STAP SCREENING TEMPLATE

GEF ID	11066
Project title	Yield Lab Opportunity Fund I: Accelerating technology and local innovation for sustainable and decarbonized food systems in Latin America and the Caribbean
Date of screen	June 16, 2023
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1. **Summary of STAP's views of the project**

STAP acknowledges the Inter-American Development Bank's Non-Grant Instrument project "Yield Lab Opportunity Fund" and strongly supports the intent to develop innovative approaches to private sector finance such as this, and goal of this particular Fund to address the early start-up phase in a way that is complementary to other funds.

STAP sees that the general logic in the blended financing side seems sound, and there is significant consideration of delivering GEBs. However, the theory of change contains major gaps in the logic implied by the arrow between the outputs and the outcomes. For example, the logic does not address what incentives will ensure that the investee companies will deliver and successfully market GEB-friendly products, nor what incentives will ensure purchasers will apply these products to deliver GEBs, nor what will assure these GEBs will endure. STAP did find many of these issues embedded in various parts of the proposal implicitly (see below). We are confident, therefore, that the project's logic can be strengthened and made transparent relatively easily; and thus, benefit significantly the project governance, as well as the monitoring and technical assistance it plans to deliver.

Because the project's logic for the impact pathways is complex and long, this logic (or at least an approach to how it will be developed and tested during implementation) must be made transparent. Each investment needs to have its own theory of change developed (which should be recognized as an area which will need technical support, most of which is directed towards business skills at present). STAP also recommends being explicit about a knowledge management and learning plan (which appears missing in the project) to test how assumptions will work out for each of these (M&E is an outcome #5 that has no elaboration, and the KM section on p.17 refers the reader for more detail to the KM Section that does not exist).

Consequently, STAP recommends the project's logic should be strengthened before it is submitted for CEO endorsement, so there is a clear understanding of how the project will learn from its successes and failures in delivering GEBs (as opposed to successful start-ups). These points are elaborated below. **STAP acknowledges a commitment by IDB in response to a draft STAP screen to address the issues identified here before the project is finalized, particularly with regard to monitoring and learning about the investments under this model that successfully deliver GEBs and those that do not.**

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.

The project description needs strengthening in relation to GEBs. As written, the project logic is overwhelmingly based on the viability of the Venture Capital Fund and its investee start-ups, and less so on environmental outcomes, despite expressed good intents.

Overall, the global environmental problems stemming from unsustainable food systems are sufficiently explained at this PIF phase. Figures are provided to support degradation, deforestation and greenhouse gas emissions resulting from unsustainable agricultural production. Figures of global food waste are also provided, given the focus of the project on chemicals and waste management. The environmental challenge faced, as well as the challenges for early stage agri-tech start-ups in LAC are well articulated. However, the context influencing the GEB problems could usefully be briefly elaborated, noting drivers of long-term change, such as population growth, political and economic instability in Latin America, as well as climate change which is affecting the region and agricultural productivity – how may these affect what start-ups to prioritise?

The proposed response to these challenges is to establish a fund that can invest in start-up companies developing products that have the potential to be marketed to end users who could then deliver GEBs with them. Here key aspects of the fund structure, such as its governance and who will make final decisions on which entities to invest in, are opaque, and are only mentioned through a tangential discussion about stakeholders (p.37). A simple fund structure diagram and explanation of decision-making roles should be provided in the Project Description (or at least in the final NGI attachment G.4 which is currently empty, with cross reference). Key issues are: who has the responsibility and agency to select the investees, and to ensure their screening is successful; what would a simple theory of change look like for each investee, focused on how they will deliver GEBs, with identified assumptions in it; and how that data is subsequently collected to confirm whether this style of investment successfully delivers GEBs or not.

This whole process of monitoring and learning based around the different characteristics of each investee is alluded to but nowhere outlined (even if rather prospectively). In fact, although it is not presented for this purpose, a relevant logic is outlined when explaining how some of the core indicators were calculated (p.25-26), highlighting assumptions about market sizes and rates of uptake, areas involved, balance of corporate vs smallholder farmer clients, and implications for GEBs; these will differ for each investee and could be the basis for a skeleton theory of change to be tailored for each. Then all these assumptions require monitoring, including the actual GEB delivery levels, and compared to the type of start-up to determine whether some types are more able to deliver GEBs than others. A commitment to some approach of this nature (by all means better if possible) needs to be indicatively laid out to give confidence that a start-up finance focus will actually deliver (or at least learn about delivering) GEBs. In STAP's view, the absence of this, especially coupled with no knowledge management strategy plan, is a fatal flaw in the current proposal.

The 'theory of change' provided really does not address this full logic chain, even at a high level. In the middle of it, all the impacts pathways and assumptions involved in them are hidden in one arrow connecting the Output and Outcome columns. Aside from asking how to ensure that the investee companies manage to sell their products, this also hides issues such as: what are the incentives for those companies to want to deliver GEBs at the same time as making a successful business; how to hit the right market so that the products can be used to create GEBs; what incentives may be needed to ensure those endusers actually deliver the GEBs; and what there is in place to ensure that the products do not cause leakage (e.g. more efficient farm machinery just meaning that more forest is cleared). These issues can all be addressed, but there is little sign in the current proposal that proponents are even aware that these could cause problems. It would help if the overall theory of change (as opposed to one for individual businesses) was elaborated, particularly so that these sorts of implicit assumptions in the ToC as presented are thoroughly discussed in the narrative surrounding the ToC, which at present instead often repeats aspects of the financial approach (e.g. the (useful) complementarity with SP Ventures is discussed at least 3 times repetitively).

Improving these points will undoubtedly lead to learning about how GEF's investments in the Yield Lab Fund can help scale the adoption of agricultural technology while achieving environmental, social, and financial benefits.

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

As the project is developed, STAP recommends for IDB to implement the advice below:

1. The Project Summary asserts "each startup WILL result in environmental benefits" – from the start it would be good to flag the fact that there may be challenges in realizing this assertion, but that these are dealt with later in the proposal (which they currently are not).

2. Output 5.1 is design of impact monitoring and measuring guidelines, but little is subsequently said about what this will encompass; does 'impact' here refer to the financial aspects or also (as it should) to the GEBs and whether they are delivered by different investment pathways?

3. p.9 "The Fund management team should combine financial skills with operational and business skills…" what about skills for understanding how GEBs may be delivered and made enduring? This *is* the ultimate purpose!

4. Lots of good points in the Project Rationale, but also repetition – which could make space for other issues such as more on the overall drivers of the system (population, climate change, economics) to set up for how the Fund will invest in ways that are likely to be resilient to these.

5. p.12 "Technologies such as farm mechanization…etc …can provide the impact and deliver the goals…" – this is true, but it is also easy to see that some could do otherwise – e.g. farm mechanization might mean that it is easier to clear new land etc; this section should acknowledge the issues that might undermine the delivery of GEBs so that these can be addressed! At present the unspoken assumption is that if potentially good products are produced, then they will automatically deliver GEBs; this is not guaranteed, so what will improve the chances of it (or at least monitor and learn about where it does not work so as to avoid such investments next time)?

6. STAP urges IDB to revise the theory of change, and reflect the layers of complexity affiliated with the project. The long causal logic chain should be better systematized – it could be initially described as: "the GEF invests in the Yield Lab Fund to support agro-technology companies and intermediaries (e.g. country partners for the Fund) that will offer packages to farmers to improve agricultural productivity, reduce agricultural pollution, sequester carbon, and enhance ecosystems, via a variety of technologies and practices. These activities will lead to higher incomes for the farmers, who also will generate GEB outcomes (sustainable land management, chemicals and waste management), and contribute to the reflow of funds to the Yield Lab Fund." Being explicit about assumptions in these causal pathways allows these to be be monitored and tested, and the intent to do so can be indicated in the (currently absent) knowledge management and learning section. At present the ToC diagram is simplistic, and the surrounding description just asserts the same again, rather than actually analysing *how* the activities/inputs will lead to the outputs and thence the outcomes. It would help to show key barriers and enablers, so the pathways can indicate how they are addressing these. STAP's theory of change primer is a useful resource for the project team to draw from (see below).

7. p.15 Investment criteria – none of these relate to the prospects of the investee actually delivering GEBs – this seems a significant oversight in a fund aimed at this end.

8. p.16 Pipeline – this is excellent, and opens the opportunity for a serious analysis of the different types of potential investment, the likely chain of logic for how each may lead to GEBs and hence what needs to be monitored to check that this chain is realized (or not invested in again if it fails). In this regard, STAP urges that the project commits to having a theory of change for each start-up project. This can address issues such as incentives for behavioral change, what will ensure improved management practices will continue, and whether there are risks of leakage of these benefits, all raising assumptions related to the specific context of the start-up topic. This should be part of the investment criteria, and where the risk is deemed reasonable, then drive a monitoring plan to confirm that it delivers the GEBs as expected.

9. p.17 "refer to Knowledge Management section" – this appears to be missing from the PIF. P.39 asserts that KM&L has been clearly described, but the word learning hardly appears at all, and there is no consolidated place where this approach is described. This certification is invalid.

10. p.18 it is good to see the engagement with FAO & IFAD; it would be good to have a few other examples of where IDB is learning from experiences of funds other than its own, also.

11. P.19 also good to see learning intentions with the GEF; however, there is very little here about learning as regards the successful delivery of GEBs from different types of investment, as opposed to learning about running the investment vehicle itself. Also this is the first mention of an Advisory committee – please explain the intended governance of the fund earlier and who will have a say in what is invested in, and how this will ensure expertise about GEBs is included in the decision.

12. P.25-28 – it is great that all this logic is outlined, but in fact this should be the logic underlying theories of change for the different investments; and the many assumptions made clear in this listing should be identified as part of this theory of change (or at least there should be a commitment to doing so as part of the investment criteria) so that targeted critical monitoring of key assumptions is then committed to. GEF should not be involved in the details of the individual investments, but it should know that there is a process planned that will meet certain standards, and will provide learning afterwards.

13. P.28 Justification of Financial Structure – this is incomplete, though it has probably been covered adequately in other places.

14. Because climate change, population growth, political and economic instability, characterize countries where some of the companies are/will be based, STAP urges IDB to design this project, as well as make it mandatory that start-up projects, to design activities explicitly by accounting for these long-term changes and the risks listed in the risk section. STAP's guidance on future narratives, the World Bank's guidance on resilience, as well as the Taskforce for Nature Disclosure scenario planning are useful resources to design simple plausible futures. (Resources are listed below.)

15. Section C – there is no analysis here of whether there may be policies in countries that are antithetical to either the funds' investment process, or to the durability of GEBs that are delivered. If, for example, a country had a policy that currently encourages new land clearing in an area where the Fund is seeking to improve sustainability, this might form part of a reason not to invest there.

16. P.37 there are governance aspects outlined here under stakeholders that should be dealt with properly in one place with a Fund governance diagram and roles of players and committees, etc.

Useful sources:

World Bank resilience rating system: https://openknowledge.worldbank.org/entities/publication/9920d826-21e5-5def-898d-8ccb1daaf4a0

Using simple narratives to ensure durability of GEF investments: https://stapgef.org/resources/policy-briefs/using-simple-narratives-ensure-durability-gef-investments

Nature-related Risk and Opportunity Management and Disclosure Framework Beta v0.4 Annex 4.10 Additional guidance on scenario analysis: https://framework.tnfd.global/wp-content/uploads/2023/03/23-23882-TNFD_v0.4_Annex_4.10_v4.pdf

STAP Theory of Change Primer: https://stapgef.org/resources/advisory-documents/theory-change-primer

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.)