

REVISED STAP SCREENING TEMPLATE, OCTOBER 2022

GEF ID	11115
Project title	Strengthening management to combat threats from aquatic invasive alien species in Venezuela
Date of screen	8 June 2023
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1. Summary of STAP's views of the project

The project focuses on the management of aquatic biological invasions, which is an important issue for achieving global environmental benefits and identifies three main pathways for change (legal frameworks and coordination, strategies for prevention and control, and protocols and capacity for containment). These are all appropriate responses that are consistent with good practice for the management of biological invasions. At a general level, the theory of change maps out a coherent set of activities to achieve the intended outcomes.

The PIF includes innovative elements such as the training and deployment of 'environmental brigades' to monitor sites and provide an early warning system. If successful, the project would transform the management approach to biological invasions in Venezuela.

STAP's review notes that, although the overall intention and approach are sound, there are specific aspects of the PIF that are either not consistent with the intended outcomes or where the proposed activities are not supported by the available evidence, and these should be reviewed during the next phase of project development.

The main areas where such revision is recommended are: a review of the objectives for the management of the target species to be consistent with the status of the invasion (is it early detection or suppression?); a clearer articulation of the objectives for 'socio-productive alternatives'; and further consideration of lessons learnt elsewhere for the development of the strategy, which would include management of pathways of introduction and possible risk evaluation.

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 **problem** relating to aquatic biological invasions is well described and presents a strong **rationale** for a project on the management of invasive species in Venezuela. The proposal outlines three **barriers**, which are shared across many countries (lack of legal and institutional coherence, gaps in knowledge and strategy, and challenges with control of invasive populations) and appropriately identifies the absolute need for an integrated and coordinated approach to the management of IAS. The four **components** of the project are appropriate and necessary responses to better manage biological invasions.

The **logic** for the overall design as well as for each of the components is reasonably well described in the theory of change, which sets out why the proposed interventions will achieve the intended outcomes with a focus on

three main pathways for change (legal frameworks and coordination, strategies for prevention and control, and protocols and capacity for containment). Nevertheless, there are several aspects relating to the **theory of change (TOC)** and the four components that should be revisited during the next phase of project development to better reflect on some of the key assumptions and the likely outcomes from the proposed activities:

- a) Under **outcome 1.2**, it is assumed that an analysis of economic costs on the impacts of IAS, together with greater awareness, will result in greater and more effective allocation of resources from public and private funds. However, the evidence from other countries does not always support this assumption (e.g. see van Wilgen et al 2022, *Biological Conservation* 274) and will likely require a carrot and stick approach comprising regulated responsibilities together with greater awareness and access to information. The possibility that these activities do not free up more funding needs to be factored into project design.
- b) For **outcome 3.1**: As noted in the PIF, the management of biological invasions typically comprises prevention, early detection (and the potential for eradication during the first stages of invasion), containment of established invasions to prevent spread and, where necessary and feasible, suppression of invader populations below levels where they cause unacceptable ecological effects or have unacceptable impacts on ecosystem services (see Green & Grosholtz 2020 for examples from aquatic systems, *Frontiers in Ecology and the Environment* vol 19). The proposal identifies *Unomia stolonifera* as a recent introduction and therefore calling for prompt action to identify the pathway of introduction and to contain its expansion. However, one of the references in the proposal (Ruiz-Allais et al, 2021) notes that it is firmly established on reefs in Venezuela with 30-80% coverage and was already established in 2005. In this case, the most appropriate actions would appear to be for suppression of select populations and this will require a different objective for the community projects (i.e. from eradication or containment to suppression). It may also affect the opportunities for scaling up since suppression may not be appropriate across all invaded sites but only those where it is needed to achieve particular ecological objectives.
- c) For **outcome 3.3**, it is not clear what is meant to be achieved through ‘socio-productive alternatives’. The invasive species was introduced from the aquarium trade and there is no evidence presented that current activities by local communities lead to further spread. So what is the purpose of “alternative” practices?
- d) **Outcome 2.1**. Based on experiences in other parts of the world, e.g. South Africa, the strategy should also consider some form of risk and impact evaluation to inform the management responses for different invasive species on the understanding that it is unrealistic to manage or suppress all invasive populations everywhere. For example the socio-economic impact classification of alien taxa (SEICAT) (Bacher et al 2017, <https://doi.org/10.1111/2041-210X.12844>).
- e) The overall approach seems to have relatively little focus on pathways of introduction and spread, which should be included in the strategy. For the target species, the literature indicates that *U. stolonifera* invasions are associated with ports and could be spread through ballast water and hull fouling and it is not clear how this links to the activities of the project.

The project provides a reasonable account of **knowledge management**, which is mostly dealt with in a generic way with ambitions to bring academics and practitioners into a knowledge network. This is important but the project developers should look at examples elsewhere for knowledge systems that explicitly support actions relating to prevention, early detection, containment and suppression. Each of these components requires different knowledge and information ranging from taxonomy and identification, distribution, biology, natural enemies, and control options.

The project correctly notes that having an integrated legislative environment, effective collaboration between departments and institutions, an agreed strategy for all stages of the invasion process, and tested protocols for managing biological invasions should have a transformative impact on biological invasions and the reduction of their negative effects on the environment.

.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

1. Clarify the status of *U. stolonifera* and what is already known about pathways of invasion. The literature implies that it is well established in the Caribbean and in coastal areas of Venezuela and at least some of the pathways of introduction and spread are known. If so, several components of the project will need to be revised so that the activities are appropriate for a well established invasive species rather than an early stage invasion.
2. Provide greater clarity on the purpose of 'socio-productive alternatives' and what this actually means. In particular, the proposal needs to point out how these socio-productive alternatives support the objectives of the project, ie. to improve the management of invasive species.
3. Look at experiences from other countries where various strategies and approaches have been adopted and implemented for the management of biological invasions, e.g. New Zealand, Australia, South Africa as this will enable the project to leapfrog past some of the obstacles that these countries have encountered. These include legislative frameworks as well as strategies to deal with the different phases of biological invasions. Some of the legislative challenges can be very technical, e.g. do you regulate all introduced species or only those that are proven to be invasive; how do you deal with species that can be invasive but have economic importance; do you regulate by species, pathways or activities?

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.)