

STAP guidelines for screening GEF projects

PIF	What STAP looks for	Response
<p>GEF ID: 10917 Project Title: Energy Efficiency for the Transition to Carbon Neutral Cities in Colombia</p> <p>Date of Screening: June 1, 2022 STAP member screener: Saleem Ali STAP secretariat screener: Sunday Leonard STAP's overall assessment: Minor</p>	<p>This project brings together a range of energy efficiency interventions to reduce the carbon footprint of building infrastructure in Colombia. The cities that are the project's focal area have thus far not had as much attention for sustainability initiatives. In particular, Barranquilla, the largest city on the country's Atlantic coast, has a significant ecological footprint, and alleviating energy efficiency concerns could have a major upscaling impact. This is where the project could potentially also connect with a blue economy nexus with the decarbonization of port infrastructure. The other two focal cities, Pasto and Monteria, are smaller but in neglected zones as well. The interventions could also lead to positive spillover effects in other cities of comparable size. It is also worth noting that Colombia has recently been inducted into the OECD, which could bring forth additional resources and mechanisms for environmental performance.</p> <p>One key revision that would strengthen the project is incorporating a more innovative technological interface rather than just noting the simple solutions such as LED lighting and other retrofitting efficiency and conservation measures and paths or non-motorized connectivity in public parks. There is a range of other innovative strategies for energy efficiency which need to be considered and benchmarked.</p> <p>Further, while the project objective suggests a focus on emissions reduction in the different stages of the life cycle of buildings, it is not clear from the project logic, theory of change, and the components how the different life cycles of buildings have been considered and the interventions that will address each of building life cycle to achieve the desired outcomes of GHG emissions reduction. We suggest that the proponent systematically analyze the types of buildings being considered and show how the project will address emissions reduction across each aspect of their life cycle. A systems dynamic approach has been used in this regard already in Colombia – including in Barranquilla, as noted in the following recent study.</p> <ul style="list-style-type: none"> • Arias-Gaviria, J., Valencia, V., Olaya, Y., Arango-Aramburo, S., 2021. Simulating the effect of sustainable buildings and energy efficiency standards on electricity consumption in four cities in Colombia: A system dynamics approach. Journal of cleaner production 314, 128041- https://doi.org/10.1016/j.jclepro.2021.128041 	

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		<p>STAP notes and welcomes the inclusion of a theory of change in the proposal. We encourage the proponent to improve it in the following ways:</p> <ul style="list-style-type: none"> • Correctly identify the drivers of change leading to the problem that the project seeks to solve. Drivers of change are factors such as population, market demand, urbanization, globalization, climate and other global environmental changes, disruptive technologies, and policy changes that facilitate or reverse the problems being addressed by the project. • Clearly show the causal pathways and the underlying assumptions upon which they depend, including providing evidence that the assumptions will hold and what will be done to ensure they hold. <p>The proposal could be improved by adding greater specificity on innovations that would be employed in the actual infrastructure delivery of the pilot projects. For example, IFC has embarked on a green building program in Colombia as part of their EDGE program (https://www.environmental-finance.com/content/market-insight/gaining-an-edge-in-financing-green-buildings.html). There is also opportunity to consider Nature-Based Solutions approach in the urban park redesign for decarbonization through corridor development. STAP prepared a guidance document in partnership with the Moore foundation, which can be helpful in this regard.</p> <p>Further, the opportunity of using digital solutions for the energy efficiency of buildings, if included in the project, could make it innovative. For example, the project could incorporate smart building energy management systems which use digital technologies to monitor, control, and manage energy use in buildings. We refer the proponent to relevant literature on this:</p> <ul style="list-style-type: none"> • Paula Rocha, Afzal Siddiqui, Michael Stadler, 2015. Improving energy efficiency via smart building energy management systems: A comparison with policy measures, <i>Energy and Buildings</i>, 88, 203-213, https://doi.org/10.1016/j.enbuild.2014.11.077. • J. Ock, R. R. A. Issa, and I. Flood, "Smart Building Energy Management Systems (BEMS) simulation conceptual framework," 2016 Winter Simulation Conference (WSC), 2016, pp. 3237-3245, doi: 10.1109/WSC.2016.7822355. • Marinakis, Vangelis, and Haris Doukas. 2018. "An Advanced IoT-based System for Intelligent Energy Management in Buildings" <i>Sensors</i> 18, no. 2: 610. https://doi.org/10.3390/s18020610 • IoTa Communications. Leveraging IoT Sensors & Analytics To Optimize Energy Efficiency. https://www.caba.org/wp-content/uploads/2020/07/IS-2020-84.pdf • T. J. H. et al., (2019). A Review on Smart Energy Management Systems for Intelligent Buildings. <i>International Journal of Advanced Science and Technology</i>, 28(10), 175 - 181. Retrieved from http://sersc.org/journals/index.php/IJAST/article/view/1006 <p>The proposed financial mechanism is pertinent to the durability of the expected GEBs, and the sustainability, replication, and scale up of the project. However, the proposal is unclear about the modalities for the financial mechanism or innovation beyond credit lines or subsidies that will guarantee an effective finance or business model. We encourage the proponent to research examples of new financing/business models for this type of project, for example, energy performance contracting, citizen financing, etc. Identifying potential financing mechanisms early on in the project is essential as this information would influence the type of national standards and supporting legislation and governance structure that should be developed in the project. The following resource would be helpful in this regard:</p> <ul style="list-style-type: none"> • Vincenzo Bianco, et al. 2022, Business models for supporting energy renovation in residential buildings. The case of the on-bill programs. <i>Energy Reports</i>, 8, 2496-2507. https://doi.org/10.1016/j.egyr.2022.01.188.

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<ul style="list-style-type: none"> • Moschetti R, Brattebø H, Skeie KS, Lien AG, Performing quantitative analyses towards sustainable business models in building energy renovation projects: Analytic process and case study, Journal of Cleaner Production (2018), doi: 10.1016/j.jclepro.2018.06.091. • Zhu, 2020. Business models for energy efficiency - Energy Performance Contracting. Copenhagen Centre on Energy Efficiency, UNEP DTU Partnership. https://c2e2.unepdtu.org/wp-content/uploads/sites/3/2021/01/business-models-for-energy-efficiency-energy-performance-contracting.pdf • Di Santo et al., 2015. Emerging business models for energy efficiency in buildings. https://www.dariodisanto.com/wp-content/uploads/2015/06/3-322-15_DiSanto.pdf • Wijaya et al. 2021. Exploring Viable Energy Efficiency Business Models in Indonesia. Climate Policy Initiative. https://www.climatepolicyinitiative.org/publication/exploring-viable-energy-efficiency-business-models-in-indonesia/ <p>A detailed climate risk screening was done and provided in the safeguard appendix. The risk of climate change was clearly identified, including up to 2050, as well as the adaptive capacity of vulnerable communities. Given the vulnerability of project outcomes to climate risk as identified, a robust climate risk mitigation measure should be developed for the project.</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?	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 –clear metrics of GEB calculations are provided though it would be helpful to have some footnoting and backup of how they were calculated.
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, there are a series of outputs listed along with each outcome but these could be made more specific.

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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 more focal areas objectives or programs?	The multiple focal areas and the linkages and synergies are also presented but better connections with other areas of GEF activity
2) the baseline scenario or any associated baseline projects	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?	Yes, and the outcomes are benchmarked with the baseline but there could be greater detail provided on the pilot project success metrics.
3) the proposed alternative scenario with a brief description of expected outcomes and components of the project	What is the theory of change? What is the sequence of events (required or expected) that will lead to the desired outcomes?	Theory of change document is provided but required to be improved. Please see overarching comments for more details.

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	<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? 	
5) incremental/additional cost reasoning and expected contributions from the baseline, the GEF trust fund, LDCF, SCCF, and co-financing	<p>GEF trust fund: will the proposed incremental activities lead to the delivery of global environmental benefits?</p> <p>LDCF/SCCF: will the proposed incremental activities lead to adaptation which reduces vulnerability, builds adaptive capacity, and increases resilience to climate change?</p>	Noted
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>	Yes,

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	What activities will be implemented to increase the project's resilience to climate change?	
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? Is there a clearly-articulated vision of how the innovation will be scaled-up, for example, over time, across geographies, among institutional actors? Will incremental adaptation be required, or more fundamental transformational change to achieve long term sustainability?	The innovations coverage needs improvement and specificity as mentioned in the opening comments.
1b. Project Map and Coordinates. Please provide geo-referenced information and map where the project interventions will take place.		Provided
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 in the project preparation, and their respective roles and means of engagement.	Have all the key relevant stakeholders been identified to cover the complexity of the problem, and project implementation barriers? 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?	Yes – stakeholder mapping is included in project design and stakeholder satisfaction also in outcome goals.
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.	Have gender differentiated risks and opportunities been identified, and were preliminary response measures described that would address these differences?	Gender equity plan with clear set of question to be addressed and linkages with policies are provided.

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<p>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>Do gender considerations hinder full participation of an important stakeholder group (or groups)? If so, how will these obstacles be addressed?</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?</p> <p>Are there social and environmental risks which could affect the project?</p> <p>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 	<p>Risk management table is also included</p> <p>Climate risk screening with adequate citations provided.</p>

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	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>Yes – there is listing of coordination prospects provided with public and private sector and donors.</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>Yes adequately provided</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><i>* 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 "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> <ul style="list-style-type: none"> (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. <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> <ul style="list-style-type: none"> (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.