https://epi.yale.edu/).</p> <p>Another valuable feature of this project is the development of a life-cycle carbon footprint accounting mechanism for transport (noted in subcomponent 1-C). Proponents are recommended to consider the industrial ecology literature in this regard, such as the article by Lei, Sheng Zhou, and Xunmin Ou. "Life-Cycle Energy Consumption and Greenhouse-Gas Emissions of Hydrogen Supply Chains for Fuel-Cell Vehicles in China." <i>Energy (Oxford)</i> 209 (2020): 118482-. https://doi.org/10.1016/j.energy.2020.118482.</p> <p>The carbon financing feature of the project in Subcomponent 2C for Jiangsu province to develop a zero-emissions port is another key feature of this project which has potential for upscaling and should consider interface with work being done in this regard by Green Finance Platform (https://www.greenfinanceplatform.org/organization/global-green-growth-institute-gggi). A useful recent study from</p>

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		<p>China in this regard concerning private sector venture capital engagement (which should be considered in the partnerships) is: Cheng, Cheng, Yue Hua, and Duoduo Tan. "Spatial Dynamics and Determinants of Sustainable Finance: Evidence from Venture Capital Investment in China." <i>Journal of Cleaner Production</i> 232 (2019): 1148–57. https://doi.org/10.1016/j.jclepro.2019.05.360.</p> <p>Component 3 (capacity building) incorporates elements of behavioral change to help facilitate the adoption of solutions to be proposed under components 1 and 2. As correctly noted in paragraph 7 of the project concept note, "any policy or technology shift towards lower carbon mobility and logistics would entail influencing a vast number of individual consumers and producers." Therefore, we recommend that the proponent review STAP's recent advisory on behavior change, highlighting six strategic levers for changing behavior, to help provide further insight into designing this component. (https://stapgef.org/resources/advisory-documents/why-behavior-change-matters-gef-and-what-do-about-it).</p> <p>An important emerging aspect of this type of project is the circular economy's role in decarbonizing and transforming the transportation sector. STAP recently release a report on the circular economy and climate mitigation, which provides valuable insights on this topic, including specific interventions in e-mobility, public transport, and non-motorized mobility. We encourage the project proponent to review this report: Ali, S and Leonard, S.A. 2021. The Circular Economy and Climate Mitigation. A STAP Advisory Document. Scientific and Technical Advisory Panel to the Global Environment Facility. Washington, DC.</p> <p>A comprehensive analysis of environmental and social risk was presented, highlighting the potential impacts of the project. The risk of the project increasing energy consumption, thereby contributing to greenhouse gas emission, was also noted under climate change risk, including mitigation measures by aligning with a counterpart GEF project. However, analysis of risks associated with the impact of climate change on the planned interventions, for example, on infrastructure, is yet to be carried out. Given the substantial possible implications of climate change on transportation infrastructure in China (see example publications on these below), it is essential to conduct a detailed climate risk screening. The World Bank Climate and Disaster Risk Screening Tool (https://climatescreeningtools.worldbank.org/) could be an excellent resource in this regard.</p> <ul style="list-style-type: none"> • Yong-Jian Ding, et al., 2021. An overview of climate change impacts on the society in China. <i>Advances in Climate Change Research</i>, 12, 210-223, https://doi.org/10.1016/j.accre.2021.03.002. • IPCC 2014. Asia. In: <i>Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change.</i> https://www.ipcc.ch/site/assets/uploads/2018/02/WGIIAR5-Chap24_FINAL.pdf • Xi, H. 2016. How Climate Change Threatens China's Essential Infrastructure. https://thediplomat.com/2016/04/how-climate-change-threatens-chinas-essential-infrastructure/ • Regmi and Hanaoka, Impacts of Climate Change on Transport and Adaptation in Asia. https://www.researchgate.net/publication/228888356_Impacts_of_Climate_Change_on_Transport_and_Adaptation_in_Asia

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Part I: Project Information B. Indicative Project Description Summary		
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
Outcomes	A description of the expected short-term and medium-term effects of an intervention. Do the planned outcomes encompass important global environmental benefits? Are the global environmental 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?	Yes – adequately provided.
Part II: Project justification	A simple narrative explaining the project's logic, i.e. a theory of change.	
1. Project description. Briefly describe: 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? Are the barriers and threats well described, and substantiated by data and references? 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	Yes – this is adequately presented.

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	more focal areas objectives or programs?	
2) the baseline scenario or any associated baseline projects	<p>Is the baseline identified clearly? Does it provide a feasible basis for quantifying the project's benefits? Is the baseline sufficiently robust to support the incremental (additional cost) reasoning for the project? 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; are the lessons learned from similar or related past GEF and non-GEF interventions described; and how did these lessons inform the design of this project?</p>	Yes, there are citations to earlier studies and materials provided.
3) the proposed alternative scenario with a brief description of expected outcomes and components of the project	<p>What is the theory of change? What is the sequence of events (required or expected) that will lead to the desired outcomes?</p> <ul style="list-style-type: none"> • What is the set of linked activities, outputs, and outcomes to address the project's objectives? • Are the mechanisms of change plausible, and is there a well-informed identification of the underlying assumptions? • 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 - adequate
5) incremental/additional cost reasoning and expected contributions from the baseline, the GEF trust	GEF trust fund: will the proposed incremental activities lead to the delivery of global environmental benefits?	Yes

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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?	
6) global environmental benefits (GEF trust fund) and/or adaptation benefits (LDCF/SCCF)	<p>Are the benefits truly global environmental benefits, and are they measurable?</p> <p>Is the scale of projected benefits both plausible and compelling in relation to the proposed investment?</p> <p>Are the global environmental benefits explicitly defined?</p> <p>Are indicators, or methodologies, provided to demonstrate how the global environmental benefits will be measured and monitored during project implementation?</p> <p>What activities will be implemented to increase the project's resilience to climate change?</p>	Yes – these are noted in terms of the emissions reduction inventories.
7) innovative, sustainability and potential for scaling-up	<p>Is the project innovative, for example, in its design, method of financing, technology, business model, policy, monitoring and evaluation, or learning?</p> <p>Is there a clearly-articulated vision of how the innovation will be scaled-up, for example, over time, across geographies, among institutional actors?</p> <p>Will incremental adaptation be required, or more fundamental transformational change to achieve long term sustainability?</p>	The green hydrogen production upscaling would be an important contribution.
1b. Project Map and Coordinates. Please provide geo-referenced information and map where the project interventions will take place.		
2. Stakeholders.	Have all the key relevant stakeholders been identified to cover the complexity	There is a detailed addendum social review provided as per IFC/ World Bank Group Templates

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<p>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.</p> <p>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>of the problem, and project implementation barriers?</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>3. Gender Equality and Women's Empowerment.</p> <p>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.</p> <p>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.</p> <p>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>Do gender considerations hinder full participation of an important stakeholder group (or groups)? If so, how will these obstacles be addressed?</p>	<p>Yes, there is a description of the gender disparities in country but how this could be addressed is not provided.</p>
<p>5. Risks. 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, there is a detailed pro forma assessment as per World Bank templates.</p> <p>Climate risk screening needs to be carried out.</p>

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<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"> • 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? • Has the sensitivity to climate change, and its impacts, been assessed? • Have resilience practices and measures to address projected climate risks and impacts been considered? How will these be dealt with? • What technical and institutional capacity, and information, will be needed to address climate risks and resilience enhancement measures? 	
<p>6. Coordination. 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? Is there adequate recognition of previous projects and the learning derived from them? Have specific lessons learned from previous projects been cited? How have these lessons informed the project's formulation? 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>Project builds upon GEF projects including "City Cluster Eco-Transport" (P121263) under GEF 4 , "Large City Congestion and Carbon Reduction Project (P127036) under GEF5, and "Efficient and Green Freight Transport Project (P159883) under GEF 6. It will also coordinate with a counterpart project on energy in China.</p> <p><i>We would recommend that the proponents continue to work with the GEF Impact program on Sustainable Cities as already noted in the proposal.</i></p>

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<p>8. Knowledge management. 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? What plans are proposed for sharing, disseminating and scaling-up results, lessons and experience?</p>	<p>Material is noted on databases and government repositories of information which could be linked.</p>

STAP's advisory response

<i>STAP advisory response</i>	<i>Brief explanation of advisory response and action proposed</i>
1. Concur	<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>
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;</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>
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. 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>