

STAP Screen: 11544

GEF ID	11544
Project title	Enhance the adaptative capacity to floods and water security in São Tomé and Príncipe
Date of screen	May 30, 2024
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1. Summary of STAP’s views of the project

STAP acknowledges the project “Enhance the adaptative capacity to floods and water security in São Tomé and Príncipe.” The objective of this project is to increase (1) the resilience of urban areas and vulnerable communities to the impacts of climate change driven floods and (2) water security in São Tome and Príncipe. Changing precipitation patterns and sea level risk are clearly a problem but equally important is urbanization and deforestation, neither of which are addressed directly by this project apart from support for potential nature-based solutions.

STAP finds that the project successfully incorporates a great deal of climate information and more than one climate future to make the case for an adaptation need.

However, the PIF does not integrate climate futures with other important trends (urbanization, deforestation) to develop integrated narratives of the future to guide the selection of interventions. Furthermore, it does not substantively engage with upstream populations in the watershed thereby oversimplifying the behavioral changes needed for the project to succeed.

Overall, STAP finds that most of the outputs focus on planning, studies, coordination, capacity building etc. and are spread out across several key areas (upstream NbS, downstream waste management, etc.). STAP suggests that it might be more optimal to have greater depth in one specific area to achieve meaningful change rather than risk spreading the project to thinly across multiple areas. For example, addressing deforestation upstream including through NbS to prevent flash flooding downstream could be a worthwhile, targeted endeavor.

STAP provides additional observations and recommendations below.

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
- X 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.

- Information in the PIF seems to indicate that STP will suffer from both water scarcity and increased flooding because of climate change. The information presented uses two scenarios – RCP 4.5 and RCP 8.5 – both of which are toward the high end of possible futures. This is important because the two scenarios, despite being high estimates of future climate forcing, present conflicting predictions regarding total seasonal rainfall. The highest scenario suggests a decline in rainfall throughout the year, while the RCP 4.5 scenario shows increased rainfall from October to May (historically a drier season) and small decreases in rainfall from June to September. These quite different outcomes and what different things they might mean for flooding and water supplies is not addressed.
- A further assertion is that there will be an increase in intense rainfall during the rainy season; however, this is not accompanied by data to support this claim, which runs contrary to the data presented. Instead, data suggest that under RCP 4.5 there will be 1-4 more days per year with rainfall greater than 50mm (with the southwest of the larger island getting the greatest increase, but also having the largest number of such days currently). Under RCP 8.5, once again most of the country will see fewer of these days. This wide range of outcomes is not addressed in the PIF.
- The data for sea level rise is more straightforward and convincing with Figure 8 clearly indicating a steady increase over time, leading to saltwater intrusion, flash flooding and coastal erosion negatively impacting infrastructure and communities through increased risk of waterborne disease and decreasing crop production.
- While the PIF provides two possible climate futures, these are not integrated with any other drivers of flooding in the country. The PIF mentions urbanization (sprawl), deforestation, poor planning, and lack of planning and monitoring as drivers of flooding; however, there is no discussion of expected trends in urbanization or deforestation that might contribute to future flooding patterns. For example, if currently deforested areas are reforested, and we realize an RCP 4.5 future, there might be substantially less flooding risk in the future even without the project. Without simple, integrated narratives of plausible futures, it is difficult to determine if the proposed interventions will be robust and deliver adaptation benefits under future uncertainty.
- STAP appreciates the detailed theory of change, including impact pathways from goals to components to outputs and outcomes. The project proposes a three-pronged approach, tackling upstream issues (i.e. deforestation) through nature-based solutions, downstream issues (improved capacity for planning and integrated water management and monitoring and potential NbS for wastewater treatment though not yet defined). Assumptions seem logical – however, missing is the actual financing of much needed sanitation and infrastructure and NbS (which are as of yet undefined).
- The details of activities, particularly under outcome two of the project aimed at addressing upstream issues, lack substance. Under this work, the project proposes to use nature-based solutions in the upstream areas to reduce the risk of flooding. This portion of the project does not propose any concrete changes beyond a watershed management plan, instead referencing studies, trainings, and plans with little substance. There is no description of current activities in the watershed that might be contributing to such risk, who is conducting those activities, and what is their incentive for taking up NbS. For example, it is not clear where “green zones” that promote infiltration would be located – would these be on privately or communally-held land? Will the land be taken from owners for this purpose, or will owners have to adopt new land management practices? Ultimately, this project engages with significant behavioral change, whether in terms of deforestation or urbanization/sprawl in key watersheds, but all of this change is glossed over in the PIF. Awareness-raising activities are not always going to bring about behavioral change, particularly as it seems likely people are aware of the problem.
- Information pertaining to knowledge management is weak. For example, there is no information on lessons learned from the many previous and ongoing related projects in STP.

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

Based on the issues identified above, STAP recommends the following specific points to be addressed:

1. Recognize and address the fact that the climate futures presented for the country are highly divergent and discuss this in the PIF – is one of these futures more likely? For example, does a third, lower emissions scenario track more closely to one or another of the two futures presented in this PIF?
2. Integrate the non-climate future trends currently listed in at the end of the PIF into expected changes in changes in climate to construct two or more simple future narratives that capture a range of plausible futures in which the project will have to operate, and its outcomes will influence. By providing a range of such futures, the project will be able to provide a rationale for why certain activities were selected as priorities over others by identifying and selecting those that are robust across these futures. For example, in one future, urbanization could increase dramatically while the number of large rainfall events also increases. In another scenario urbanization could occur more slowly in a drying climate. These two scenarios will result in very different urban vulnerabilities to flash flooding. Identifying interventions that work across them will ensure that the project produces durable adaptation benefits.
3. Substantively engage with those living in upstream areas of the watersheds affected by the project to understand their land use practices, clarify what, if any, behaviors will need to change, whose behaviors have to change, and what incentives there are for such behavioral change. The PIF should go beyond awareness-raising when describing the incentives for behavioral change.

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, sociocultural 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.)