

STAP guidelines for screening GEF projects

PIF	What STAP looks for	Response
<p>GEF ID: 10770 Project Title: China Energy Transition Towards Carbon Neutrality Date of Screening: May 18, 2021 STAP member screener: Saleem H. Ali STAP secretariat screener: Sunday Leonard STAP's overall assessment: Minor issues to be considered during project design</p>	<p>This project aims to facilitate the ambitious target set forth by the Chinese government to peak its carbon emissions by 2030 and then move towards carbon neutrality by 2060. The project is specially focused on the transition away from coal in key provinces that are most dependent on the carbon nexus, and is supported by an appropriate theory of change highlighting the activities, outputs, outcomes, long-term impacts, as well as key underlying assumption on pathways to achieving set out objectives.</p> <p>The project description is fairly macroscopic, and the three components are also very broad in terms of how the funds could be utilized. "Policy and technical support"; "Capacity building and project management" constitute these amorphous goals in component 1 and 2. Only Component 2 has specificity in terms of outcomes wherein pilots in cities would be carried out around energy transitions.</p> <p>Given the World Bank's longstanding experience in the country as well as the demonstrable efficacy of China's transition to solar and wind power in recent years gives us some confidence of this project being able to deliver global environmental benefits.</p> <p>This project like the other major China carbon mitigation project in this round of review (transport sector – project 10790) purports to support Green Hydrogen technologies. While this is laudable, the way in which this would be operationalized is less clear in this project, whereas in the transport sector project the focus on ports and shipping vessels made it clearer and more tangible. Given that green hydrogen is still at the developmental stage with many hurdles to overcome, its successful implementation in this project could provide needed evidence for more adoption across China and elsewhere.</p> <p>Battery storage and coal power plant repurposing are also two additional features of the pilot which are noted but details are lacking. For example, are there new battery technologies which will be explored beyond lithium ion variations? Further details are needed.</p> <p>We would recommend the proponents review the following readings in this regard.</p> <ul style="list-style-type: none"> • Cui, Ryna Yiyun, Nathan Hultman, Diyang Cui, Haewon McJeon, Sha Yu, Morgan R. Edwards, Arijit Sen, et al. "A Plant-by-Plant Strategy for High-Ambition Coal Power Phaseout in China." <i>Nature Communications</i> 12, no. 1 (March 16, 2021): 1468. https://doi.org/10.1038/s41467-021-21786-0. 	

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	<ul style="list-style-type: none"> • He, Gang, Jiang Lin, Froylan Sifuentes, Xu Liu, Nikit Abhyankar, and Amol Phadke. "Rapid Cost Decrease of Renewables and Storage Accelerates the Decarbonization of China's Power System." <i>Nature Communications</i> 11, no. 1 (May 19, 2020): 2486. https://doi.org/10.1038/s41467-020-16184-x. <p>Potential risk from climate change on the proposed interventions were identified and remedial measures were stated. The underlying information used to identify these risks were missing, such as the project impacts of climate change in the targeted regions. Given the substantial possible implications of climate change on renewable energy as well as on infrastructure in China (see example publications on this below), we recommend that a more comprehensive climate risk assessment should be carried out. The World Bank's Climate and Disaster Risk Screening Tool (https://climatescreeningtools.worldbank.org/) is an excellent resource in this regard.</p> <ul style="list-style-type: none"> • Gernaat, DEHJ, de Boer, H.S., Daioglou, V. et al. Climate change impacts on renewable energy supply. <i>Nat. Clim. Chang.</i> 11, 119–125 (2021). https://doi.org/10.1038/s41558-020-00949-9 • Kepa Solaun, Emilio Cerdá, 2019. Climate change impacts on renewable energy generation. A review of quantitative projections, <i>Renewable and Sustainable Energy Reviews</i>, 116, 109415, https://doi.org/10.1016/j.rser.2019.109415 • 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. • Xi, H. 2016. How Climate Change Threatens China's Essential Infrastructure. https://thediplomat.com/2016/04/how-climate-change-threatens-chinas-essential-infrastructure/ <p>Further, the overall project risk is rated as high. Given this, it is vital that an adequate risk monitoring and evaluation protocol be put in place and adaptive management measures are built into the project design and implementation plan.</p> <p>The project expects to mitigate 80 billion metric tons of CO₂e (preliminary estimates at the PIF stage). This is substantial and achievable, but information on how this number was arrived at is missing. We encourage the proponent to provide more details on the baselines and assumptions used to calculate the expected greenhouse gas reduction.</p>	
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?	Partially

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Outcomes	<p>A description of the expected short-term and medium-term effects of an intervention.</p> <p>Do the planned outcomes encompass important global environmental benefits?</p> <p>Are the global environmental benefits likely to be generated?</p>	Yes
Outputs	<p>A description of the products and services which are expected to result from the project.</p> <p>Is the sum of the outputs likely to contribute to the outcomes?</p>	Partially
Part II: Project justification		
<p>1. Project description. Briefly describe:</p> <p>1) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed (systems description)</p>	<p>Is the problem statement well-defined? Are the barriers and threats well described, and substantiated by data and references?</p> <p>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?</p>	Yes – this is adequately presented.
<p>2) the baseline scenario or any associated baseline projects</p>	<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?</p> <p>For multiple focal area projects: are the multiple baseline analyses presented (supported by data and references), and the multiple benefits</p>	This is well-established for Chinese localities

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	<p>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>	
<p>3) the proposed alternative scenario with a brief description of expected outcomes and components of the project</p>	<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? 	<p>Provided</p>
<p>5) incremental/additional cost reasoning and expected contributions from the baseline, the GEF trust fund, LDCF, SCCF, and co-financing</p>	<p>GEF trust fund: will the proposed incremental activities lead to the delivery of global environmental benefits? LDCF/SCCF: will the proposed incremental activities lead to adaptation which reduces vulnerability, builds adaptive capacity, and increases resilience to climate change?</p>	<p>Partially presented</p>
<p>6) global environmental benefits (GEF trust fund) and/or adaptation benefits (LDCF/SCCF)</p>	<p>Are the benefits truly global environmental benefits, and are they measurable? Is the scale of projected benefits both plausible and compelling in relation to the proposed investment?</p>	<p>Yes, but it needs to provide information on how greenhouse gas emissions reduction was calculated.</p>

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	<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>	
<p>7) innovative, sustainability and potential for scaling-up</p>	<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>	<p>Green hydrogen is noted alongside battery storage and coal powerplant repurposing as innovations in the pilot.</p>
<p>1b. Project Map and Coordinates. Please provide geo-referenced information and map where the project interventions will take place.</p>		
<p>2. Stakeholders. 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</p>	<p>Have all the key relevant stakeholders been identified to cover the complexity 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>There is a detailed addendum social review provided as per IFC/ World Bank Group Templates</p>

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in the project preparation, and their respective roles and means of engagement.		
<p>3. Gender Equality and Women's Empowerment. 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>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 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"> • 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? 	<p>Yes, there is a detailed pro forma assessment as per World Bank templates.</p> <p>Given the overall "high" risk rating, an effective monitoring and evaluation system, as well as adaptive management measures, should be built into the project.</p> <p>Climate risk screening is also provided, but a more comprehensive climate risk assessment is encouraged.</p>

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	<ul style="list-style-type: none"> • 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?</p> <p>Is there adequate recognition of previous projects and the learning derived from them?</p> <p>Have specific lessons learned from previous projects been cited?</p> <p>How have these lessons informed the project's formulation?</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>Private sector engagement should have been noted more clearly</p>
<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?</p> <p>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 that 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>