

REVISED STAP SCREENING TEMPLATE, OCTOBER 2022

GEF ID	11270
Project title	Barbados - Accelerating transition to climate-resilient agri-food systems (BATCRAS)
Date of screen	22 January 2024
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1. Summary of STAP's views of the project

The problems affecting agricultural production are described, and several solutions are proposed. The need for the project is well articulated. However, STAP proposes that the project proponents improve the alignment between current challenges and the proposed solution. For example, saline water intrusion of groundwater and rising sea water levels were identified as challenges that can affect the resilience of agrifood systems; the project proponents must make connections on how these significant challenges will be addressed.

A better discussion of the current production systems would help contextualize the proposed solutions. It is good that a detailed feasibility study will be conducted to inform the expansion of resilient aquaculture and aquaponics systems. However, it is unclear whether the other proposed solutions are informed by previous research or whether there is an understanding of the feasibility of the proposed technological solutions in the target regions. There is also a need to explore the resilience benefits of the proposed solutions in different future scenarios.

Note to STAP screeners: a summary of STAP's view of the project (not of the project itself), covering both strengths and weaknesses.

STAP's assessment*

- Concur - STAP acknowledges that the concept has scientific and technical merit
- Minor - STAP has identified some scientific and technical points to be addressed in project design**
- Major - STAP has identified significant concerns to be addressed in project design

Please contact the STAP Secretariat if you would like to discuss.

2. Project rationale, and project description – are they sound?

See annex on STAP's screening guidelines.

It is unambiguous that this project is needed to support addressing food security challenges. However, there is a need for better systems thinking in formulating the proposed solutions, enabling the proposed solutions to better align with the existing and identified challenges (e.g., raising sea level and saline water intrusion of groundwater).

There is a need to consider the feasibility of the proposed solutions under different [future scenarios](#), for example, a plausible future in which the sea level continues to rise and the groundwater becomes more saline.

It is unclear how much area is currently under irrigation. The proponent needs to provide more details on this and the projected increase in the irrigation area. This information will help understand the baseline conditions and the number of potential users of the weather data.

It is unclear whether the practices and technologies to be promoted (Table 1) have all been tested and proven to work under local conditions. If so, what were the lessons learned, and how are they informing the actions in the proposed project?

It is unclear whether the farmers will receive long-term support following project completion for the outcomes of this work to be more enduring. The project proponents have provided an extensive list of stakeholders they consulted during the development of the proposal. For sustainability and consideration in future budgetary allocations, including the Ministry of Finance, Economic Affairs, and Investment in the discussions may be essential.

The project also needs to explore the policy space to determine if the existing government policies will support scaling the proposed solutions. Are there policy barriers? If so, how will these be addressed? The proponent must consider the necessary institutional and behavioural changes at different scales.

The underlying assumptions in the theory of change should be mentioned.

There is a need for an explanation of how the core indicators were quantified. Is the area under improved practices estimated from the demonstration sites or the adoption area? What is the expected adoption area in what proportions for the different proposed practices? This information would also help estimate the emission reductions. Also, explain how the emission reductions were estimated.

Note: provide a general appraisal, asking whether relevant screening guideline questions have been addressed adequately – not all the questions will be relevant to all proposals; no need to comment on every question, only those needing more attention, noting any done very well, but ensure that all are considered. Comments should be helpful, evaluative, and qualitative, rather than yes/no.

3. Specific points to be addressed and suggestions

In addition to the comments made in section 1, STAP recommends the following:

- The project proponents should consider revising the climate impact chain (Figure 1). For instance, both droughts and flooding are currently linked to reducing the availability of quality water. However, innovations such as managed groundwater [recharge](#) can improve water availability in the case of flooding.
- The dependence on fossil fuels needs to be discussed across the theory of change. It is only mentioned as a challenge at the top of Figure 2, but it is unclear how it is addressed in the diagram.
- Ensure that the solutions are aligned with the identified problems. If saline water intrusion of groundwater is a significant challenge, how will investment in more irrigation help? Investing in salt-resistant crop varieties may be essential, as mentioned in the cited Agriculture and Climate Change Policy for 2022–2035 (page 12). Other innovations, such as desalination technologies, could be explored.
- The selection of practices and technologies included in Table 1 needs to be better linked with the challenges; it is unclear if all the proposed technologies will be adopted. There is a need for prioritization.
- A significant challenge is the limited and shrinking available land area. There is a need to emphasize technological and management innovations increasing production per unit area. This principle should inform technology and management option selection (as mentioned on page 13).
- Based on the descriptions, the climate risk overall risk to project outcomes is not moderate (as currently stated in the table on page 30) but high.

Note: number key points clearly and provide useful information or suggestions, including key literature where relevant. Completed screens should be no more than two or three pages in length.

*categories under review, subject to future revision

ANNEX: STAP'S SCREENING GUIDELINES

1. How well does the proposal explain the problem and issues to be addressed in the context of the **system** within which the problem sits and its drivers (e.g. , population growth, economic development, climate change, socio-cultural and political factors, and technological changes), including how the various components of the system interact?
2. Does the project indicate how **uncertain futures** could unfold (e.g. using simple **narratives**), based on an understanding of the trends and interactions between the key elements of the system and its drivers?
3. Does the project describe the **baseline** problem and how it may evolve in the future in the absence of the project; and then identify the outcomes that the project seeks to achieve, how these outcomes will change the baseline, and what the key **barriers** and **enablers** are to achieving those outcomes?
4. Are the project's **objectives** well formulated and justified in relation to this system context? Is there a convincing explanation as to **why this particular project** has been selected in preference to other options, in the light of how the future may unfold?
5. How well does the **theory of change** provide an "explicit account of how and why the proposed interventions would achieve their intended outcomes and goal, based on outlining a set of key causal pathways arising from the activities and outputs of the interventions and the assumptions underlying these causal connections".
 - Does the project logic show how the project would ensure that expected outcomes are **enduring** and resilient to possible future changes identified in question 2 above, and to the effects of any conflicting policies (see question 9 below).
 - Is the theory of change grounded on a solid scientific foundation, and is it aligned with current scientific knowledge?
 - Does it explicitly consider how any necessary **institutional and behavioral** changes are to be achieved?
 - Does the theory of change diagram convincingly show the overall project logic, including causal pathways and outcomes?
6. Are the project **components** (interventions and activities) identified in the theory of change each described in sufficient detail to discern the main thrust and basis (including scientific) of the proposed solutions, how they address the problem, their justification as a robust solution, and the critical assumptions and risks to achieving them?
7. How likely is the project to generate global environmental benefits which would not have accrued without the GEF project (**additionality**)?
8. Does the project convincingly identify the relevant **stakeholders**, and their anticipated roles and responsibilities? is there an adequate explanation of how stakeholders will contribute to the

development and implementation of the project, and how they will benefit from the project to ensure enduring global environmental benefits, e.g. through co-benefits?

9. Does the description adequately explain:

- how the project will build on prior investments and complement current investments, both GEF and non-GEF,
- how the project incorporates **lessons learned** from previous projects in the country and region, and more widely from projects addressing similar issues elsewhere; and
- how country policies that are contradictory to the intended outcomes of the project (identified in section C) will be addressed (**policy coherence**)?

10. How adequate is the project's approach to generating, managing and exchanging **knowledge**, and how will lessons learned be captured for adaptive management and for the benefit of future projects?

11. Innovation and transformation:

- If the project is intended to be **innovative**: to what degree is it innovative, how will this ambition be achieved, how will barriers and enablers be addressed, and how might scaling be achieved?
- If the project is intended to be **transformative**: how well do the project's objectives contribute to transformative change, and are they sufficient to contribute to enduring, transformational change at a sufficient scale to deliver a step improvement in one or more GEBs? Is the proposed logic to achieve the goal credible, addressing necessary changes in institutions, social or cultural norms? Are barriers and enablers to scaling be addressed? And how will enduring scaling be achieved?

12. Have **risks** to the project design and implementation been identified appropriately in the risk table in section B, and have suitable mitigation measures been incorporated? (NB: risks to the durability of project outcomes from future changes in drivers should have been reflected in the theory of change and in project design, not in this table.)