## 1. Project Data

GEF project ID  GEF Agency project ID  GEF Agency project ID  GEF Replenishment Phase  Lead GEF Agency (include all for joint projects)  Project name  Country/Countries  Region  Africa  Focal area  Operational Program or Strategic  Priorities/Objectives  Stand alone or under a programmatic framework  Executing agencies involved  Executing agencies involved  NGOs/CBOs involvement  Private sector involvement (including micro, small and medium enterprises)¹  CEO Endorsement (FSP) / Approval (MSP) date  Effectiveness date / project start date  Expected date of project completion (at start)  Project Preparation  GEF Project Grant  IA own  37.22  African Development (Including Inc. SAB)  African Development (Inc. SM)  African Development (Inc. SM)  African Development (FORP), Regional Service of Estates and Land Property  As inc. SAB (Agency (Inc. SM))  African Cerc (Inc. SAB)  BIOMEX (partnership with producers for Artemisia production)  Project Financing  At Endorsement (IUS SM)  At Completion (US SM)  Project Preparation  GEF Project Grant  IA own  37.22  34.53	- I Toject Data					
GEF Agency project ID P-MG-AAB-004 GEF Replenishment Phase GEF-5 Lead GEF Agency (include all for joint projects) African Development Bank Project name Southwest Region of Madagascar Country/Countries Madagascar Region Africa Focal area Climate Change Operational Program or Strategic Priorities/Objectives Stand alone or under a programmatic framework If applicable, parent program name and GEF ID Ministry of Agriculture, including: The Regional Directorates for Rural Development (DRDR); Regional Service of Estates and Land Property Atsimo-Andrefana (SRDPF); National Center for Applied Research on Rural Development (FOFIFA). Ministry of Environment and Forestry Directorate (DREF).  NGOs/CBOs involvement Africance (development of rice fields); HELVETAS (technical assistance to WUAs) Private sector involvement (including micro, small and medium enterprises)¹ BIOMEX (partnership with producers for Artemisia production) CEO Endorsement (FSP) / Approval (MSP) date 4/14/2014 Effectiveness date / project start date 4/14/2014 Expected date of project completion (at start) 9/30/2021 Actual date of project completion 9/30/2021 Project Financing At Endorsement (US \$M) At Completion (US \$M)  Project Preparation GEF funding 0.13 GEF Project Grant  IA own 37.22 34.53		Summary project data				
GEF Replenishment Phase   GEF-5	GEF project ID		5233			
Lead GEF Agency (include all for joint projects)   African Development Bank	GEF Agency project ID		P-MG-AAB-004			
Project name  Country/Countries  Region  Africa  Country/Countries  Region  Africa  Country/Countries  Region  Africa  Climate Change  Operational Program or Strategic Priorities/Objectives  Stand alone or under a programmatic framework  If applicable, parent program name and GEF ID  Ministry of Agriculture, including: The Regional Directorates for Rural Development (DRDR); Regional Service of Estates and Land Property Atsimo-Andrefana (SRDPF); National Center for Applied Research on Rural Development (FOFIFA).  Ministry of Environment and Forests - Regional Environment and Forestry Directorate (DREF),  NGOs/CBOs involvement  Private sector involvement (including micro, small and medium enterprises)¹  CEO Endorsement (FSP) /Approval (MSP) date  Effectiveness date / project start date  Expected date of project completion (at start)  Project Financing  At Endorsement (US \$M)  Project Preparation GEF funding Co-financing  GEF Funding  OL13  At 2  At 33  At 53			GEF-5			
Project name   Southwest Region of Madagascar	Lead GEF Agency (inc	lude all for joint projects)	African Development Bank			
Region	Project name		_	Agriculture Sector in the		
Focal area  Climate Change  Operational Program or Strategic Priorities/Objectives  Stand alone or under a programmatic framework  If applicable, parent program name and GEF ID  Ministry of Agriculture, including: The Regional Directorates for Rural Development (DRDR); Regional Service of Estates and Land Property Atsimo-Andrefana (SRDPF); National Center for Applied Research on Rural Development (FOFIFA).  Ministry of Environment and Forests - Regional Environment and Forestry Directorate (DREF).  NGOs/CBOs involvement  Private sector involvement (including micro, small and medium enterprises)¹  CEO Endorsement (FSP) /Approval (MSP) date  Effectiveness date / project start date  Effectiveness date / project completion (at start)  Actual date of project completion  GEF funding  O.13  Co-financing  GEF funding  GEF funding  O.13  37.2²  34.5³	Country/Countries		Madagascar			
Operational Program or Strategic Priorities/Objectives  Stand alone or under a programmatic framework  If applicable, parent program name and GEF ID  Ministry of Agriculture, including: The Regional Directorates for Rural Development (DRDR); Regional Service of Estates and Land Property Atsimo-Andrefana (SRDPF); National Center for Applied Research on Rural Development (POFIFA). Ministry of Environment and Forests - Regional Environment and Forestry Directorate (DREF),  AfricaRice (development of rice fields); HELVETAS (technical assistance to WUAs)  Private sector involvement (including micro, small and medium enterprises)¹  CEO Endorsement (FSP) /Approval (MSP) date  Effectiveness date / project start date  4/14/2014  Expected date of project completion (at start)  Project Financing  At Endorsement (US \$M)  At Completion (US \$M)  Project Preparation Gaef funding Co-financing  GEF funding Co-financing  IA own  37.2²  34.5³	Region		Africa			
Stand alone or under a programmatic framework   Standalone	Focal area		Climate Change			
If applicable, parent program name and GEF ID  Ministry of Agriculture, including: The Regional Directorates for Rural Development (DRDR); Regional Service of Estates and Land Property Atsimo-Andrefana (SRDPF); National Center for Applied Research on Rural Development (FOFIFA).  Ministry of Environment and Forests - Regional Environment and Forestry Directorate (DREF),  MfricaRice (development of rice fields); HELVETAS (technical assistance to WUAs)  Private sector involvement (including micro, small and medium enterprises)¹  CEO Endorsement (FSP) / Approval (MSP) date  Effectiveness date / project start date  Expected date of project completion (at start)  Actual date of project completion (at start)  Project Preparation GEF funding Co-financing  GEF Funding  O.13  37.2²  34.5³	-	or Strategic	CCA-1, CCA-2, CCA-3			
Executing agencies involved  Ministry of Agriculture, including: The Regional Directorates for Rural Development (DRDR); Regional Service of Estates and Land Property Atsimo-Andrefana (SRDPF); National Center for Applied Research on Rural Development (FOFIFA).  Ministry of Environment and Forests - Regional Environment and Forestry Directorate (DREF),  AfricaRice (development of rice fields); HELVETAS (technical assistance to WUAs)  Private sector involvement (including micro, small and medium enterprises)¹  CEO Endorsement (FSP) / Approval (MSP) date 4/14/2014  Effectiveness date / project start date 4/14/2014  Expected date of project completion (at start) 9/30/2021  Actual date of project completion 9/30/2021  Project Financing  At Endorsement (US \$M) At Completion (US \$M)  Project Preparation Grant GEF funding 0.13 0.13  GEF Project Grant  IA own 37.2² 34.5³	Stand alone or under	a programmatic framework	Standalone			
Executing agencies involved  Development (DRDR); Regional Service of Estates and Land Property Atsimo-Andrefana (SRDPF); National Center for Applied Research on Rural Development (FOFIFA).  Ministry of Environment and Forests - Regional Environment and Forestry Directorate (DREF),  AfricaRice (development of rice fields); HELVETAS (technical assistance to WUAs)  Private sector involvement (including micro, small and medium enterprises)¹  CEO Endorsement (FSP) /Approval (MSP) date 4/14/2014  Effectiveness date / project start date 4/14/2014  Expected date of project completion (at start) 9/30/2021  Actual date of project completion 9/30/2021  Project Financing  At Endorsement (US \$M) At Completion (US \$M)  Project Preparation GEF funding 0.13 0.13  GEF Project Grant  IA own 37.2² 34.5³	, -		Not Applicable			
AfricaRice (development of rice fields); HELVETAS (technical assistance to WUAs)   Private sector involvement (including micro, small and medium enterprises)¹   BIOMEX (partnership with producers for Artemisia production)   CEO Endorsement (FSP) / Approval (MSP) date   4/14/2014     Effectiveness date / project start date   4/14/2014     Expected date of project completion (at start)   9/30/2021     Actual date of project completion   9/30/2021     Project Financing   At Endorsement (US \$M)   At Completion (US \$M)     Project Preparation   GEF funding   0.13   0.13     GEF Project Grant   IA own   37.2²   34.5³	Executing agencies involved		Development (DRDR); Regional Service of Estates and Land Property Atsimo-Andrefana (SRDPF); National Center for Applied Research on Rural Development (FOFIFA). Ministry of Environment and Forests - Regional Environment and			
and medium enterprises)¹  CEO Endorsement (FSP) /Approval (MSP) date  Effectiveness date / project start date  Expected date of project completion (at start)  Actual date of project completion  Project Financing  At Endorsement (US \$M)  Project Preparation Grant  GEF funding  Co-financing  IA own  At Own  At Completion (US \$M)  At Completion (US \$M)  At Completion (US \$M)  At Completion (US \$M)	NGOs/CBOs involvement					
Effectiveness date / project start date 4/14/2014  Expected date of project completion (at start) 9/30/2021  Actual date of project completion 9/30/2021  Project Financing  At Endorsement (US \$M) At Completion (US \$M)  Project Preparation GEF funding 0.13 0.13  Co-financing  GEF Project Grant 1A own 37.22 34.53	, ,					
Expected date of project completion (at start)  Actual date of project completion  Project Financing  At Endorsement (US \$M)  Project Preparation Grant  Co-financing  GEF funding  Co-financing  IA own  At Completion (US \$M)  O.13  O.13  O.13  O.13	CEO Endorsement (FS	SP) /Approval (MSP) date	4/14/2014			
Actual date of project completion  Project Financing At Endorsement (US \$M)  Project Preparation Grant  GEF funding Co-financing  GEF Project Grant  IA own  9/30/2021  At Completion (US \$M)  At Completion (US \$M)  0.13  0.13  37.22  34.53	Effectiveness date / p	roject start date	4/14/2014			
Project Financing  At Endorsement (US \$M)  Project Preparation GEF funding Co-financing  GEF Project Grant  IA own  At Completion (US \$M)  O.13  O.13  34.53	Expected date of proj	ect completion (at start)	9/30/2021			
At Endorsement (US \$M)	Actual date of project completion		9/30/2021			
Project Preparation Grant         GEF funding Co-financing         0.13         0.13           GEF Project Grant         IA own         37.22         34.53	P		Project Financing			
Co-financing   Co-financing   GEF Project Grant   IA own   37.2 <sup>2</sup>   34.5 <sup>3</sup>			At Endorsement (US \$M)	At Completion (US \$M)		
Grant         Co-financing	Project Preparation	GEF funding	0.13	0.13		
IA own 37.2 <sup>2</sup> 34.5 <sup>3</sup>		Co-financing				
	<b>GEF Project Grant</b>					
		IA own	37.2 <sup>2</sup>	34.5 <sup>3</sup>		
Government	Co-financing	Government				
Co-financing Other multi- /bi-laterals		Other multi- /bi-laterals				
Private sector		Private sector				
NGOs/CBOs		NGOs/CBOs				

<sup>&</sup>lt;sup>1</sup> Defined as all micro, small, and medium-scale profit-oriented entities, including individuals and informal entities, that earn income through the sale of goods and services rather than a salary. (GEF IEO 2022)

<sup>&</sup>lt;sup>2</sup> AfDB – African Development Fund: USD 27.45 million, AfDB – Special Nigerian Fund: USD 9.75 million (CEO Endorsement, p. 4).

<sup>&</sup>lt;sup>3</sup> The Terminal Evaluation reports amounts in Units of Account (UAC) of the AfDB. Actual amount committed was UAC 25.5 million (TE, p. 3). Based on the June 2022 Exchange Rates (<a href="https://www.afdb.org/en/documents/june-2022-exchange-rates">https://www.afdb.org/en/documents/june-2022-exchange-rates</a>), this amount is equivalent to USD 34.5 million.

Other		
Total GEF funding	6.3	6.3
Total Co-financing	37.2	34.5
Total project funding (GEF grant(s) + co-financing)	43.5	40.9
Terminal eval	uation validation information	
TE completion date	12/6/2022	
Author of TE	Morou Moussa	
TER completion date	9/27/2023	
TER prepared by	Federico Fraga	
TER peer review by (if GEF IEO review)	Neeraj Negi	

Access the form to summarize key project features here: <a href="https://www.research.net/r/APR2023">https://www.research.net/r/APR2023</a>.

## 2. Summary of Project Ratings

Criteria	Final PIR	IA Terminal Evaluation <sup>4</sup>	IA Evaluation Office Review	GEF IEO Review
Project Outcomes	Satisfactory	Satisfactory	Satisfactory	Moderately Satisfactory
Sustainability of Outcomes		Satisfactory	Satisfactory	Unable to assess
M&E Design		N/A	N/A	Moderately Satisfactory
M&E Implementation		N/A	N/A	Unsatisfactory
Quality of Implementation		Very satisfactory	Very satisfactory	Moderately Satisfactory
Quality of Execution		satisfactory	satisfactory	Moderately Satisfactory
Quality of the Terminal Evaluation Report				Unsatisfactory

# 3. Project Objectives and theory of change

### 3.1 Global Environmental Objectives of the project:

According to the CEO Endorsement request document (p. 2), the project objective was to "secure and improve rural farmers' livelihoods through water management and health interventions in Southwest Madagascar".

### 3.2 Development Objectives of the project:

According to the CEO Endorsement request document (p. 2-3) the development objectives<sup>5</sup> of the project are as follows:

- Agricultural water infrastructures as well as water-related and health community infrastructures
  in the irrigated areas of Taheza, Monombo Ranozaz and Bas Mangoky are resilient to climate
  change.
- Community activities resilient to climate change are implemented in the Rural Municipalities of Bezaha and Andranomangatsiaka (Taheza), Ankililoaka (Manombo Ranozaza), and Ambahikily (Bas Mangoky), and targeted community and municipal authorities have strengthened capacity to promote a local resilient development.
- Knowledge and best practices are monitored, evaluated, and disseminated.

3.3 Were there any **changes** in the Global Environmental Objectives, Development Objectives, or project activities during implementation? What are the reasons given for the change(s)?

No changes were reported.

<sup>4</sup> IA Terminal Evaluation and IA Evaluation Office ratings are based on a 1-4 scale. Therefore, these ratings are not directly comparable to GEF IEO Review ratings.

<sup>&</sup>lt;sup>5</sup> The project documents do not list specific development outcomes – but the listed outcomes are identified as the key results.

3.4 Briefly summarize project's theory of change – describe the inputs and causal relationships through which the project will achieve its long-term impacts, key links, and key assumptions.

The GEF LDCF project was embedded in the AfDB *Projet de rehabilitation des infrastructures agricoles de la région Sud-ouest* – PRIASO- project (baseline project). The objective of the GEF project was to secure and improve rural farmers' livelihoods through water management and health interventions in Southwest Madagascar, by incorporating climate resilience considerations into PRIASO's activities and outcomes.

The project aimed at strengthening the resilience of agricultural water infrastructures as well as water-related and health community infrastructures in the irrigated areas of Taheza, Monombo Ranozaza and Bas Mangoky. While the baseline project would identify structural weaknesses in irrigation works and improve their capacity to withstand flood waters, past experiences with the irrigation network combined with predictions for increased extreme weather events caused by climate change indicated that it would be prudent to design these networks with climate change in mind. Without additional activities that focus on making infrastructure resilient to the types of flood levels predicted with climate change, the structures would possibly return to their baseline state of decay. Therefore, irrigation infrastructures renovation work planned against a business-as-usual scenario would be upgraded to include climate resilience aspects with GEF-LDCF funding.

The project also aimed at demonstrating how efficient and effective community-based climate resilient strategies and practices can be promoted and adopted by a large audience. Therefore, the project would mainstream climate resilience considerations within local development plans, as well as capacity building among targeted communities and municipalities, under the premise that there are important complements to water management and to an agricultural development that is climate change resilient. Finally, adaptation best practices (including gender differentiated issues) from the implementation and promotion of community-based resilient practices and income generating activities would be captured and widely disseminated to support replication (with appropriate adjustments) in other vulnerable areas, landscapes, and regions.

# 4. GEF IEO assessment of Outcomes and Sustainability

Please refer to the GEF Terminal Evaluation Review Guidelines for detail on the criteria for ratings.

The outcome ratings (relevance, effectiveness, efficiency, and overall outcome rating) are on a six-point scale: Highly Satisfactory to Highly Unsatisfactory. The sustainability rating is on a four-point scale: Likely to Unlikely.

Please justify the ratings in the space below each box.

4.1 Relevance and Coherence	HS
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On a 1-to-4-point scale, the TE assessed project relevance and coherence as "perfectly relevant (4)" (TE, p. 2). Following the six-point rating scale used by GEF/IEO, this validation considers it *highly satisfactory*.

Reflecting the country's dependence on natural resources, Madagascar's Second National Communication identified the potential adverse impacts of climate change on water and health as particular concerns. The project was designed in alignment with Madagascar's national policy on "Watershed and Irrigation

Schemes", which stated that the development of irrigation schemes should be accompanied by direct measures to protect the watershed. It also addresses other priorities identified in the Second National Communication, such as the transfer of agricultural technology (infrastructure and knowledge on climateresilient farming techniques) and awareness raising on climate change in Madagascar (PIF, p. 5)

The project was aligned with all three objectives of GEF-5 focal area strategy of climate change: reducing vulnerability, promoting adaptation, and supporting technology transfer for adaptation. The dike and related infrastructure in water management and irrigation, combined with training for local farmers, would strengthen agricultural livelihoods and reduce their vulnerability to cyclones and flooding. Training of WUAs and Farmer Associations would support adaptation through strengthened awareness and ownership. Adaptation technology would also be demonstrated and deployed – both in the upgrading of the dike and associated irrigation infrastructure, and through the water management and agricultural training provided to farmers (PIF, p. 5).

The project was coherent with the baseline project, and all GEF funded activities were designed to ensure that each of the components were climate resilient and sustainable in the face of projected climate change. Furthermore, internal coherence was supported by the involvement of the Ministry of Environment in project implementation, through the designation of a Climate Change Expert who would be part of the PMU and would follow up the implementation of activities related to climate change adaptation. The PIU was embedded within the Regional Rural Development Directorate to ensure that the project was effectively mainstreamed with other related government initiatives (PIF, p. 9 and 10). Finally, the AfDB's long established presence in Madagascar, with active involvement in agriculture and livelihoods-related projects, gave the institution a comparative advantage in addressing issues of agriculture, climate change and rural livelihoods.

4.3 Effectiveness	MU
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On a 1-to-4-point scale, the TE assessed project effectiveness as "satisfactory (3)", because "all activities initially planned as part of the implementation of the PRIASO project have been carried out" (TE, p. 8).

The Project Framework (CEO Endorsement, p. 2) listed three expected outcomes at design (see section 3.2. above). Following the Effectiveness table that is included in the TE (p. 3), and comparing it with the Project Results Framework included in Annex A of CEO Endorsement (p. 34), it is only possible to assess progress with respect to two out of seven of the outcome indicators:

- Outcome 1. Increase in agricultural productivity in targeted areas:
  - o Rice productivity in Bas Mangoky: 5 tons/ha (fully achieved)
  - Rice productivity in Taheza: not reported.
  - o Rice productivity in Ranozaza; 3 tons/ha (partially achieved, end target was 4 tons/ha)
- Outcome 2.
  - Average income in targeted households' supported with income generating activities:
     MGA 2,100,448 (partially achieved, end target was: MGA 2,500,000)
  - % of targeted rural population that have adopted adaptation technologies by technology type: 40% (partially achieved, end target was 50%).

The TE does not report on the following outcome indicators that were included in the CEO Endorsement request document Results Matrix (Annex A): "Sustainable water management practices introduced to increase access to irrigation water under existing and projected climate change" (Outcome 1); "Number of Local Development Plans including specific actions and budget for climate change adaptation" (Outcome 2); "Type and No. of monitoring systems in place" (Outcome 3); "Number of contributions to the Adaptation Learning Mechanism" (Outcome 3).

Furthermore, according to the TE all project outputs initially planned were achieved, except for land tenure security for which the distribution of land titles was scheduled for October 2021, as well as the study on the hydro-agricultural development master plan of the right bank of the Mangoky delta. Reporting on outputs is not framed following the results matrix of the CEO Endorsement request document, what makes it difficult to make a comprehensive assessment of activities. However, in broad terms the project appears to have been successful in implementing activities that are likely to increase resilience of infrastructure and livelihoods.

Overall, considering that the outcome indicators for which there is information (two out of seven) only partially met their targets, this validation assesses the project's effectiveness as Moderately Unsatisfactory.

4.4 Efficiency	S
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On a 1-to-4-point scale, the TE assessed project efficiency as "satisfactory (3)". Following the six-point rating scale used by GEF/IEO, this validation agrees with the assessment.

The TE reports that the project had a planned duration of 60 months but was implemented for 88 months, although the GEF financed activities were completed in 80.5 months. The TE clarifies that the main project activities were in fact completed in December 2018 (over 55 months for the ADF and FSN and 42.5 months for the GEF) -the extensions from January 2019 were granted to use the surplus in resources resulting from the variation in the MGA exchange rate (TE, p. 10).

With respect to resource management, the TE considered efficiency of the use of resources as "very satisfactory", because all activities planned were carried out within the limits of the allocated budget. The exchange rate gains recorded at the level of the three sources of financing and the savings made on almost all the works during the execution of the project even made it possible to have a balance of funds that enabled to carry additional unplanned activities (e.g., construction of other infrastructure and COVID-19 related support).

Finally, an economic analysis was carried out based on the reference price method and the comparison of the "without project" situation and the "with project" situation. The project's economic rate of return (ERR) at project closure was estimated at 19%, above the opportunity cost of capital which was estimated at 12%.

Overall, considering that all planned activities were carried out within the allocated budget, and there was only a moderate delay of about 12 months to closing the project, this validation assesses efficiency as satisfactory.

4.5 Outcome	MS
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Summarize key outcomes related to environment, human well-being, and enabling conditions (Policy, Legal & Institutional Development; Individual & Institutional Capacity-Building; Knowledge Exchange & Learning; Multistakeholder Interactions), as applicable. Include any unintended outcomes (not originally targeted by the project), whether positive or negative, affecting either ecological or social aspects.

Where applicable, note how both intended and unintended outcomes have positively and/or negatively affected marginalized populations (e.g., women, indigenous groups, youth, persons with disabilities), and where some stakeholder groups have benefited more/ less than others.

The TE reports that security in the project area improved following the establishment, in July 2014, of a fixed gendarmerie post in the Rural Commune of Andranomangatsiaka, in accordance with the commitments made by the government during the appraisal of the Project. Specifically, security improved in the irrigated area of Tahea thanks to the mobilization of local civil society to create self-defense and village justice groups called "Dinabé". Furthermore, the construction of roads/dykes along the main irrigation canals has made the perimeter of Manombo Ranozaza accessible in all seasons, improving access to markets. Also, the capacity building activities and rehabilitation of irrigated areas encouraged the involvement of new partners, such as the NGO Helvetas (establishing the consultation spaces necessary for debates and arbitrations around access and use of water) and the private company BIOMEX (which established a partnership with producers in irrigated areas for the production and processing of Artemisia. Finally, part of the remaining project funds that resulted from the variation in the exchange rate were used to finance additional activities to deal with climatic hazards as well as COVID-19.

4.6 Sustainability	UA
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Note any progress made to sustain or expand environmental benefits beyond project closure, using stakeholder (rather than project) resources, e.g. through replication, mainstreaming or scaling-up of GEF-supported initiatives. Examples would be farmers adopting practices using own funds, follow-on replication projects, development of plans for scaling, inclusion in local or national legislation, and allocation of government budgets or private sector investments for institutional adoption.

On a 1-to-4-point scale, the TE assessed project efficiency as "satisfactory (3)". Considering that there are significant information gaps regarding attainment of outcomes, as highlighted in the effectiveness section, this validation is unable to assess the project's sustainability. A summary of the sustainability analysis (TE, p. 11-13) is provided below:

**Financial sustainability:** The TE highlights that the financial viability beyond project's closure is based on the ability to recover costs for the maintenance of the infrastructure and development activities carried

out. Agricultural infrastructures require regular technical monitoring and support. The TE notes that the rate of recovery of fees and contributions at the level of each WUA and the Water Federation is low, which hinders the ability to collect the funds necessary for O&M. It is also noted that there is an insufficiency of technical capacities from the Ministry of Agriculture, on the ground, to support beneficiaries in the management and maintenance of the perimeters (e.g., rural engineering technicians, agronomists, and socio-organizers.)

**Institutional sustainability:** To ensure the involvement and accountability of decentralized Government services in implementation, the Project was initially executed by the Regional Directorate of Agriculture and Livestock (DRAE) under the coordination of the Regional Director. However, political instability in Madagascar led to high turnover at the head of the DRAE, leading to change from 2019 by entrusting the coordination of the Project based on a competitive procedure. In terms of infrastructure sustainability, socio-organizational support for WUAs and the Federation was provided through the technical assistance provided by the Project (capacity strengthening of WUAs and study to establish a fund pilot for financing infrastructure maintenance). The project supported at different levels the capacity building of institutions such as the Regional Public Health Directorate, the locust control center (CNA), and DRAE agents. Thus, the project made a significant contribution to strengthening institutional capacities and in the acquisition of computer equipment and electronic archiving among others. Studies were carried out and decrees were adopted to create the Fund for the Rehabilitation and Maintenance of Agricultural Water Networks (FRERHA), but this was not accomplished.

Ownership and sustainability of partnerships: The project adopted a participatory approach primarily involving beneficiaries and local stakeholders, such as WUAs and decentralized State services. The project was able to establish partnerships with other projects and institutions (UNDP for women's associations, and HELVETAS for technical assistance to WUAs and the private company BIOMEX which established a partnership with producers in irrigated areas for the production and processing of Artemisia), and support initiatives synergistic solutions to amplify the impact of these interventions.

**Environmental and social sustainability:** The TE reports that environmental sustainability is feasible due to good consideration of climate variability in the design and financing of the Project and due to implementation of specific measures for maintenance of agricultural infrastructure (e.g., capacity building). Note that the TE mentions in this section that "the financing of maintenance through fees from WUA members and the contribution to the Fund for the Rehabilitation and Maintenance of Agricultural Water Networks (FRERHA) are solid financial tools to also ensure the environmental and social sustainability of investments". This is inconsistent with the considerations under "financial sustainability" above.

## 5. Processes and factors affecting attainment of project outcomes

Before describing the factors, you may choose to summarize reported outcomes and sustainability here: <a href="https://www.research.net/r/APR2023">https://www.research.net/r/APR2023</a>.

5.1 Co-financing. To what extent was the reported co-financing essential to the achievement of GEF objectives? If there was a difference in the level of expected co-financing and actual co-financing, what were the reasons for it? Did the extent of materialization of co-financing affect project's outcomes and/or sustainability? If so, in what ways and through what causal linkages?

According to the TE (p. 2), a total of UAC<sup>6</sup> 25.5 million materialized as counterpart funding by the AfDB. This is below the planned amount of UAC 29.3 million. The TE (p. 9) reports that a "balance of approximately 9.9% of the total financing by the AfDB Group will be subject to cancellation". However, no further details are provided about the reasons for such cancellation. The TE is not clear about actual cofinancing by the GoM. The co-financing amount by the Government was reported as zero (TE, p. 3). However, the TE (p. 15) also reports that "the rate of mobilization of counterpart resources was 26.2% at the closure of the Project. The government has somehow fulfilled its commitments concerning the recurring costs linked to the management of the project (salaries of civil servants, water, and electricity) sometimes with considerable delay. The part of the national counterpart relating to the restructuring and maintenance works of the secondary canals on the Taheza and Manombo Ranoaa perimeters for a total amount estimated at UAC 2,300,000 was not mobilized due to an overestimation of these costs and the ambiguity of the mechanisms for its mobilization. The cost of maintaining the secondary canals on the Taheza and Manombo Ranozaza perimeters was finally covered by the beneficiaries for a cost estimated at UAC 273,493. The Project appraisal report should have been more explicit regarding the mechanisms for mobilizing the counterpart linked to the maintenance of the irrigation network".

5.2 Project extensions and/or delays. If there were delays in project implementation and completion, then what were the reasons for it? Did the delay affect the project's outcomes and/or sustainability? If so, in what ways and through what causal linkages?

According to the TE (p. 10), the project was implemented over a period of 88 months for the AfDB and 80.5 months for the GEF, above the planned duration of 60 months. The TE states that the main project activities were in fact completed in December 2018 (over 55 months for the ADF and FSN and 42.5 months for the GEF). The extensions from January 2019 were granted not to carry out planned activities but to use the surplus in resources resulting from variations in the MGA exchange rate (TE, p. 10).

The main delays during project implementation were related to lengthy "procurement processes, the low capacity of the Control Body and the members of the Tender Commission in the Region, as well as the frequent change of the Procurement Manager for this project represent the main causes of delays noted during project implementation" (TE, p. 11). In the same line, "the weakness of studies and their validations lead to systematic amendments to most works contracts, the performance of certain companies and consultants as well as the internal organization in contract management contributed to the delays in execution of works services, goods and consultants" (TE, p. 11).

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<sup>&</sup>lt;sup>6</sup> "Units of Account" of the AfDB. In June 2022 (the TE's report date), UAC 1 = USD 1.3497 (https://www.afdb.org/en/documents/june-2022-exchange-rates)

5.3 Stakeholder ownership. Assess the extent to which stakeholder ownership has affected project outcomes and sustainability. Describe the ways in which it affected outcomes and sustainability, highlighting the causal links.

The project adopted a participatory approach primarily involving beneficiaries and local stakeholders, such as WUAs, Water Federation and decentralized State services. The capacity building of WUAs, which are expected to take care of the O&M of irrigation canals should contribute to their project ownership and continued engagement beyond project completion. The financing of O&M, however, is in question, as already explained in the Sustainability section, and this could be a key factor hindering the environmental and social sustainability of investments. It is also important to highlight that, according to the TE (p. 12), the project was able to establish partnerships with other projects and institutions (UNDP for women's associations, and HELVETAS for technical assistance to WUAs and the private company BIOMEX which established a partnership with producers in irrigated areas for the production and processing of Artemisia), and support initiatives synergistic solutions to amplify the impact of these interventions.

5.4 Other factors: In case the terminal evaluation discusses other key factors that affected project outcomes, discuss those factors and outline how they affected outcomes, whether positively or negatively. Include factors that may have led to unintended outcomes.

No additional key factors are discussed.

## 6. Assessment of project's Monitoring and Evaluation system

Ratings are assessed on a six-point scale: Highly Satisfactory to Highly Unsatisfactory.

Please justify ratings in the space below each box.

6.1 M&E Design at entry	MS
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The TE does not provide a rating for M&E design. In general, the M&E plan adequately addressed the project's theory of change, and the outcome indicators were mostly aligned to the project's components and overall objective. However, the design of the results framework had areas for improvement. For example, with respect to Outcome 2, the Results Matrix did not include any indicator to assess progress on strengthening of capacities at the community and municipal level. In addition, the indicator included to measure progress on outcome 1, "Sustainable water management practices introduced to increase access to irrigation water under existing and projected climate change" refers to an output, not an outcome. This is also the case for the indicators "Number of Local Development Plans including specific actions and budget for climate change adaptation" and "% of targeted rural population that have adopted adaptation technologies by technology type" within outcome 2, and "Type and No. of monitoring systems in place" and "Number of contributions to the Adaptation Learning Mechanism" within outcome 3.

6.2 M&E Implementation	U
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The TE does not provide a rating for M&E implementation, but only a qualitative assessment (which refers to PRIASO's M&E). In that regard, the TE reports that "the project was equipped with an efficient monitoring evaluation system, which enabled all stakeholders, especially the beneficiaries, to be regularly informed, through the establishment of the Steering Committee and the Local Monitoring Committees (CLS) at the level of each area of intervention of the Project. Made up of representatives of the beneficiaries and the municipalities concerned, these committees actively participated in the finalization and validation of the annual work plans and project activity reports. The Government held all the steering meetings and ensured external monitoring through several missions (with the MAE, the DDP) and its participation in the Steering Committee" (p. 15).

The terminal evaluation and implementation reports had significant shortcomings about reporting progress on outcomes and outputs following the project results framework as approved in the CEO Endorsement request document. This hindered the evaluation of the effectiveness and sustainability of the project. Therefore, this validation assesses M&E implementation as unsatisfactory.

## 7. Assessment of project implementation and execution

Quality of Implementation rating is based on the assessment of the performance of GEF Agency(s). Quality of Execution rating is based on performance of the executing agency(s). In both instances, the focus is upon factors that are largely within the control of the respective implementing and executing agency(s). A six-point rating scale is used (Highly Satisfactory to Highly Unsatisfactory), or Unable to Assess.

Please justify ratings in the space below each box.

7.1 Quality of Project Implementation	MS
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On a 1-to-4-point scale, the TE rated "AfDB's performance" as "very satisfactory (4)". The TE (p. 14) justifies this rating based on the following reasons. First, the Bank assisted the government at each stage of the project cycle and, in a proactive manner, identified and resolved problems encountered and authorized the required adjustments, particularly during the mid-term review. Furthermore, the Bank incorporated lessons learned from previous operations, and promoted stakeholder participation to strengthen ownership of stakeholders. In addition, the Bank regularly ensured compliance both with fiduciary as well as environmental safeguards provisions. The Bank also sent supervision missions on a regular basis (twice a year on average) with varied expertise (irrigation engineer, agronomist, procurement experts, etc.), and these missions allowed to formulate recommendations to government authorities to resolve problems and overcome identified constraints. Finally, the Bank also responded to the various project requests within the required deadlines, even if delays were sometimes noted in the processing of requests for Notice of No Objection and disbursement requests linked most often to the quality of the file submitted and requests for additional information and/or clarification addressed to the project.

Considering the shortcomings in M&E implementation that hindered the assessment of several outcome indicators, this validation assesses quality of project implementation as moderately satisfactory.

On a 1-to-4-point scale, the TE rated the "borrower's performance" as "satisfactory (3)", based on the following reasons (TE, p. 15). First, a multidisciplinary team of competent experts for the management of the Project. Following the high turnover problems at the head of the regional directorate of agriculture (to which the coordination of the project was originally entrusted), required adjustments were made by appointing a new coordinator in 2019 on a competitive basis. As already mentioned in "Quality of M&E implementation" section, the TE highlights that an efficient monitoring-evaluation system was implemented, which enabled all relevant stakeholders to be up to date about the project's progress. In addition, the recommendations of the supervision missions were monitored by the MINAE and the DDP, and measures were taken promptly.

As a shortcoming, the TE highlights the low rate of counterpart co-financing, as already described in section 5. In addition, conclusions about the partnership that was developed within the framework of the project are mixed; some are considered satisfactory, such as the agreement with the Regional Directorate of the Environment regarding reforestation, and the agreement with AfricaRice for the development of rice-growing areas; others are considered unsatisfactory, such as the agreement with the National Center for Applied Research on Rural Development (FOFIFA) whose production of basic and pre-basic seeds did not reach the expected quantity, and the agreement with the Regional Service of Estates and Land Property Atsimo-Andrefana (SRDPF) which did not result in the expected delivery of property titles on the closing date of the Project. Furthermore, the TE highlights that the relatively long delays recorded in the procurement, the low capacity of the Control Body and the members of the Tender Commission in the Region, as well as the frequent change of the Procurement Manager, were the main causes of the delays noted during the implementation.

Based on the information above, this validation assesses the quality of execution of activities as moderately satisfactory.

### 8. Lessons and recommendations

8.1 Briefly describe the key lessons, good practices, or approaches mentioned in the terminal evaluation report, including how they could have application for other GEF projects. Lessons must be based on project experience.

A summary of some relevant lessons and recommendations with general applicability is provided below.

#### **Lessons learned:**

<u>O&M</u> of infrastructure. The establishment of maintenance funds is key to guarantee the O&M of infrastructure works carried, and these also require regular technical monitoring and support.

<u>Co-financing.</u> The effective mobilization of the counterpart, within the required deadlines, greatly favors the execution of the Project and the coverage of the planned costs.

<u>Technical considerations</u>. The recurrence of severe natural hazards such as floods and cyclones require a more rigorous consideration regarding infrastructure selection and design.

8.2 Briefly describe the recommendations given in the terminal evaluation.

### For the Government and implementing agencies:

- Constant anticipation, increased decentralization of the bodies involved in the Government/Organization processes, a qualified acquisition team available before execution of the project are likely to reduce these delays. In addition, the weakness of studies and their validations lead to systematic amendments to most works' contracts. A qualified validation committee with field verification of the results of the studies must be established at the level of the Ministry during the execution of contracts (TE, p. 18).
- Ensure the contribution of beneficiaries before any intervention, in physical or financial form, to promote the appropriation and establishment of maintenance funds considering the effective financial capacity of beneficiaries. Pay particular attention to the structure of recurring charges for the recovery of fees and contributions at the level of each of the rehabilitated infrastructure, and involve the private sector, civil society, and all stakeholders in infrastructure management. Furthermore, Ensure the technical support is available at the level of each perimeter to support associations in the management of infrastructure.
- To limit risks during execution, the State should not be responsible for activities and expenses whose non-completion would have too heavy an impact on the entire project. Also, the state's contribution should take into consideration the country's capacity and its status as a fragile state.
- Ensure that any partnership is accompanied by a periodic performance assessment and compliance with the terms of the established protocols. Terminate agreements in the most difficult cases.
- Use of proven techniques adapted to local conditions which address needs which have been expressed: prior technical and indispensable studies as well as their updating is strongly recommended. It is also important to ensure the quality of works implementation through strict supervision. There is also a need for monitoring during and after commissioning.

# 9. Quality of the Terminal Evaluation Report

Before rating the quality of the terminal evaluation, click here to summarize your observations on the sub-criteria: <a href="https://www.research.net/r/APR2023">https://www.research.net/r/APR2023</a>.

A six-point rating scale is used for each sub-criteria and overall rating of the terminal evaluation report (Highly Satisfactory to Highly Unsatisfactory)

Criteria/indicators of terminal	GEF IEO COMMENTS	Rating
evaluation quality		

1.	Timeliness: terminal evaluation report was carried out and submitted on time?	The actual completion date of the project was in September 2021. The evaluation mission took place between September 28 and 29, 2021. The report was prepared in June 2022 and submitted to the GEF portal in January 2023.	S
2.	General information: Provides general information on the project and evaluation as per the requirement?	The TE provides evaluators names, executing agencies and key project milestones. The GEF environmental objectives are not specified.	MS
3.	Stakeholder involvement: the report was prepared in consultation with – and with feedback from - key stakeholders?	The TE did not specify whether key stakeholders were reached out and/or whether their feedback was incorporated on the report. The TE does not mention if the OFP feedback was sought or incorporated in the report.	Н
4.	Theory of change: provides solid account of the project's theory of change?	The TE does not provide solid account of the theory of change: causal links/mechanisms to achieve the intended impacts are not discussed. The key assumptions of the theory of change are not presented either.	Η
5.	Methodology: Provides an informative and transparent account of the methodology?	The report does not discuss information sources for the evaluation; does not provide information on who was interviewed and on project sites/activities covered for verification; does not describe tools and methods used; and does not identify limitations of the evaluation.	HU
6.	Outcome: Provides a clear and candid account of the achievement of project outcomes?	There is no assessment of relevance of the project to the GEF strategies. In the same line, The TE's reporting on outcomes and outputs is not consistent with the Project's results framework as approved in the CEO Endorsement document.	ни
7.	Sustainability: Presents realistic assessment of sustainability?	The assessment does not include a systematic account of risks, their likelihood of materialization and/or the likely effects if these materialize. However, it does include realistic considerations regarding some relevant risks, such as financial and technical shortcomings to the O&M of infrastructure works.	MU

8. M&E: Presents sound assessment of the quality of the M&E system?	The TE does not analyze quality of M&E at design, nor provides a rating for it. The TE provides a brief qualitative assessment of M&E implementation but does not provide a rating either.	HU
9. Finance: Reports on utilization of GEF funding and materialization of co-financing?	The TE does not report on utilization of GEF resources. It does report on materialization of co-financing by the AfDB and the government. The reasons for cancellation of a balance of funds from AfDB are not clearly specified. The TE does not explain how the non-materialization of national counterpart funds impacted on the project results.	U
10. Implementation: Presents a candid account of project implementation and Agency performance?	The report assesses performance of the AfDB and borrower's performance (Government of Madagascar) and provides a rating for them. Overall, the analysis is adequate.	S
11. Safeguards: Provides information on application of environmental and social safeguards, and conduct and use of gender analysis?	In terms of safeguards, the only reference is that "the Bank has regularly ensured compliance with the provisions laid down in terms of environmental monitoring and surveillance". The TE does not refer to a gender analysis and/or gender mainstreaming plan having been conducted or implemented.	HU
12. Lessons and recommendations are supported by the project experience and are relevant to future programming?	The report presents lessons based on project experience. It also presents recommendations as needs for action, as well as action takers.	S
13. Ratings: Ratings are well- substantiated by evidence, realistic and convincing?	Ratings are provided on a 1–4-point scale, which is only relevant to the AfDB. Regarding outcomes, the TE falls short in complementing the quantitative progress for outcomes and outputs, with thorough discussion to justify the rating provided. The sustainability analysis is more comprehensive and includes an assessment of the different sustainability dimensions. However, the rating on sustainability lacks an overall justification.	U
14. Report presentation: The report was well-written, logically organized, and consistent?	To the GEF evaluation purposes, this TE is deficient. The report lacks key relevant information regarding the performance and sustainability of the project: there is	ни

Overall quality of the report	progress with respect to outcomes as defined in the CEO Endorsement request document.	
	no reference to the M&E framework, implementation of GEF activities, and	

10. Note any additional sources of information used in the preparation of the terminal evaluation report (excluding PIRs, TEs, and PADs).

#### ANNEX 1. GEF IEO THEORY OF CHANGE FRAMEWORK

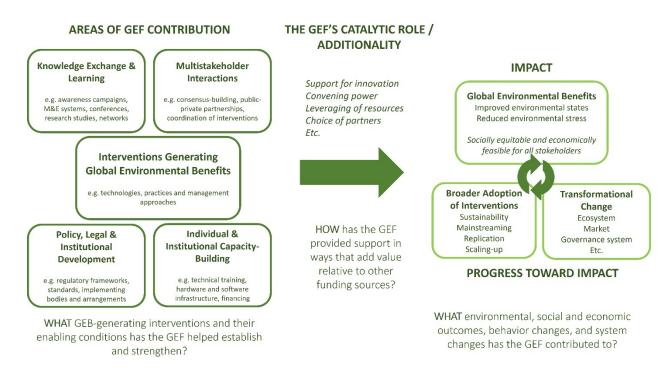


Figure 1. The GEF IEO's updated Theory of Change Framework on how the GEF achieves impact

The general framework for the GEF's theory of change (figure 1) draws on the large amount of evaluative evidence on outcomes and impact gathered over the years by the GEF Independent Evaluation Office. The framework diagram has been updated to reflect the IEO's learning since OPS5 (GEF IEO 2014, p. 47-50) about how the GEF achieves impact, as well as the evolution of the GEF's programming toward more integrated systems-focused and scaled-up initiatives.

The framework outlines the three main areas that the IEO assesses in its evaluations: a) the GEF's contributions in establishing and strengthening both the interventions that directly generate global environmental benefits, and the enabling conditions that allow these interventions to be implemented and adopted by stakeholders, b) the GEF's catalytic role or additionality in the way that the GEF provides support within the context of other funding sources and partners, and c) the environmental, social and economic outcomes that the GEF has contributed to, and the behavior and system changes that generate these outcomes during and beyond the period of GEF support.

The circular arrow between impact and progress toward impact, as before, indicates how bringing about positive environmental change is an iterative process that involves behavior change (in the form of a broader group of stakeholders adopting interventions) and/or systems change (which is a key characteristic of transformational change). These three areas of change can take place in any sequence or simultaneously in a positively reinforcing cycle, and are therefore assessed by the GEF IEO as indicators of impact.

Assessing the GEF's progress toward achieving impact allows the IEO to determine the extent to which GEF support contributes to a trajectory of large-scale, systemic change, especially in areas where changes in the environment can only be measured over longer time horizons. The updated diagram in particular expands the assessment of progress towards impact to include transformational change, which specifically takes place at the system level, and not necessarily over a long time period.

The updated diagram also more explicitly identifies the link between the GEF's mandate of generating global environmental benefits, and the GEF's safeguards to ensure that positive environmental outcomes also enhance or at the very least do not take away from the social and economic well-being of the people who depend on the environment. Thus the IEO assesses impact not only in terms of environmental outcomes, but also in terms of the synergies and trade-offs with the social and economic contexts in which these outcomes are achieved.

### **ANNEX 2. DEFINITION OF TERMS**

Intervention	Any programmatic approach, full-sized project, medium-sized project, or enabling activity financed from any GEF-managed trust fund, as well as regional and national outreach activities. In the context of post-completion evaluation, an intervention may consist of a single project, or multiple projects (i.e. phased or parallel) with explicitly linked objectives contributing to the same specific impacts within the same specific geographical area and sector.  https://www.gefieo.org/evaluations/gef-evaluation-policy-2019
Activity (of an intervention)	An action undertaken over the duration of an intervention that contributes to the achievement of the intervention's objectives, i.e. an intervention is implemented through a set of activities. E.g. training, (support to) policy development, (implementation of) management approach.
Outcome	An intended or achieved short- or medium-term effect of a project or program's outputs. <a href="https://www.gefieo.org/evaluations/gef-evaluation-policy-2019">https://www.gefieo.org/evaluations/gef-evaluation-policy-2019</a>
Impact	The positive and negative, primary and secondary long-term effects produced by a project or program, directly or indirectly, intended or unintended. <a href="https://www.gefieo.org/evaluations/gef-evaluation-policy-2019">https://www.gefieo.org/evaluations/gef-evaluation-policy-2019</a>
Environmental outcomes	Changes in environmental indicators that could take the following forms:  • Stress reduction: reduction or prevention of threats to the environment, especially those caused by human behavior (local communities, societies, economies)  • Environmental state: biological, physical changes in the state of the environment <a href="http://www.gefieo.org/sites/default/files/ieo/evaluations/ops5-final-report-eng.pdf">http://www.gefieo.org/sites/default/files/ieo/evaluations/ops5-final-report-eng.pdf</a>
Social and economic outcomes	Changes in indicators affecting human well-being at the individual or higher scales, e.g. income or access to capital, food security, health, safety, education, cooperation/ conflict resolution, and equity in distribution/ access to benefits, especially among marginalized groups.
Synergies	Multiple benefits achieved in more than one focal area as a result of a <i>single intervention</i> , or benefits achieved from the interaction of outcomes from at least two separate interventions in addition to those achieved, had the interventions been done independently.

	http://www.gefieo.org/evaluations/evaluation-multiple-benefits-gef-support-through-its-
	multifocal-area-portfolio-map-2016
Trade-offs	A reduction in one benefit in the process of maximizing or increasing another benefit.
	http://www.gefieo.org/evaluations/evaluation-multiple-benefits-gef-support-through-its-multifocal-area-portfolio-map-2016
Broader adoption	The adoption of GEF-supported interventions by governments and other stakeholders beyond the original scope and funding of a GEF-supported intervention. This may take place through sustaining, replication, mainstreaming, and scaling-up of an intervention and/or its enabling conditions (see definitions below).
	http://www.gefieo.org/sites/default/files/ieo/evaluations/ops5-final-report-eng.pdf
Sustainability	The continuation/ likely continuation of positive effects from the intervention after it has come to an end, and its potential for scale-up and/or replication; interventions need to be environmentally as well as institutionally, financially, politically, culturally and socially sustainable. <a href="https://www.gefieo.org/evaluations/gef-evaluation-policy-2019">https://www.gefieo.org/evaluations/gef-evaluation-policy-2019</a>
Replication	When a GEF intervention is reproduced at a comparable administrative or ecological scale, often in different geographical areas or regions.
	http://www.gefieo.org/sites/default/files/ieo/evaluations/ops5-final-report-eng.pdf
Mainstreaming	When information, lessons, or specific aspects of a GEF initiative are incorporated into a broader stakeholder initiative. This may occur not only through governments but also in development organizations and other sectors.
	http://www.gefieo.org/sites/default/files/ieo/evaluations/ops5-final-report-eng.pdf
Scaling-up	Increasing the magnitude of global environment benefits (GEBs), and/or expanding the geographical and sectoral areas where they are generated to cover a defined ecological, economic, or governance unit. May occur through replication, mainstreaming, and linking.
	http://www.gefieo.org/evaluations/evaluation-gef-support-scaling-impact-2019
Transformational change	Deep, systemic, and sustainable change with large-scale impact in an area of major environmental concern. Defined by four criteria: relevance, depth of change, scale of change, and sustainability.
	http://www.gefieo.org/evaluations/evaluation-gef-support-transformational-change-2017
Additionality	a) Changes in the attainment of direct project outcomes at project completion that can be attributed to GEF's interventions; these can be reflected in an acceleration of the adoption of reforms, the enhancement of outcomes, or the reduction of risks and greater viability of project interventions.
	b) Spill-over effects beyond project outcomes that may result from systemic reforms, capacity development, and socio-economic changes.
	c) Clearly articulated pathways to achieve broadening of the impact beyond project completion that can be associated with GEF interventions.
	https://www.gefieo.org/sites/default/files/ieo/council-documents/files/c-55-me-inf-01.pdf