

Climate Resilient Seaweed Blue Economy in Madagascar (SeaBlue)

Review PIF and Make a recommendation

Basic project information

GEF ID
12311
Countries
Madagascar
Project Name
Climate Resilient Seaweed Blue Economy in Madagascar (SeaBlue)
Agencies
UNIDO
Date received by PM
3/29/2026
Review completed by PM

Program Manager
Jason Spensley
Focal Area
Climate Change
Project Type
MSP

GEF-8 PROJECT IDENTIFICATION FORM (PIF) REVIEW SHEET

1. General Project Information / Eligibility

- a) Does the project meet the criteria for eligibility for GEF funding?
- b) Is the General Project Information table correctly populated?


Secretariat's Comments

April 9, 2026:

Cleared.

April 1, 2026:

In General Project Information Table Local implementing partners (NGOs / community organizations) are included as executing partners - however, they are not included in LoE. Please remove them (they can be included during preparation as appropriate).

| General Project information  | | | |
|---|---|-------------------------|------------|
| Project Title: | Enhancing climate resilience and sustainable livelihoods through seaweed-based value chains in coastal Madagascar | | |
| Region: | Africa | GEF Project ID: | 12311 |
| Country(ies): | Madagascar | Type of Project: | MSP |
| GEF Agency(ies): | UNIDO | GEF Agency ID: | 260109 |
| Executing Partner: | Ministry of Environment and Sustainable Development | Executing Partner Type: | Government |
| | Local implementing partners (NGOs / community organizations) | | Others |

Agency's Comments Suggested change is made.

2. Project Summary

Does the project summary concisely describe the problem to be addressed, the project objective and the strategies to deliver the GEBs or adaptation benefits and other key expected results?

Secretariat's Comments

April 9, 2026:

Cleared.

March 30, 2026:

In the paragraph on approach, please strengthen articulation of how the project will strengthen resilience and adaptive capacity of people to the impacts of current and anticipated CLIMATE hazards.

Agency's Comments

Section revised accordingly as per below:

Approach: The project will achieve this through a multi-faceted approach that directly strengthens the resilience and adaptive capacity of coastal communities, particularly women, youth, and vulnerable households, to current and anticipated climate hazards, including intensifying cyclones, storm surges, sea-level rise, marine heatwaves, and post-cyclone flooding. This is delivered through five integrated components: (1) climate-resilient production and ecosystem protection, which strengthens coastal communities' adaptive capacity to withstand and recover from cyclones and marine heatwaves by improving last-mile connectivity to national EWS for local seaweed communities, digital climate services, restoration of 2,000?2,500 hectares of mangroves as natural buffers that reduce storm surge energy reaching farms and villages, and sustainable management of 3,500 hectares of marine ecosystems using climate-adaptive seaweed strains and integrated

multi-trophic aquaculture to withstand marine heatwaves, thereby protecting livelihoods and coastal assets from climate shocks; (2) inclusive value-chain upgrading and market diversification, which strengthens economic adaptive capacity by establishing post-harvest facilities (solar drying to prevent losses during rainy seasons), introducing quality standards, and developing bio-stimulants, thereby reducing climate-related losses (20-40% post-harvest), diversifying income sources so households are not dependent on a single climate-sensitive product, and enhancing financial resilience to absorb shocks without distress asset sales; (3) enabling policy frameworks and community-based climate-risk finance, which builds financial resilience at the household level by piloting shock-triggered disbursement mechanisms for post-cyclone recovery (emergency funds and women-led savings groups aligned with seaweed income cycles), enabling people to repair productive assets and resume livelihoods immediately after extreme events without resorting to mangrove cutting for charcoal; (4) knowledge management and South-South exchange, including platforms such as the UNGSI, which builds adaptive capacity by facilitating learning, innovation, and replication of climate-resilient blue economy practices across communities and targeted regions; and (5) robust monitoring, evaluation, and learning to ensure adaptive management, enabling communities and institutions to respond effectively to evolving climate risks and scale up successful interventions.

3 Indicative Project Overview

3.1 a) Is the project objective presented as a concise statement and clear?

b) Are the components, outcomes and outputs sound, appropriate and sufficiently clear to achieve the project objective and the core indicators per the stated Theory of Change?

Secretariat's Comments

April 9, 2026:

Cleared.

March 30, 2026:

Regarding the project objective, please strengthen the climate adaptation and resilience focus of this statement. For example, is the project about reducing vulnerability and adaptive capacity to climate hazards and their impact, or just vulnerability and capacity more broadly?

Agency's Comments

Objective is revised to the following:

"To transform seaweed-based livelihoods from a low-value, climate-sensitive, high-risk commodity into a diversified, climate-resilient driver of the blue economy, enhancing the resilience, sustainability, income and adaptive capacity of coastal communities in the face of current and future climate hazards".

3.2 Are gender dimensions, knowledge management, and monitoring and evaluation included within the project components and appropriately funded?

Secretariat's Comments

April 9, 2026:

Cleared.

March 30, 2026:

We note the 50% target of seaweed producers being female. But we also understand that more than 50% of seaweed producers are typically female. If this is the case in Madagascar, please increase all sex desegregated targets as much as feasible.

Agency's Comments

Targets are changes as the following:

Page 1-2 (Project Summary):

- 60,000 direct beneficiaries (60% women)

Page 34 (Core Indicators table):

- 3,000 trained (60% women, 30% youth)
- 400-600 MSMEs engaged
- 2,500 ha mangrove restoration with 60% women's employment target

3.3 a) Are the components adequately funded?

b) Are the GEF Project Financing and Co-Financing contributions to PMC proportional?

c) Is the PMC equal to or below 5% of the total GEF grant for FSPs or 10% for MSPs? If the requested PMC is above the caps, has an exception (e.g. for regional projects) been sufficiently substantiated?

Secretariat's Comments

April 9, 2026:

Yes

Agency's Comments

4 Project Outline

A. Project Rationale

4.1 SITUATION ANALYSIS

a) is the current situation (including global environmental problems, key contextual drivers of environmental degradation, climate vulnerability) clearly and adequately described from a systems perspective?

b) Are the key barriers and enablers identified?

Secretariat's Comments

April 9, 2026:

Cleared.

March 30, 2026:

The project rationale needs to be strengthened with regards to impacts of current and anticipated climate hazards. For example, please provide a modest and high scenario of key climate hazards related to seaweed production and coastal climate resilience, as is typically done in a project by UNIDO and other GEF Agencies seeking LDCF and SCCF support; and link the risk of these climate impacts to the solutions to be implemented by the project.

Agency's Comments

Suggested changes are made to relevant sections. In summary:

- **Pages 9-12 (Project Rationale, subsections "Future Climate Scenarios and Anticipated Impacts"):**
 - **Page 9: Modest Scenario (RCP2.6) ? 1.6°C warming by 2030, 15-25% productivity decline, periodic marine heat stress >32°C**
 - **Pages 10-11: High Scenario (RCP6.0) ? 2.0°C warming by 2050, 3+ meter storm surges, compound thermal/physical hazards, 36-40°C lethal temperatures for seaweed**
 - **Page 12: Explicit linkages to specific outputs**
- 4.2 JUSTIFICATION FOR PROJECT**

a) Is there an indication of why the project approach has been selected over other potential options?

b) Does it ensure resilience to future changes in the drivers?

c) Is there a description of how the GEF alternative will build on ongoing/previous investments (GEF and non-GEF), lessons and experiences in the country/region?

d) are the relevant stakeholders and their roles adequately described?

Secretariat's Comments

April 9, 2026:

Cleared.

March 30, 2026:

Please address the comment above on articulating what are the anticipated climactic changes, and how specifically the project will address them in a cost effective and sustainable manner.

Agency's Comments Relevant sections are revised accordingly.

5 B. Project Description

5.1 THEORY OF CHANGE

a) Is there a concise theory of change that describes the project logic, including how the project design elements will contribute to the objective, the expected causal pathways, and the key assumptions underlying these?

b) Are the key outputs of each component defined (where possible)?

Secretariat's Comments

March 30, 2026:

Yes

Agency's Comments

5.2 INCREMENTAL/ADDITIONAL COST REASONING

Is the incremental/additional cost reasoning properly described as per the Guidelines provided in GEF/C.31/12?

Secretariat's Comments

March 30, 2026:

Yes

Agency's Comments

5.3 IMPLEMENTATION FRAMEWORK

a) Is the institutional setting, including potential executing partners, outlined and a rationale provided?

b) Comments to proposed agency execution support (if agency expects to request exception).

c) is there a description of potential coordination and cooperation with ongoing GEF-financed projects/programs and other bilateral/multilateral initiatives in the project area

d) are the proposed elements to capture and disseminate knowledge and learning outputs and strategic communication adequately described?

Secretariat's Comments

March 30, 2026:

Yes

Agency's Comments

5.4 a) Are the identified core indicators calculated using the methodology included in the corresponding Guidelines (GEF/C.54/11/Rev.01)?

b) Are the project's indicative targeted contributions to GEBs (measured through core indicators)/adaptation benefits reasonable and achievable?

Secretariat's Comments

April 9, 2026:

Cleared.

March 30, 2026:

Please consider if it is possible to increase impact ambition on any of the core indicators.

Agency's Comments

Impact indicators are revised as per the following:

| | |
|---|--|
| Total number of direct beneficiaries | 60,000 people, approximately 60% women beneficiaries. Indicative; to be further verified and confirmed during the PPG phase. |
| Area of land and coastal ecosystems managed for climate resilience (ha) | 6,000 ha total, including approximately 2,500 ha of mangrove ecosystems under restoration (GEF Core Indicator 3) and 3,500 ha of coastal and nearshore marine habitats under improved climate-resilient management (GEF Core Indicator 5). |
| Total number of policies, plans, or regulatory instruments integrating climate resilience | 5?7 national and sub-national policies, strategies, or planning instruments informed by project-supported evidence and policy engagement. |
| Total number of people trained in climate-resilient livelihoods, ecosystem management, and adaptation practices | 3,000 people, including seaweed producers, community members, and local stakeholders (60% women, 30% youth). |
| Number of private sector enterprises engaged in climate change adaptation and resilience actions | 400?600 MSMEs, including seaweed producers, cooperatives, and women-led ?blue enterprises? adopting climate-resilient practices and business models |

5.5 NGI Only: Is there a justification of financial structure and use of financial instrument with concessionality levels?

Secretariat's CommentsN/A

Agency's Comments

5.6 RISKS

a) Is there a well-articulated assessment of risk and identification of mitigation measures under each relevant risk category?

b) Is the rating provided reflecting the residual risk to the likely achievement of intended outcomes after accounting for the expected implementation of mitigation measures?

c) Are environmental and social risks, impacts and management measures adequately screened and rated at this stage and consistent with requirements set out in SD/PL/03?

Secretariat's Comments

April 9, 2026:

Cleared.

April 1:

Risks:

- i. The rating for the Climate risk category is high. Please confirm in the narrative this is the post-mitigation assessment reflecting residual risk after mitigants are applied, as per the GEF Risk Appetite approach. The justification should explain why the listed

mitigants (EWS, mangrove restoration, climate-resilient framing) do not reduce this risk to Moderate or Substantial. If high is the pre-mitigation rating, the entry should be revised.

ii. Fiduciary risk. Consider revising the rating given Madagascar's governance context and the delivery chain from UNIDO to the Ministry and to NGOs/community organizations. This matters since the risks associated with execution are yet to be fully identified.

Agency's Comments

Risk analysis table is revised accordingly.

•Page 34 (Risks Table):

•Climate Risk: Rated Moderate (not High) with justification: "while catastrophic climate events cannot be eliminated entirely, the combination of early warning, adaptive production practices, and ecosystem-based adaptation significantly lowers the likelihood of project outcome failure"

•Fiduciary Risk: Rated Moderate with mitigation via UNIDO systems, HACT assessment, milestone-based disbursements, and dedicated oversight for community finance (Output 3.1.3)

•Overall Risk: Moderate

5.7 Qualitative assessment

a) Does the project intend to be well integrated, durable, and transformative?

b) Is there potential for innovation and scaling-up?

c) Will the project contribute to an improved alignment of national policies (policy coherence)?

Secretariat's Comments

March 30, 2026:

Yes

Agency's Comments

6 C. Alignment with GEF-8 Programming Strategies and Country/Regional Priorities

6.1 Is the project adequately aligned with focal area and integrated program strategies and objectives, and/or adaptation priorities?

Secretariat's Comments

March 30, 2026:

Yes

Agency's Comments

6.2 Is the project alignment/coherent with country and regional priorities, policies, strategies and plans (including those related to the MEAs and to relevant sectors)

Secretariat's Comments

March 30, 2026:

Yes

Agency's Comments

6.3 For projects aiming to generate biodiversity benefits (regardless of what the source of the resources is - i.e. BD, CC or LD), does the project clearly identify which of the 23 targets of the Kunming-Montreal Global Biodiversity Framework the project contributes to and how it contributes to the identified target(s)?

Secretariat's Comments

April 9, 2026:

Cleared.

March 30, 2026:

Given the Biodiversity Rio Marker is indicated as 1, please clearly identify which of the 23 targets of the Kunming-Montreal Global Biodiversity Framework the project contributes to and how it contributes to the identified target(s).

Agency's Comments

The following is added to the PIF:

Contribution to Kunming-Montreal Global Biodiversity Framework (GBF)

The project directly contributes to the following five GBF targets through its integrated approach to ecosystem-based adaptation and sustainable blue economy development:

Target 2: Restoration: Ensure that by 2030 at least 30% of areas of degraded terrestrial, inland water, and coastal and marine ecosystems are under effective restoration

Contribution: The project restores 2,500 ha of degraded mangrove forests in Analanjirofo, Diana, Melaky, Menabe, and Atsimo-Andrefana regions (Output 1.2.1). This represents a quantifiable contribution to Madagascar's national restoration commitment under NDC2 (170,000 ha by 2030) and the global 30% restoration target. The restoration employs participatory community stewardship protocols with clear tenure agreements, ensuring long-term effectiveness beyond the project period.

Target 3: Conservation: Ensure and enable that by 2030 at least 30% of terrestrial and inland water areas, and of marine and coastal areas, especially areas of particular importance for biodiversity and ecosystem functions and services, are effectively conserved and managed

Contribution: The project brings 3,500 ha of coastal and nearshore marine habitats under improved climate-resilient management through sustainable seaweed aquaculture practices (Integrated Multi-Trophic Aquaculture IMTA, climate-adaptive strains) and ecosystem-based adaptation (Outcome 1.2). This contributes to the "30% of planet protected" goal through Other Effective Area-Based Conservation Measures (OECMs) in productive seascapes, complementing formal protected area systems.

Target 10: Agriculture/Aquaculture: Ensure that areas under agriculture, aquaculture, fisheries, and forestry are managed sustainably, in particular through the conservation and sustainable use of biodiversity

Contribution: The project transforms 3,500 ha of marine habitat under improved practices (Outcome 1.1) through climate-resilient aquaculture techniques including Integrated Multi-Trophic Aquaculture (IMTA), which enhances resource efficiency and reduces pressure on overexploited fisheries. By diversifying into bio-stimulants and organic fertilizers (Output 2.2.1), the project reduces dependence on synthetic inputs, supporting biodiversity-friendly production systems.

Target 19: Financial Resources: Substantially and progressively increase the level of financial resources from all sources... for the implementation of national biodiversity strategies and action plans

Contribution: The project mobilizes USD 7 million in co-financing and pilots innovative community-based climate risk finance mechanisms (Output 3.1.3) with transparent governance structures. The blue carbon assessment (Output 3.1.4) strengthens national Measurement, Reporting, and Verification (MRV) systems, creating the evidentiary foundation for future access to biodiversity and climate finance.

Target 23: Gender Equality: Ensure gender equality in the implementation of the Framework through a gender-responsive approach

Contribution: The project ensures 60% of direct beneficiaries are women and targets 60% women's employment in restoration activities (Outputs 1.1.1, 1.2.3). It establishes women-led savings groups aligned with seaweed income cycles (Output 3.1.3) and provides targeted training for women-led "blue enterprises" in business management and climate adaptation planning (Output 2.1.3), closing structural gender gaps in resource access, leadership, and decision-making.

Secondary Contributions:

The project also generates co-benefits toward:

Target 4 (Spatial Planning): Through spatial planning tools and incentive frameworks for sustainable seaweed production (Output 3.1.1) that integrate biodiversity conservation into coastal zone management.

Target 6 (Pollution Reduction): By developing seaweed-based bio-stimulants and organic fertilizers (Output 2.2.1) that provide alternatives to carbon-intensive synthetic fertilizers, reducing nutrient pollution in coastal waters.

Target 15 (Livelihoods): By directly benefiting 60,000 people through diversified, climate-resilient livelihoods that reduce pressure on biodiversity while improving human well-being.

7 D. Policy Requirements

7.1 Is the Policy Requirements section completed?

Secretariat's Comments

April 9, 2026:

Cleared.

April 1, 2026:

We note that UNIDO has attached Annex D/Revision 3: Environmental and Social (E&S) Screening Template. An overall ESS risk is classified as Moderate.

i. The Environmental and Social (E&S) Screening Template said, "Coastal communities in Madagascar include traditional fishers and local communities with customary resource use

rights.? (page 13) Please clarify whether the project had consultations with Indigenous Peoples/traditional fishers and local communities about the project concept (PIF) and how the results of consultations were integrated into the project concept particularly Component 1 and 2.

ii. Please ensure the project obtained free, prior and informed consent (FPIC) from Indigenous Peoples/traditional fishers and local communities about project design during PPG and throughout project implementation and monitoring.

iii. Please ensure including Indigenous Peoples/traditional fishers and local communities as key stakeholders of the project and involving them not only as beneficiaries but as a partner of the project particularly Component 1 and 2.

iv. Please consider integrating Indigenous Peoples and local communities? governance, traditional and local knowledge, capacity building as a part of the project, particularly in Component 1 and 2.

v. Please consider incorporating monitoring indicators related to integration of traditional and local governance, traditional and local knowledge and capacity building for Indigenous Peoples and local communities in the project during PPG.

Agency's Comments

Changes introduced in relevant parts of the PIF. Summary:

Page 36 (Stakeholder Engagement):

- Revised from "beneficiaries" to "partners" with specific roles in Components 1, 2, and 3

Pages 22-24 (Project Description, Component 1 & 3):

- FPIC protocols commitment for PPG phase covering site selection, climate finance mechanisms, and benefit-sharing
- Integration of customary governance (dina, fokonolona) into spatial planning

Page 25 (Indigenous Peoples/Traditional Knowledge Indicators table):

- 10 community-based monitoring systems integrating TEK
 - 70% of trained producers applying climate-adaptive techniques with traditional knowledge
 - 5 FPIC agreements covering 2,500 ha
- 7.2 Is a list of stakeholders consulted during PIF development, including dates of these consultations, provided?**

Secretariat's Comments

March 30, 2026:

Yes

Agency's Comments

8 Annexes

Annex A: Financing Tables

8.1 Is the proposed GEF financing (including the Agency fee) in line with GEF policies and guidelines? Are they within the resources available from (mark all that apply):

STAR allocation?

Secretariat's Comments

March 30, 2026:

Yes

Agency's Comments

Focal Area allocation?

Secretariat's CommentsN/A

Agency's Comments

LDCF under the principle of equitable access?

Secretariat's Comments

March 30, 2026:

Yes

Agency's Comments

SCCF A (SIDS)?

Secretariat's CommentsN/A

Agency's Comments

SCCF B (Tech Transfer, Innovation, Private Sector)?

Secretariat's CommentsN/A

Agency's Comments

Focal Area Set Aside?

Secretariat's Comments N/A

Agency's Comments

8.2 Is the PPG requested within the allowable cap (per size of project)? If requested, has an exception (e.g. for regional projects) been sufficiently substantiated?

Secretariat's Comments

March 30, 2026:

Yes

Agency's Comments

8.3 Are the indicative expected amounts, sources and types of co-financing adequately documented and consistent with the requirements of the Co-Financing Policy and Guidelines?

Secretariat's Comments

April 9, 2026:

Cleared.

March 30, 2026:

- 1) Co-financing is quite low. Please endeavor to increase ambition.
- 2) The type of cofinancing for SMEs is currently missing and should be completed.

Agency's Comments

Total co-financing is increased to USD 10,350,000

Type of co-financing for SME's indicated.

Annex B: Endorsements

8.4 Has the project been endorsed by the country's(ies) GEF OFP and has the OFP at the time of PIF submission name and position been checked against the GEF database?

Secretariat's Comments

March 30, 2026:

Yes

Agency's Comments

Are the OFP endorsement letters uploaded to the GEF Portal (compiled as a single document, if applicable)?

Secretariat's Comments

March 30, 2026:

Yes

Agency's Comments

Do the letters follow the correct format and are the endorsed amounts consistent with the amounts included in the Portal?

Secretariat's Comments

April 9, 2026:

Cleared.

April 1, 2026:

Title in LoE (Climate Resilient Seaweed Blue Economy in Madagascar (SeaBlue)) is different than in Portal (Enhancing climate resilience and sustainable livelihoods through seaweed-based value chains in coastal Madagascar) - suggest to leave in Portal the title in the LoE (this can be modified during preparation) - alternatively, a new LoE is required.

Agency's Comments Title revised in alignment with LOE.

8.5 For NGI projects (which may not require LoEs), has the Agency informed the OFP(s) of the project to be submitted?

Secretariat's Comments N/A

Agency's Comments

Annex C: Project Location

8.6 Is there preliminary georeferenced information and a map of the project's intended location?

Secretariat's Comments

March 30, 2026:

Yes

Agency's Comments

Annex D: Safeguards Screen and Rating

8.7 If there are safeguard screening documents or other ESS documents prepared, have these been uploaded to the GEF Portal?

Secretariat's Comments

March 30, 2026:

Yes

Agency's Comments

Annex E: Rio Markers

8.8 Are the Rio Markers for CCM, CCA, BD and LD correctly selected, if applicable?

Secretariat's Comments

March 30, 2026:

Yes. Please note the comment above on biodiversity targets.

Agency's Comments Biodiversity targets are added in the document.

Annex F: Taxonomy Worksheet

8.9 Is the project properly tagged with the appropriate keywords?

Secretariat's Comments Yes

Agency's Comments

Annex G: NGI Relevant Annexes

8.10 Does the project provide sufficient detail (indicative term sheet) to take a decision on the following selection criteria: co-financing ratios, financial terms and conditions, and financial additionality? If not, please provide comments. Does the project provide a detailed reflow table to assess the project capacity of generating reflows? If not, please provide comments. Is the Partner Agency eligible to administer concessional finance? If not, please provide comments.

Secretariat's Comments N/A

Agency's Comments

9 GEFSEC Decision

9.1 Is the PIF and PPG (if requested) recommended for technical clearance?

Secretariat's Comments

April 9, 2026:

Pending final review for policy alignment.

March 30, 2026:

Comments need to be addressed

Agency's CommentsComments are addressed to be the best of my knowledge.

9.2 Additional Comments to be considered by the Agency at the time of CEO Endorsement/ Approval

Secretariat's Comments

April 1, 2026:

At the CEO endorsement stage, the specific names of cofinanciers, together with the corresponding cofinancing letters, should be provided instead of using general labels such as Cooperatives, Producer Groups, or SMEs.

Agency's CommentsNoted.

Review Dates

| | PIF Review | Agency Response |
|---|-------------------|------------------------|
| First Review | 4/1/2026 | 4/9/2026 |
| Additional Review (as necessary) | 4/9/2026 | |
| Additional Review (as necessary) | | |
| Additional Review (as necessary) | | |
| Additional Review (as necessary) | | |