

STAP SCREENING TEMPLATE, OCTOBER 2022

GEF ID	11694
Project title	Madagascar Science-based management of Biodiversity and Natural Resources for Economic Development Project
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1. Summary of STAP's views of the project

STAP welcomes Madagascar's project "Madagascar Science-based management of Biodiversity and Natural Resources for Economic Development Project". The project is a multi-trust fund project, GEF and LDCF. It seeks to address the interconnectedness between biodiversity conservation, climate change adaptation, and sustainable development in Madagascar. The project involves an innovative financing mechanism, a Lemur Bond, which seeks to support biodiversity conservation and climate resilience in the targeted areas during the life of the bond, as well as create a financing model that can scale.

STAP highly encourages the World Bank to develop a theory of change to detail the project logic. Currently, the Results Chain does not sufficiently detail the causal connections between the components or articulate the assumptions and risks that can undermine the project logic. A theory of change process would address these gaps, which are critical for monitoring and learning - especially innovations such as the Lemur bond.

Below, STAP details its recommendations.

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.

The proposal describes well the drivers of environmental degradation. In this regard, the proponents demonstrate an understanding of the links between poverty, adoption of unsustainable agricultural management practices, deforestation, loss of endemic species, and increased community vulnerabilities. They also describe how deforestation, biodiversity loss, associated carbon losses, and community vulnerabilities will increase without appropriate actions.

The project proponents also reflect on different potential **climate change scenarios** and potential climate impacts. According to Madagascar's National Climate and Development Report (2024), the country has experienced 35 cyclones, 8 severe floods, and 5 prolonged droughts in the past twenty years, three times more extreme events than in the previous two decades. The North and Northeast regions are the most affected, and, therefore, these areas might be prioritized for interventions targeting adaptation and resilience. However, it is unclear whether Boeny, Sofia and Diana are targeted because of biodiversity loss, poverty, climate change considerations, some

combination, or some other reason. Given the complexity of the socio-ecological systems in Madagascar, and the challenges they face, the project proponents should consider being more specific about defining the targeted socioecological systems in each of the project sites by applying systems thinking. Additional attention to levers of change in the project logic will also be necessary to achieve the project objective, and the scaling-up efforts identified throughout the project. (Further details on scaling and levers of change are provided below.)

The project consists of **four components**. **Component 1** focuses on policy and institutional capacity-building. While the importance of land rights is noted as a prerequisite for local engagement (e.g., footnote 32), it is then not visible in the list of outputs under component 1 in the results chain diagram or on page 21 (which only mentions assistance to register land, not to change policy). If a policy change to enable land rights is also assessed as crucial, then the need for this reform should be visible in the project. For example, the project should identify this challenge in its logic, and design to address it.

Component 2 aims to address local engagement and conservation management on land and in the sea. A high-profile barrier noted early on is the weak enforcement of extant conservation areas and policies, but this is not explicitly addressed (e.g., around p.22) or in the Results Framework diagram). Supporting local engagement and livelihoods (p.9) to garner support for local management of conservation outcomes is implicit. Nonetheless, the logic around this could be made much more evident. For example, the targeted communities will need to actually see that their livelihoods are being improved as a result of the alternative practices (e.g., tourism, mariculture, seaweed farming) to incentivize changes in fuel wood extraction and charcoal production.

This limitation may arise from the formulation of the Results Chain diagram. While providing a good representation of the components planned, the results chain does not show signs of having been developed in a proper theory of change process that works back from the intended long-term outcome to ask what **all the necessary and sufficient** intermediate results and medium term outcomes are that would deliver the long-term outcome, even if some of these need to be delivered by other interventions with which coordination could be sought (see [STAP's theory of change primer](#), including page 24 to distinguish the differences between a results logic and theory of change. [STAP's webinar on theory of change](#) is also a useful resource). As a consequence, there is little explanation of how the outputs will actually result in the intended outcomes, and not enough of this logic is spelled out to enable the identification of critical assumptions in the logic, such as the assumption that communities' values and norms to rely on fuel wood as an energy source will change as a result of economic opportunities introduced by the project.

Component 3 focuses on an outcome-based lemur bond. This component is still rather nascent, as may be inevitable until the design progresses and stakeholders are engaged. The intent is for IBRD/WB to issue a \$100-175m Bond, the proceeds of which will be used for the bank's ordinary SDG operations. The foregone coupon payments will be invested in lemur habitat-related conservation, with investor returns paid by the GEF at a level dependent on meeting outcomes, as yet undefined by performance indicators. Further observations and recommendations to strengthen component 3 are detailed in the section below.

Component 4 covers management, communications and monitoring. Insufficient detail is given on the latter 2 to assess whether these will contribute sufficiently to the desire to scale the outcomes.

With regards to **stakeholder engagement** activities, it is good to see the proponents plan to strengthen the capacity of government institutions, promote inter-sectoral cooperation, and empower local communities. In addition to these activities, outreach is needed to help local communities and local government authorities know the laws and regulations related to natural resources management. The project could also benefit from strengthening the description of stakeholders' roles and responsibilities in achieving the proposed global environmental outcomes. Participatory management of protected areas through engagement in the development and implementation of revised management plans will help ensure sustainability, empower local

communities, and create enabling conditions for securing local investment that will impact the economy and livelihoods.

On risks, STAP notes that there might be some confusion between assessing challenges to the project logic (theory of change), and identifying the remaining risks to this logic in the risk table. In the section below, STAP provides further comments and recommendations on how to design the project so it addresses challenges in its theory of change, as well as how to complete the risk table appropriately.

STAP also has observations on the knowledge management and learning section, which the project proponents indicate has been addressed in the project description. STAP's observations are described below.

3. Specific points to be addressed, and suggestions

STAP recommends addressing the following points as the project is designed.

1. STAP recommends that a theory of change process be used to design the project. A theory of change process will help to identify the critical assumptions and risks (which are currently missing) along the impact pathways. In this regard, some of the critical assumptions identified in the Results Chain diagram, at least CA1, CA3 and CA4, should be fundamental aspects of the design logic. That is, the design should (and in this case probably does) aim to **ensure** that "communities are effectively incentivized". In all of these three assumptions, there may certainly be a remaining risk that, despite good design, the intent is not met (community incentives are de-railed, capacity interventions are insufficient), but these should be dealt with in the Risk Table which currently also mostly addresses design drivers, not residual risks (see comment below).

Assumptions should focus more on aspects of the logic where there is limited evidence for the expectation that an output will lead to the medium-term outcomes. Hence, assumptions should then be subject to monitoring so adaptive management can be implemented rapidly if the assumptions seem to be failing. An example of a critical assumption might be that the strengthened capacity in management and increased community ownership result in declining rates of illegal logging or marine harvest. This assumption could be readily monitored with metrics associated with the relevant pathway.

2. The overall objectives refer to scaling up efforts in the target regions (p.4). However, little or no subsequent attention is given to how scaling up will happen. For example, scaling could be plausibly result partly due to generalized changes in policy that enable change elsewhere, some sort of active outreach from the target areas in component 2 to the wider landscape, and some expansion of future performance-based bonds from component 3. Regardless, STAP recommends giving further attention to scaling up, describing how it is expected to occur.
3. Please review the components and activities to ensure better alignment. For example, REDD+ applies to forests. How is technical assistance for updating marine protected area management plans relevant? Also, updating protected area management plans is included in both Component 1 (1.1) and Component 2 (2.a). The management plans would seem more relevant to component 2.
4. If the project's goal is to switch some households from farming to ecotourism-based activities, it should seek to measure livelihood outcomes, and ensure awareness of their benefits.
5. Ecotourism is a general term and specific types of ecotourism will have different impacts on both biodiversity and livelihoods. Ecotourism projects will need to be designed in the context of specific protected areas. Also, if the project aims to be truly transformative, as indicated, specific ecotourism

interventions will need to be designed based on both the ecological context in protected areas and the community cultural context. Consideration should also be given to the amount of time required for capacity building to engage local communities substantively in ecotourism and to have truly transformative impacts on their livelihoods. Guiding is mentioned as one potential ecotourism activity. This has been implemented effectively in several national parks in Madagascar; however, while increasing household income, it could not be considered transformative. In contrast, ecotourism activities and benefit sharing that have been implemented on Nosy Ankao, with the Miavana resort and Malagasy NGO FANAMBY, have been transformative for at least some community livelihoods; however, a long period of capacity building of 4 years or more was required before livelihood benefits began to be realized.

6. For component 3, STAP has several questions and comments about the ecological significance of some of the proposed interventions, the time frame required for measurable responses to be supported by the bond, and on measuring and monitoring progress of lemur populations and their habitat that will need to be addressed during project design. STAP's comments are:
 - i. one site prioritized is Ranomafana National Park, which has a strong research program with deep knowledge of lemur demography and ecology, and the targeted species, the golden bamboo lemur, is critically endangered. The proposal mentions 12 individuals in Ranomafana and it is unclear from what is written whether this is the proposed increase in population size or the total current population size of the species. One of the largest known populations of the golden bamboo lemur, with an estimated 80 individuals, is found in southeastern Madagascar, in the Ivato/Karianga region. This population is unprotected. If the target is the species, rather than the national park, then how was this prioritization determined? Another option would be further investment in habitat restoration in the COFAV corridor, connecting Ranomafana to Andringitra NP, potentially supporting expansion of the species population. However, it is worth noting that climate change is a significant threat to the long-term survival of this species and scientists forecast a 99% reduction in suitable habitat based on climate suitability by 2080.
 - ii. STAP is pleased that there is a commitment to developing a solid theory of change for the investment of the foregone coupon payments (p.56), which is good. In terms of identifying plausible Key Performance Indicators (KPIs), the bond is expected to have a 5-year term (p.59). STAP notes that this is very short to achieve any detectable biological outcomes. It would be hard to obtain statistical validity against many of the items discussed under 'Conservation Investment Payments' (p.56-7) in this timeframe, especially of any indication of durability of outcomes, given that they are mostly lead indicators with (usually) a weak assurance of achieving enduring nature-related outcomes. For implementation of the bond, during the PPG phase, specific conservation targets will need to be established, that can be meaningfully measured and verified over the lifespan of the bond, to determine success.
 - iii. The Results Chain diagram for component 3 (p.16) identifies several items that could be measured reliably (e.g. numbers of signs installed, trainings provided) but these are very weakly related, at best, to actually achieving improvements in lemur habitat, or lemur populations (which are then circularly described as the useful indicators for healthy ecosystem p.13). Topics such as tree planting are more closely related to habitat restoration, but their survival and maturation rates and use by lemurs are unlikely to be measurable within 5 years. Related implicit assumptions (that local populations will feel more engaged in the management and hence reduce levels of illegal harvest) are equally important and probably hard to detect on a 5-year time frame.

STAP therefore urges the proponents to make these issues very clear in the final project document so that they are then considered properly in the next stages. One alternative is to consider a longer Bond term; another is to target KPIs where there is very strong evidence that a lead indicator will in fact deliver conservation improvements (and then monitor this closely).

- iv. There is no indication of the likely (or proposed) magnitude of the foregone coupon payments, although the expectation is that it will be commensurate with the scale of the proposed GEF liability for performance payments (\$9.59m, p.59-60, though all but \$2.8m from the NGI window can be re-purposed). Otherwise, a direct investment might be more efficient. This targeted magnitude should be nominated in the financial termsheet (p.55), as otherwise it is impossible to judge additionality.
 - v. Clearly, component 3 is a financial and business model innovation with an objective of scaling. The project proponents have developed a separate theory of change for this component, but could pay more attention to clarifying levers of change and logic chains. This will help address scaling challenges in project design rather than being left as residual risks.
7. Many of the risks nominated are actually core design issues addressed earlier in the proposal. These may sometimes have risks remaining even after good design, and it would be reasonable to include those in the risk table. However, it is not necessary to summarize and repeat the project design, which distracts from actually mitigating the remaining risks. As a consequence, the risk table does not address the mitigation of these remaining risks after the best efforts at good design. Often, such mitigation will be to monitor the remaining risks and act adaptively if they materialise. As a result, some of the residual risk ratings seem unduly severe to STAP.

For example, the environmental and social risks are widely addressed and are in part intended to be embedded in the design. Of course, there may remain a risk of issues like sexual harassment, but the risk entry correctly indicates the mitigation action for this, with consultation sessions, which should then result in a low residual risk. Similarly, climate risks should be incorporated into the project design as it is well known that Madagascar is exposed to increasing climate risks, and these are distributed unevenly across the island; but there does remain the operational risk that, for example, a cyclone might hit one of the project areas during the investment period and destroy planting activities. There is also the remaining risk that, despite the good project design, community resilience is in fact not sufficiently improved. These risks could be subject to monitoring with the intent to adapt the project during implementation if necessary. STAP recommends consulting its advisory note on "[Clarifying risks in GEF projects, with a focus on innovation risks](#)". STAP also recorded [a webinar for its advisory note on risk](#), which could be useful to the proponents.

8. On knowledge management and learning, STAP recommends strengthening the approach to knowledge management and adaptive learning. This process should include defining the assumptions or remaining risks, and describing how they will be monitored to enable adaptive learning. Furthermore, how will knowledge exchange occur with other regions to support future scaling, as well as identifying statistically feasible, and outcome meaningful KPIs for the lemur bond, as discussed above? A credible treatment of Knowledge Management and Learning is required to consider reflecting on outcomes with and without GEF funding, especially considering several other listed initiatives ongoing in Madagascar.

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.)