



FINAL REPORT No 06/25-ADM/AUDIT/CLIMAT

Performance Audit of Madagascar's Climate Change National Adaptation Plan (NAP) and its implementation in Biodiversity and Forestry Sectors



OCTOBER 2025

LIST OF ABBREVIATIONS

ACRONYMS	DEVELOPMENT
ABE	Ecosystem Based Adaptation
BN-CCREDD+	National Office for Climate Change and Reducing Emissions from Deforestation and Forest Degradation
CDN	Nationally Determined Contribution
PEAK	Interministerial Committee for the Environment
DAPRNE	Directorate of Protected Areas, Renewable Natural Resources and Ecosystems
DGGE	General Directorate of Environmental Governance
DMFD	Sustainable Financing Mechanism Directorate
DPSE	Department of Programming and Monitoring-Evaluation
DRGPF	Department of Reforestation, Landscape and Forest Management
IPCC	Intergovernmental Panel on Climate Change
ISSAI	International Standards of Supreme Audit Institutions
LOCS	Organic Law on the Supreme Court
MEDD	Ministry of the Environment and Sustainable Development
MRV	Measurement, Reporting and Verification
MNP	Madagascar National Park
SDGs	Sustainable Development Goals
ONE	National Office for the Environment
OSC	Civil Society Organizations
PAGE	Environmental Management Support Program
PANA	National Adaptation Action Program
PANASS	National Plan for Adaptation of the Health Sector to Climate Change
PANLCC	National Action Plan to Combat Climate Change
PDFN	National Forest Master Plan
PGE	General State Policy
PNA/ NAP	National Adaptation Plan
PNASS	National Health Sector Adaptation Plan
PNEDD	National Environmental Policy for Sustainable Development
PNLCC	National Policy to Combat Climate Change
PNSE	National Health and Environment Policy
POLFOR	Forest Policy
PRCCC	Management Support Program
PASASS	Strategic Plan for Adaptation of the Health Sector to Climate Change, integrating the transparency of the Paris Agreement
POLFOR	Forest Policy
PRR	Project for resistance and resilience of the regions of the Great South to the effects of El Niño
RPF	Restoration of Forest Landscapes
RRC	Disaster Risk Reduction
SARC	Climate Adaptation and Resilience Service
SBD-SE	Database and Monitoring-Evaluation Service
SFCFE	Carbon Fund and External Financing Service
SMFD	Sustainable Financing Mechanisms Service
SPANB	National Biodiversity Strategy and Action Plans
IUCN	International Union for Conservation of Nature
UTCATF	Land use, land-use change and forestry

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EXECUTIVE SUMMARY

Madagascar, a vast mountainous island in the Indian Ocean, is a globally recognized biodiversity hotspot, home to approximately 5% of the world's species. Its rich and diverse ecosystems span terrestrial, aquatic, marine, and coastal environments. However, the country is among the ten most affected by climate change, facing severe environmental challenges. Between 2015 and 2021, recurring droughts in the south led to devastating famine, impacting over a million people. Moreover, climate change threatens Madagascar's invaluable natural heritage, particularly its forests, which are crucial for both ecological balance and sustainable development.

An effective response from Government actions to climate change is therefore imperative.

Biodiversity is one of the sectors most vulnerable to the effects of climate change, while deforestation has continued to increase alarmingly across the country over the past ten years.

This is how the Court of Accounts, as part of a cooperative audit on a global level in the area of climate change, carried out an audit of the performance of actions to adapt to climate change in the biodiversity and forestry sectors.

The overall objective of the audit is to assess the performance, in terms of consistency and effectiveness, of the National Action Plan on Climate Change through the biodiversity and forestry sectors.

This overarching objective is further articulated through the following specific objectives (SO):

- SO1: Examine whether the NAP aligns with the objectives of the Paris Agreement;
- SO2: Assess the effectiveness of the NAP's governance;
- SO3: Assess whether the NAP considers the principle of inclusiveness;
- SO4: Assess whether the NAP, the national biodiversity strategy and the forest policy are aligned;
- SO5: Assess the effectiveness of the NAP through biodiversity and forestry cases.

Audit Question 1: Examine whether the NAP aligns with the objectives of the Paris Agreement

In line with its commitments under the Paris Agreement (Article 7, point 9), Madagascar developed a National Adaptation Plan (NAP) for climate change. The process, initiated in 2012, was only finalized in December 2021, five years after the country ratified the Agreement. This delay stemmed from institutional complexities, the involvement of multiple stakeholders, and the diverse sectors affected. As a result, the implementation of planned adaptation measures was significantly slowed.

The adopted plan is based on a programmatic approach, structured around short, medium and long-term actions, but presents certain shortcomings, particularly in the analysis of the impact of vulnerability and in the estimation of costs.

Climate impacts have been identified, but specific details, particularly concerning social and gender disparities, remain lacking. Regional analyses are limited, with some heavily affected areas left unexamined. The approach prioritizes sectors over vulnerable populations.

Additionally, the NAP highlights eight priority sectors and establishes twelve intervention programs. These programs stem from a consultative process, ensuring alignment with national priorities and international frameworks.

An initial cost estimate in 2021 set the total expense at USD 273 million. However, a reassessment in 2024 revealed a significantly higher actual cost of USD 2.43 billion, exposing a discrepancy of USD 2.1 billion and a substantial initial underestimation. Furthermore, Madagascar depends on external financing to implement its NAP.

Accordingly, the Court recommends to the Ministry of the Environment and sustainable Development, in the short term, the following actions:

- *Thoroughly document the impacts identified in the NAP;*
- *Establish a robust methodology for data collection at the national level. This includes the design of a comprehensive mechanism for analyzing vulnerabilities and risks associated with the impacts of climate change;*
- *Ensure full regional representation throughout the process to enhance data validity and inclusiveness;*
- *Explore any financing mechanism relating to climate change;*
- *Strengthen ongoing efforts to mobilize internal resources.*

Audit Question 2: Assess the effectiveness of the NAP's governance

The governance of Madagascar's National Adaptation Plan (NAP) is based on a well-structured institutional, legislative, and regulatory framework designed to integrate climate change adaptation into public policies. This system is supported by key normative instruments, including the Malagasy Environmental Charter, the General State Policy (PGE), the National Action Plan to Combat Climate Change (PANLCC), the National Environmental Policy for Sustainable Development (PNEDD and various decrees defining the missions of the Ministry of the Environment and Sustainable Development (MEDD). Inter-institutional coordination is managed by entities such as the Interministerial Committee for the Environment (CIME) and the National Bureau for Climate Change and REDD+ (BN-CCREDD+). However, persistent challenges remain, particularly in human resource capacity, intersectoral coordination, and data management.

The process of developing the NAP involved a wide range of stakeholders through consultations at both national and regional levels. Participants included ministries, local authorities, the private sector, civil society, and technical and financial partners.

However, the private sector and non-governmental organizations have had limited participation, largely due to unclear roles and responsibilities. Additionally, while the NAP formally includes a monitoring and evaluation framework, it faces significant challenges: the absence of operational mechanisms, indicators unsuitable for impact assessment, and an inability to distinguish NAP-specific actions within existing systems.

These shortcomings hinder result tracking, periodic evaluations, and the strategic adjustment of interventions.

A functional dashboard is available at the CCREDD+ National Office (BN CCREDD+), serving as a technical foundation for monitoring the implementation of the National Adaptation Plan (NAP). Nevertheless, access to complete and integrated information remains a significant challenge, hindering the ability to conduct a thorough assessment of all activities undertaken within the framework of the NAP.

To improve the effectiveness of National Adaptation Plan (NAP) governance, the Court recommends, in the short term:

a) *To the Government, under the leadership of the Ministry of Environment and Sustainable Development:*

- *Clearly define and formalize the roles and responsibilities of non-governmental stakeholders to ensure their meaningful participation in the implementation of the NAP;*
- *Strengthen stakeholder engagement by developing inclusive strategies that actively involve all relevant actors throughout the various phases of the NAP, thereby fostering a sense of ownership;*
- *Improve and institutionalize effective, continuous communication among ministries, departments, and other public sector entities to ensure coordinated and coherent implementation efforts;*
- *Expedite the approval of the National Strategy for Corporate Social Responsibility (CSR) to facilitate the integration of private sector contributions into the NAP framework.*

b) *To the Ministry of Environment and Sustainable Development:*

- *Integrate the following components into the overarching monitoring and evaluation (M&E) framework:*
 - *Systematic data collection, reporting, and analysis;*
 - *Clearly defined performance indicators to track progress;*
 - *Regular reviews to evaluate outcomes and identify implementation challenges;*
 - *Capacity-building initiatives to enhance the competencies of personnel involved in M&E activities.*
- *Develop and operationalize a dedicated M&E system for the National Adaptation Plan (NAP), hosted on a suitable digital platform to ensure accessibility, transparency, and operational efficiency;*
- *Promote the routine use of the existing dashboard as a central tool for tracking NAP implementation;*
- *Strengthen the consistent collection and reporting of sector-specific data within the dashboard.*

Audit Question 3: Assess whether the NAP considers the principle of inclusiveness

The principle of "leaving no one behind" is one of the six guiding principles of the United Nations Sustainable Development Cooperation Framework. In alignment with this principle, the National Adaptation Plan has integrated support measures for vulnerable

people and marginalized groups into the various priority sectoral programs, even though these groups of people were neither represented nor consulted during the various consultation workshops as part of the NAP development process.

Furthermore, the monitoring and evaluation of inclusiveness in the NAP's implementation face several challenges. These include difficulties in identifying vulnerable and marginalized groups, the absence of sex-disaggregated data and indicators for tracking gender integration in climate actions, and the lack of a dedicated monitoring mechanism for inclusivity.

It is important to note that in 2023, Madagascar adopted a National Gender and Climate Change Strategy. This strategy aligns with the country's commitments under the Second Nationally Determined Contribution, the Revised National Policy to Combat Climate Change and its action plan, as well as the National Adaptation Plan.

From the above, the Court recommends to the Government, in the short term, to:

- *Identify social criteria that can help define vulnerable people and marginalized group;*
- *Provide baseline data for each sector based on people's vulnerability (gender, race, social class, disability, etc.);*
- *Establish indicators addressing vulnerability issues to facilitate monitoring and evaluation of inclusiveness in the implementation of the NAP.*

Audit Question 4: Assess whether the NAP, the national biodiversity strategy and the forest policy are aligned

The effectiveness of the NAP depends on its alignment with specific sectoral adaptation plans, ensuring coherence and integration across all sectors.

The forest policy and the biodiversity-specific NAP were established prior to the adoption of NAP in 2021. However, ensuring their alignment remains essential.

The National Adaptation Plan (NAP) establishes six strategic priorities for the biodiversity and forest sectors. Meanwhile, the sectoral biodiversity plan, through its action plan, outlines four strategic objectives encompassing a total of 20 specific targets.

Regarding the forestry sector, the relevant policy establishes three strategic orientations, supported by 12 objectives.

The comparison of these three documents led to the following observations:

- The three strategic axes of the PNA are incorporated into both sectoral plans.
- The strategic priorities for the biodiversity and forestry sectors outlined in the PNA are also reflected in the two sectoral plans.

On the other hand, updating sectoral plans is necessary despite the alignment of the main points. Indeed, the comparative analysis of the NAP and the sectoral plans on biodiversity and forestry highlights that among the 17 activities of the NAP, some are not included in the said sectoral plans, but this does not lead to any contradiction between the plans.

Accordingly, the Court recommends to the Ministry of the Environment and Sustainable Development, in the short term, to:

- *Develop a new national biodiversity strategy and action plan aligned with the 2021 NAP, as the current plan is set to expire in 2025;*
- *Update the forest policy and the National Forest Master Plan 2019-2029.*

Audit Question 5: Assess the effectiveness of the NAP through the cases of biodiversity and forestry

Of the 12 programs structuring the NAP, 3 programs are linked to the biodiversity and forestry sector, namely:

- **Program 1:** Establishment of a Green Belt to strengthen the fight against desertification and resilience to climate change;
- **Program 7:** Acceleration of reforestation through the operationalization of the REDD+ mechanism and the development of ecosystem services;
- **Program 8:** Improving the conservation of natural forests and the management of protected areas, including the development of climate refuge zones within and on the peripheries.

The achievement of activity indicators within each program provides insight into their progress, as well as the overall advancement of the NAP. However, without a dedicated report on this matter, and given that the activities of these three programs align with the routine missions and responsibilities of the Ministry of the Environment and Sustainable Development (MEDD), the accomplishments detailed in the MEDD activity report cannot be explicitly attributed to the NAP.

In addition, the financing of these three programs is hampered by shortcomings due to a lack of awareness among the actors responsible for their implementation regarding available funding mechanisms. This gap in knowledge may result in the non-execution of certain program activities.

Moreover, the absence of precise and detailed financial information for a program prevents an accurate assessment of the remaining funding needs necessary for its implementation. More broadly, this gap in financial clarity may affect the overall effectiveness of the NAP.

To address these shortcomings, the Court recommends to the Ministry of the Environment and Sustainable Development to:

- *Establish a dedicated monitoring and evaluation mechanism for NAP programs;*
- *Produce specific, periodic reports on NAP programs and activities, clearly detailing undertaken actions, expected results, and anticipated achievements;*
- *Provide program managers with comprehensive information and training on climate finance mechanisms to enhance their understanding and ability to secure funding effectively.*

INTRODUCTION

1. Context

Madagascar, a vast mountainous island in the southwest Indian Ocean, is situated off the southeastern coast of Africa, between latitudes 11°57' and 25°35' South, and longitudes 43°14' and 50°27' East. Covering 587,041 km², the island boasts 6,603 km of coastline. It extends 1,600 km from north to south and 580 km from east to west.

Home to approximately 5% of the world's biodiversity, Madagascar is renowned for its rich natural capital. It is one of the world's 10 biodiversity hotspots.¹

This rich biodiversity is present in several ecological regions, characterized by a variety of ecosystems: terrestrial (forests, farmland, and grasslands), aquatic (wetlands, inland waters), marine, and coastal. These different types of ecosystems are home to a complex and varied flora and fauna.²

Madagascar was among the ten countries most affected by climate change, and since then the situation has worsened. Between 2015 and 2021, below-average rainfall was regularly recorded, causing famine in the south of the country, affecting more than 1.14 million people, approximately half of the region's population (UN OCHA, 2022; Amnesty, 2021).³

Madagascar's unique natural heritage faces severe threats. The sectors vital for sustainable socio-economic development depend on the environmental goods and ecological services provided by diverse ecosystems. However, the island's natural forests, which once covered vast areas, are disappearing at an alarming rate.

Given the extensive impacts of climate change, a strong and effective Government's response is essential.

2. National adaptation planning in Madagascar

To address the challenges and risks of climate change and adapt climate-sensitive sectors and regions in the medium and long term, Madagascar has established a policy framework that includes the 2006 National Adaptation Action Programme (NAPA), the 2010 National Climate Change Policy (NCCP), the 2015 Nationally Determined Contribution (NDC) and the three National Communications.

The 2006 NAPA outlined 15 priority actions across five key sectors: agriculture and livestock, public health, water resources, coastal areas, and forestry. The relevant adaptation solutions focus on three main areas—capacity building, policy reform, and integrating adaptation measures into sectoral policies.

In 2012, the Government of Madagascar initiated its "NAP Roadmap" to establish national adaptation priorities. This framework aims to enhance the integration of climate

¹<https://mg.chm-cbd.net/biodiversity>

²National Adaptation Plan December 2021

³Source <https://madagascar.co.uk/blog/2022/12/fighting-effects-climate-change>

change adaptation into development planning and to promote private sector engagement in climate change adaptation.

Through this strategic agenda, the Government has outlined its priorities and established a clear timetable for the implementation of the NAP.

The three National Communications of 2004, 2010, and 2017 each included vulnerability assessments across key priority sectors: agriculture, fisheries and pastoralism, health, coastal zones, water resources, forestry, and biodiversity.

Several sectors, including agriculture, health, coastal areas, ecosystems, and water resources, have emphasized the need to integrate climate change considerations into their strategies and action plans.

The National Climate Strategy for the Agriculture, Livestock, and Fisheries Sectors (SNCCAEP) 2012–2025 provides a comprehensive framework for reducing the agricultural sector’s vulnerability to climate change. It establishes the technical, social, economic, and financial foundations necessary for adaptation while promoting the integration of key issues such as vulnerability reduction, resilience building, and greenhouse gas emission reduction into all agricultural programs.

In 2013, Madagascar developed a five-year National Water, Sanitation, and Hygiene Strategy to enhance access to essential services. This strategy emphasizes integrating climate change considerations into all stages of project development and implementation related to drinking water, sanitation, hygiene, and water resource management. In line with United Nations Sustainable Development Goal 6, Madagascar aims to achieve 67% access to drinking water by 2030.

The National Biodiversity Strategy and Action Plans (NBSAP) 2015-2025, adopted in 2016, recognize the need to fully integrate adaptation measures into sectoral policies. Its objectives include strengthening the adaptive capacity of ecosystems and the contribution of terrestrial and marine biodiversity to adaptation to climate change.

In 2021, Madagascar developed the Strategic Plan for Adapting the Health Sector to Climate Change, integrating the transparency of the Paris Agreement (PSASS). This plan aligns with the National Policy for Combating Climate Change (PNLCC) and the National Policy for Health and Environment (PNSE) to establish strategic options that enhance the resilience of the health sector and promote transparency in adaptation measures. By implementing this plan, Madagascar reaffirms its commitment to global efforts aimed at reporting and reducing vulnerabilities to climate change.

The National Adaptation Plan (NAP) process was launched in 2012 in Madagascar and resulted in the development of the National Adaptation Plan in December 2021.

The plan was designed with a 10-year planning horizon, allowing for a revision after 5 years, depending on contextual developments and the findings of the mid-term evaluation.

This National Adaptation Plan is structured around three main strategic axes defined as follows:

- Strategic axis 1: Strengthen governance and integration of adaptation;
- Strategic axis 2: Implement a program of priority sectoral actions;

· Strategic axis 3: Financing adaptation to climate change

Eight (8) priority sectors are selected for the PNA such as:

- Agriculture - Livestock - Fishing;
- Water resources;
- Public health;
- Biodiversity and forestry;
- Coastal areas;
- Infrastructure and regional planning;
- Risk and disaster management;
- Housing and new towns.

Biodiversity is one of the most vulnerable to the effects of climate change when ecosystems are poor and degraded. This is why the International Union for Conservation of Nature (IUCN) advocates ecosystem-based adaptation (EbA), which it defines as "positive" and "no regret" actions, because "they bring combined environmental, economic, and social benefits." These solutions involve three types of actions: preserving ecosystems, restoring degraded ecosystems, or creating new ones.

Over the past decade, deforestation has escalated at an alarming rate across the country, posing a significant threat to ecosystems and biodiversity.

To address these challenges, the PNA has adopted four strategic directions:

- 1- Improve the political, legal and institutional framework necessary for good resource governance;
- 2- Promote the development and efficient use of land and rural areas;
- 3- Promote the sustainable management and development of forest resources;
- 4- Improve the standard of living of local populations through alternatives to unsustainable agricultural practices, consumption and exploitation of wood and non-wood products.

Adaptation actions must strengthen the resilience of both populations and biodiversity by ensuring sustainable resources for local communities and preserving habitats for flora and fauna. This approach helps safeguard biodiversity from potential threats and degradation.

For these reasons, the audit of climate change adaptation actions will primarily focus on the biodiversity and forestry sectors,

AUDIT OBJECTIVES AND QUESTIONS

The main objective of the audit is to assess the performance of Madagascar's climate change National Adaptation Plan and its implementation in biodiversity and forestry sectors.

Based on this objective, the following audit questions emerge:

- Audit Question 1: Examine whether the NAP aligns with the objectives of the Paris Agreement;
- Audit question 2: Assess the effectiveness of the NAP's governance;
- Audit Question 3: Assess whether the NAP considers the principle of inclusiveness;
- Audit Question 4: Assess whether the NAP, the national biodiversity strategy and the forest policy are aligned;
- Audit Question 5: Assess the effectiveness of the NAP through biodiversity and forestry cases.

SCOPE OF THE AUDIT

The audit is based on both system-oriented and results-based approaches, in order to assess the effectiveness of the actions of the national climate change adaptation plan.

It focuses mainly on the actions of the National Adaptation Plan for the biodiversity and forestry sectors. Out of the 12 NAP programs, three (3) address these sectors.

The audit also covers the activities of stakeholders involved in the coordination, implementation, monitoring and evaluation of the NAP within the Ministry of Environment and Sustainable Development.

The main departments involved are: the General Directorate of Environmental Governance (DGGE), the Directorate of Sustainable Financing Mechanism (DMFD), the Directorate of Protected Areas, Renewable Natural Resources and Ecosystems (DAPRNE), the Directorate of Reforestation, Landscape and Forest Management (DRGPF), the National Office for Climate Change and Reduction of Emissions from Deforestation and Forest Degradation (BN-CCREDD+) and the regional and local departments directly involved in adaptation to climate change.

The audit covers the period from 2018 to 2022.

However, to ensure up-to-date findings, relevant information from 2024 has been used.

AUDIT METHODOLOGY

The audit was conducted in compliance with the International Standards of Supreme Audit Institutions (ISSAIs), including ISSAI 3000, the standard for Performance Auditing. This framework defines performance auditing as an independent, objective, and reliable examination of whether public initiatives, systems, operations, programs, activities, or organizations adhere to the principles of economy, efficiency, and effectiveness, while also identifying areas for potential improvement.

To perform the audit, the team used different methods, including:

- Interview with National Adaptation Plan (NAP) officials⁴ at the Ministry of Environment and Sustainable Development;
- Interview with officials from Madagascar National Parks (MNP), an organization dedicated to the stewardship and sustainable management of the country's protected areas;
- Analysis of documents and the system relating to climate change and adaptation issues.

In accordance with Article 385 of Organic Law No. 2004-036 of October 1, 2004, governing the organization, powers, procedures, and functioning of the Supreme Court and its three constituent courts, interim report no. 03/25 on July 23, 2025, was formally transmitted via dispatch note No. 254/25CS/CC/NOTIF on July 25, 2025. The report was addressed to the Ministry of Environment and Sustainable Development and to BN-CCREDD+, as the designated focal point, with a request for their official responses to be submitted within one month.

The BN-CCREDD+ submitted its responses to the observations issued by the Court via email on August 6, 2025.

The key findings outlined in the interim report, along with the corresponding recommendations, were subsequently confirmed and revised to reflect the clarifications and inputs provided by the BN-CCREDD+.

⁴ See list of departments and services visited in appendix no. 7

I- ALIGNMENT OF THE NATIONAL ADAPTATION PLAN WITH THE OBJECTIVES OF THE PARIS AGREEMENT

Madagascar ratified the Paris Climate Agreement through Law No. 2016-019 on June 30, 2016, formally authorizing its commitment to the 2015 Paris Agreement under the United Nations Framework Convention on Climate Change (UNFCCC). This global accord aims to enhance international efforts to combat climate change, promote sustainable development, and contribute to poverty eradication.

The success of the Paris Climate Agreement depends on the proactive measures taken by each participating country, particularly through the alignment of their National Adaptation Plans (NAPs) with the agreement's overarching objectives.

Thus, the analysis of the Madagascar NAP revealed the following observations.

I.1. Relatively long delay in the adoption of the NAP

According to Article 7.9 of the Paris Agreement, *“Each Party shall, as appropriate, undertake adaptation planning processes and implement measures that include establishing or strengthening relevant plans, policies and/or contributions, including through: (...) (b) The process to formulate and implement national adaptation plans; (...)”*

Since 2012, Madagascar has been actively developing its National Adaptation Plan (NAP), initially scheduled for completion in 2018. However, the process experienced significant delays, and the NAP was only finalized in December 2021, five years after Madagascar ratified the Paris Agreement.

The 2021 PNA adopted a programmatic approach, distinguishing between short-term (1 to 3 years), medium-term (3 to 8 years) and long-term (beyond 8 years) actions.

The delay in completing the NAP can be attributed to the diversity of stakeholders involved and sectors affected.

Madagascar's swift ratification of the Paris Agreement reflected its strong commitment to tackling climate change adaptation. However, the delay in developing the National Adaptation Plan (NAP) has posed challenges to achieving its intended objectives.

According to the response from the Ministry of Environment and Sustainable Development (MEDD) official on August 6, 2025, *the development of the National Adaptation Plan (NAP) aligns with the guidelines established under the UNFCCC's Cancun Adaptation Framework of 2010. Although the NAP process was initiated in 2012, its formulation officially began in 2015 following the updated guidance issued by the Least Developed Countries Expert Group (LEG). The technical development of the NAP was completed in 2019, following extensive consultations across Madagascar's regions to ensure the inclusion of region-specific vulnerabilities and priorities. As a national strategic framework, its validation required formal Government adoption, which led to the integration of additional vulnerable sectors identified during the review process.*

It is important to note that the guidelines from the LEG, do not prescribe any restrictive deadlines for the submission regarding the formulation of NAP.

I.2. Gaps in vulnerability analysis

Under Article 7.9 of the Paris Agreement, “Each Party shall, as appropriate, undertake adaptation planning processes and implement measures that include establishing or strengthening relevant plans, policies and/or contributions, including through: (...) (c) Assessing the impacts of, and vulnerability to, climate change with a view to formulating nationally determined priority actions, taking into account vulnerable populations, locations and ecosystems; (...)”

The following observations were noted during the analysis of the NAP:

I-2-1- Identification of impacts of climate change but without specific details

The National Adaptation Plan (NAP) has identified multiple impacts of climate change:

- socio-economic and environmental impacts closely tied to development issues such as energy expansion, electrification, regional planning, transport, and urban growth.
- Climate-related threats affecting water management, agriculture, public health and natural disasters as well as the preservation of ecosystem services, forest management, and biodiversity conservation.

However, the NAP does not provide a detailed analysis of these impacts.

Indeed, the direct and indirect impacts of climate change affect all scales and levels of development, and these impacts are not uniform due to gender disparities. Differences in how men and women interact with their environment, their economic conditions, and their unequal access to resources and decision-making further complicate adaptation efforts.

One of the key challenges is the interdependence of risks across sectors, making it difficult to design targeted programs that effectively address these complex, interconnected issues.

I-2-2- Limited vulnerability analysis in certain regions

In addition to sectoral vulnerability and risk assessments, the plan included vulnerability and risk analyses for specific regions.

For illustration, the NAP integrates data from climate risk assessment reports for the Boeny, Analamanga and DIANA regions, including impact chains for the forestry and biodiversity, fisheries and coastal areas, agriculture and livestock, and infrastructure sectors, as well as climate risk maps and indicators and adaptation options (2018).

Several regions⁵ of Madagascar are today suffering the effects of climate change, to varying degrees and vulnerabilities⁶. However, not all of these regions have been adequately considered in the vulnerability analysis.

The measures taken were largely based on existing documentation, consultations, and discussions, without incorporating updated insights despite the critical importance of climate impact.

According to the response received from the Ministry of Environment and Sustainable Development (MEDD) on August 6, 2025, one of the key guidelines from the Least Developed Countries Expert Group (LEG) for the formulation of the National Adaptation Plan (NAP) was to build upon existing information and knowledge, particularly in the area of vulnerability analysis. In this context, an inventory of vulnerability assessments conducted in Madagascar since 2010 was compiled to identify sectors and regions that had not yet been adequately covered. This data served as the foundation for determining priority adaptation measures and solutions.

In parallel with the NAP formulation process, a study on gender mainstreaming was conducted, and its recommendations were fully integrated into the final document to ensure inclusive and equitable adaptation planning.

An analysis of the NAP and its supporting documentation indicates that gender considerations have been incorporated to a certain extent, primarily through the recognition of women as a population group disproportionately vulnerable to the impacts of climate change⁷.

However, it was noted that other vulnerable groups, such as persons with disabilities, older individuals, children, and marginalized minorities, had not been explicitly identified or adequately represented in the reference documents of the NAP.

I-2-3- Vulnerability analysis focused on sectors but not on people

Analysis of the National Adaptation Plan (NAP) and related documents revealed the absence of a clear process for prioritizing vulnerable populations, as priorities were determined by sectoral risk rather than specific social vulnerabilities.

The eight priority sectors are agriculture, livestock and fisheries, water resources, public health, biodiversity and forestry, coastal areas, infrastructure and land use planning, risk and disaster management, housing and new towns.

Failure to consider people in vulnerable situations could make them less resilient to climate change.

In its comments, the MEDD emphasized that, by definition, *a vulnerability analysis identifies climate hazards, their interactions with specific sectors, and most importantly, the recommended or implemented adaptation measures. Such analysis, according to*

⁵Measuring the various forms of vulnerability in Madagascar to quantify their impact: Guidance note on research findings with public policy recommendations for Madagascar: Southwest region

⁶Climate change: policy and perspectives in Madagascar, July 2013

⁷ The report titled : *"Pour un processus du Plan National d'Adaptation (PNA) qui réponde aux questions de genre à Madagascar"* 2019

MEDD, should be grounded in the impacts of climate hazards on both the sectors and all actors involved (e.g., farmers, peasants, children).

As outlined in the reference guide on vulnerability⁸, the concept of climate vulnerability encompasses not only economic sectors and socio-ecological systems but also individuals and communities.

Furthermore, the explicit identification of vulnerable population groups should be clearly articulated within the NAP

I.3. Adaptation actions identified

According to Article 7.9 of the Paris Agreement: *“Each Party shall, as appropriate, undertake adaptation planning processes and implement measures, including establishing or strengthening relevant plans, policies and/or contributions, (...)”*.

Strategic axis No. 2 of the NAP, "Implementing a program of priority sectoral actions," presents adaptation measures for the eight priority sectors. Each of these sectors is associated with specific strategic actions, as detailed in **Annex 1**: Number of strategic priorities and actions per priority sector.

For the biodiversity and forestry sector, **Annex 2** “Strategic Priorities” highlights five strategic priorities and their respective component actions.

In addition, twelve priority programs, described in Annex 3 "List of the 12 NAP programs", were developed under the NAP. These programs are the result of a rigorous prioritization process based on strategic frameworks and consultations with stakeholders.

I.4. Cost and sources of financing identified but underestimated

To achieve the objectives of the NAP, it is essential to assess the cost of its implementation and identify sources of funding.

Strategic axis No. 3 of the NAP, "*Financing adaptation to climate change*," addresses issues related to sources of financing for adaptation to climate change. These sources are classified into two categories: internal and external financial resources.

The analysis of the PNA and its financing highlighted several key observations.

I-4-1- Actions to finance adaptation to climate change identified

a) Internal financing

According to the NPA, Strategic Priority No. 1: *“Mobilize internal financial resources and budget for planned activities”* provides details on national financing with the proposed actions below:

⁸ Guide de référence sur la vulnérabilité, publié par GIZ, 2017.

- Securing national revenues from the fight against climate change for adaptation and mitigation measures.

This point mainly concerns revenues from REDD+ carbon credits, as well as any other future revenues that the country could develop as part of its fight against climate change (credits from the carbon market).

Securing these revenues can be consolidated by including them in the country's finance law.

- Systematic estimation of the financing needs necessary for the implementation of planned climate activities.

"All priority activities in this plan must benefit from systematic budgeting of expenditures where this is not yet available. This budgeting will include both investment and operating costs of the activities, so as not to compromise the sustainability of the investments."

According to the 2022-2024 finance laws, the MEDD's budget allocation at the level of the "Environment" mission, "sustainable management of natural resources" program has continued to increase, ranging from 9.67 billion Ariary to 49 billion Ariary. This reflects an effort by the Malagasy Government in the fight against climate change.

b) External financing

Strategic priority 2: *"Mobilizing external financial resources"*, defines external financing actions as follows:

- Supporting Green Fund accreditation for a national institution;
- Involving private actors in financially supporting actions aimed at strengthening resilience to climate change;
- Strengthening the skills of national agents in mobilizing external financing;
- Create a sustainable national climate fund to centralize climate finance, organize climate investments, and monitor them.

The total cost of the 12 NAP programs is estimated at USD 273,311,200.00, financed exclusively from external resources. Potential donors identified include the World Bank, the European Union, the French Development Agency, the Green Climate Fund, etc.

Due to limited domestic funding, the objectives of the National Adaptation Plan (NAP) cannot be fully achieved without substantial external financial support.

I-4-2- Underestimated financing costs

The cost estimates for the various National Adaptation Plan (NAP) programs were initially based on the financing costs of similar projects previously funded under the NAP, totaling USD 273 million. In 2024, a cost revision was conducted, informed by the NAP implementation situation table provided by the Climate Adaptation and Resilience Service (SARC).

Table No.1: Cost of financing the 12 programs (in USD)

Prog	Program title	PNA 2021(1)	SARC Situation Table 2024) (2)	Difference (3)=(1)-(2)
1	Establishment of a Green Belt to strengthen the fight against desertification and resilience to climate change	83,311,200.00	554,568,000.00	-471 256 800,00
2	Strengthening the adaptation of the agricultural sector and the resilience of rural populations in the far south of Madagascar	15,000,000.00	719,257,244.00	-704 257 244,00
3	Strengthening the resilience of rural populations through the development and organization of export sectors	15,000,000.00	360,241,860.00	-345 241 860,00
4	Strengthening the adaptation of the fishing industry and development of alert systems and associated action plans	12,000,000.00	23,648,254.00	-11 648 254,00
5	Improving access to drinking water in urban and rural areas	10,000,000.00	345,501,500.00	-335 501 500,00
6	Strengthening early warning systems for health sector resilience to climate change	3,000,000.00	3,000,000.00	0,00
7	Accelerating reforestation through the operationalization of the REDD+ mechanism and the development of ecosystem services	60,000,000.00	50,000,000.00	10 000 000,00
8	Improving the conservation of natural forests and the management of protected areas, including the development of climate refuge zones within and on the peripheries	30,000,000.00	29,702,044.00	297 956,00
9	Protection of coastal infrastructure and economic activities (including tourism) against sea level rise.	25,000,000.00	734,000.00	24 266 000,00
10	Improving cyclone early warning systems as part of a regional effort in the Indian Ocean	-	74,000,000.00	-74 000 000,00
11	Development of resilient rice paddies with lower methane emissions	20,000,000.00	110,000,000.00	-90 000 000,00
12	Optimizing the resilience of new cities and sustainable and innovative housing with a view to modernizing Madagascar	-	166,000,000.00	-166 000 000,00
TOTAL		273,311,200.00	2,436,652,902.00	-2 163 341 702,00

Sources: 12 PNA programs and SARC situation table

The 2024 cost review of the twelve programs outlined in Madagascar's National Adaptation Plan (NAP) reveals a cumulative discrepancy exceeding USD 2.16 billion compared to the initial 2021 estimates. This substantial variation is primarily attributed to sharp cost escalations in several programs, some rising by as much as 4000%, as well as the inclusion of previously unbudgeted initiatives now valued in the tens of millions of USD. Specifically, Programs 1, 2, 3, and 5 experienced upward revisions of up to 4000%, while Programs 10 and 12, which had no initial budget allocations, have been reassessed at USD 74 million and USD 166 million, respectively.

These discrepancies underscore a significant underestimation of implementation costs, which may compromise the operational effectiveness of the NAP, despite its alignment with the guidelines of the Paris Agreement. This situation highlights the urgent need to reinforce budgeting practices, enhance financial monitoring systems, and establish mechanisms for regular cost updates to ensure the long-term sustainability and coherence of the adaptation framework.

While the NAP 2021 is aligned with the overarching objectives of the Paris Agreement, notable gaps remain in both the vulnerability analysis and the assessment of financing requirements.

To address these challenges and ensure sustainability, the Court recommends to MEDD in the short term to:

- ***Thoroughly document the impacts identified in the NAP.***
- ***Establish a robust methodology for data collection at the national level. This includes the design of a comprehensive mechanism for analyzing vulnerabilities and risks associated with the impacts of climate change;***
- ***Ensure full regional representation throughout the process to enhance data validity and inclusiveness.***
- ***Explore any financing mechanism relating to climate change;***
- ***Strengthen ongoing efforts to mobilize internal resources.***

II- EFFECTIVENESS OF PNA GOVERNANCE

Effective governance of the NAP relies on strong institutional coordination, inclusive stakeholder engagement, and a robust monitoring and evaluation system, each playing a critical role in enhancing overall efficiency. The following highlights emerge from the analysis of NAP governance.

II.1. Existence of a global PNA governance framework

The governance of the NAP must be anchored in the seamless integration of adaptation within organizational, legislative, and regulatory frameworks. This requires a well-defined institutional structure, inclusive stakeholder participation, the integration of adaptation into sectoral policies, and effective decentralization. The legislative and regulatory framework supporting this governance includes the following key elements:

- **The Malagasy Environmental Charter**, updated by Law No. 2015-003 of February 19, 2015: This is a framework law that establishes the fundamental principles for sustainable environmental management in Madagascar. It recognizes the environment as an essential element of the national heritage and aims to reconcile economic development and ecological preservation. It is inspired by the international commitments made by the country, notably at the Rio summits on sustainable development. The Charter enshrines universal principles of environmental law such as the precautionary principle, the polluter-pays principle, the right to environmental information, public participation and access to justice in the event of a violation of these rights.
- **The General Government Policy (GGP) 2019-2023**: The 2019-2023 PGE takes into account the various commitments made by Madagascar at the global, continental and regional levels. It provides guidance for the conduct and implementation of sectoral policies and strategies, the choice of instruments, pace, implementation structures and the determination of the required and targeted development results. Environmental emergence: "Natural resources and renewable energies safeguarded and rationally exploited" to reduce greenhouse gas emissions and illicit exploitation of natural resources, is one of the points highlighted in the PGE.

The strategic guidelines of the PGE emphasize that Madagascar, a country rich in biodiversity, must protect its endemic wealth, combat deforestation, bushfires and illegal land clearing, as well as the plundering of its natural resources. Environmental sustainability is an integral component of long-term development. In alignment with international commitments and with a steadfast dedication to preserving its national heritage, Madagascar is committed to collaborating with the global community to implement effective measures that mitigate the impacts of climate change.

- **The National Action Plan to Combat Climate Change (NAPCC)**: The National Action Plan to Combat Climate Change (PANLCC) adopted in 2019 aims to identify, prioritize and promote appropriate national measures, taking into account the country's real needs, to reduce greenhouse gas emissions and strengthen the

- country's capacity to adapt to climate change. This policy is structured around five main strategic axes defined as follows:
- Axis 1: Strengthening actions to adapt to climate change
 - Axis 2: Carry out mitigation actions for the benefit of sustainable development
 - Axis 3: Integrating climate change at all levels
 - Axis 4: Develop sustainable financing
 - Axis 5: Promote research, development and technology transfer.
- **Decree No. 2015-1308 of September 22, 2015**, which establishes the National Environmental Policy for Sustainable Development (PNEDD) of Madagascar, in application of the updated Malagasy Environmental Charter: this decree aims to coherently integrate environmental, social, economic and cultural dimensions into all public policies and development strategies. It is based on a systemic and participatory approach, recognizing the interdependence of environmental issues with other development sectors. The PNEDD sets strategic guidelines for the sustainable management of natural resources, the fight against climate change, the preservation of biodiversity, environmental governance and environmental education. It commits all ministries, local authorities, the private sector and civil society to contribute to its implementation, in a spirit of shared responsibility and transparency.
 - **Decree No. 2022-482 of April 6, 2022 establishing the responsibilities of the Minister of the Environment and Sustainable Development as well as the general organization of his Ministry**: On a technical and operational level, and on the basis of the principles and provisions of the Malagasy Environmental Charter and the International Conventions relating to the Environment ratified by Madagascar, the Ministry of the Environment and Sustainable Development (MEDD) is responsible for the design, coordination, implementation and monitoring-evaluation of the State's policy on the Environment and Sustainable Development, according to Decree No. 2022 – 482 of April 6, 2022 setting out the responsibilities of the Minister of the Environment and Sustainable Development as well as the general organization of his Ministry.

Thus, the governance of the NAP in Madagascar is based on the integration of climate change adaptation into institutional and political frameworks. It is guided by several key texts, including the Environmental Charter, the PNEDD, the PGE, the PANLCC, and the decrees governing the role of the MEDD. These frameworks collectively aim to ensure sustainable, inclusive, and coordinated environmental management in the face of climate challenges.

II.2. Involvement of all stakeholders in the NAP development process

To ensure policy coherence, it is important to promote synergies between national, regional, and local policies. The NAP is based on a series of consultations conducted at different levels: regional and national.

II-2-1- Government sectors and local authorities

The involvement of all ministerial departments and government sectors fosters policy coherence and supports the establishment of formal governance frameworks and informal coordination practices, enhancing effective communication among ministries, departments, and other public institutions.

The Ministry of the Environment and Sustainable Development (MEDD), in addition to the previously mentioned responsibilities, plays a pivotal role in strengthening the fight against climate change, with a view to achieving a resilient economy and low-carbon development.

Furthermore, **the National Office for Climate Change and Reducing Emissions from Deforestation and Forest Degradation (BN-CCREDD+)**, under the General Secretariat of the MEDD, is responsible for coordinating all initiatives and actions related to climate change and REDD+. These actions aim to promote a climate-resilient economy, reduce emissions from deforestation and forest degradation, as well as other greenhouse gases responsible for climate change, in order to achieve sustainable, low-carbon development.

Finally, **the Interministerial Committee for the Environment (CIME)**, operating under the authority of the Prime Minister, is responsible for integrating environmental actions into the various sectoral sustainable development policies.

Created by Decree No. 97-823 initially and reformed by Decree No. 2017-1106, the CIME's mission is to assist the Head of Government in defining the broad guidelines of environmental policy and in developing operational strategies for their implementation. It ensures the consistency of government actions in matters of the environment and sustainable development, in line with the Malagasy Environmental Charter and the National Environmental Policy for Sustainable Development (PNEDD).

As a cross-functional body, it promotes an integrated and participatory approach to environmental governance, ensuring synergy between the various public actors and strengthening consideration of the environment in development decisions.

At the initiative of the MEDD, the CIME was mobilized to carry out the following activities as part of the preparation of the PNA:

- Consultation on national provisions relating to the National Climate Change Policy (PNLCC);
- Consultation of the country's sectoral policies and strategies taking into account climate change;
- Stakeholder consultations at national and interregional levels.

The government's response includes breaking down barriers within the environmental sector and developing cross-sectoral initiatives (environment-agriculture, environment-mining, environment-fisheries, climate change mitigation-risk management, etc.). Above all, the establishment of environmental units and the appointment of focal points within each sectoral ministry aims to optimize the development of complementary and integrated thinking and action.

II-2-2- Non-governmental sectors

Various stakeholders, including members of the private sector, civil society organizations, and technical and financial partners involved in key sectors concerned with climate change mitigation and adaptation (such as agriculture, livestock, fisheries, land use planning, housing, public works, coastal areas, water resources, forests, biodiversity, education, disaster risk reduction and public health), were also consulted.

However, despite consultation with the private sector, NGOs and civil societies, they were not sufficiently involved in achieving the objectives of the NAP, which led to a lack of commitment on their part.

II-2-3- Clearly articulated roles and responsibilities of government actors

The roles and responsibilities of institutions and actors involved in the implementation of the NAP must be defined, aligned with the national strategic framework, and applied consistently at all levels of governance.

While roles and responsibilities have been clearly established for the Ministry of Environment and Sustainable Development (MEDD), the Government, and public sectors at both national and regional levels, the involvement of the private sector and non-governmental actors remains undefined within existing frameworks since the implementation of the NAP. However, a national corporate social responsibility strategy is currently under development, though it has yet to receive official approval.

The institutional framework developed by the PNA details the main actors responsible for implementing the plan, coordinating actions, and their responsibilities. These actors include:

- **The MEDD:** Responsible for the design, coordination, implementation and monitoring/evaluation of the State's environmental and sustainable development policy, with an emphasis on climate change and the achievement of a resilient, low-carbon economy.

- **The National Office for Climate Change and Reducing Emissions from Deforestation and Forest Degradation (BN-CCREDD+):** Responsible for coordinating all initiatives and actions related to climate change and REDD+.

As the focal point for the United Nations Framework Convention on Climate Change (UNFCCC), it plays a central coordinating role in climate action in Madagascar, supported by various existing structures at both central and regional levels, including DREDD, CIME, and CNCC.

- **The National REDD+ Platform (PFN REDD+) and the Regional REDD+ Platforms (PFR REDD+):** The REDD+ NFP comprises 31 members from diverse backgrounds, including representatives from government, regions and districts, the private sector, technical and financial partners, academics, civil society, grassroots communities, specialized agencies and forest managers.

- **Regional and Interregional Directorates for the Environment and Sustainable Development (DIREDD/DREDD):** act as regional relays for the MEDD.

- **The National Committee on Climate Change (CNCC): Created in November 2014 by Decree No. 2014-1588 to enhance coordination in the implementation of the National Climate Change Policy (PNLCC)**, the National Climate Change Committee (CNCC) provides technical support to the BN-CCREDD+ in drafting key documents and facilitating their validation by the Secretariat of the United Nations Framework Convention on Climate Change (UNFCCC). According to the Ministry of Environment and Sustainable Development (MEDD), *the CNCC is a structure, working in close collaboration with the BN-CCREDD+ to foster consultation and intersectoral dialogue, reflecting the cross-cutting nature of climate change. However, it is important to note that the CNCC is not formally accountable to the UNFCCC Secretariat.*

- **The Interministerial Committee for the Environment (CIME):** Reporting to the Prime Minister, it is responsible for integrating environmental actions into the various sectoral sustainable development policies. The CIME assists the head of government in choosing the broad guidelines for environmental policy and operational strategies for implementing this policy.

The current iteration of the committee was established by Decree No. 2024-1808 of October 22, 2024, which outlines its creation, composition, organization, and functioning.

- **The platform of secretaries general of ministerial departments, sitting within the Prime Minister's Office and chaired by the Secretary General of the Government (SGG):** recently revitalized, this platform plays a very important role in the accomplishment of tasks arising from the five main axes of the program for the implementation of the General Policy of the State, namely, governance, peace and security, economy, environment and social.

II.3. Limited coordination of climate actions

Article 22 of Decree No. 2022-482 of April 6, 2022, establishing the responsibilities of the aforementioned Minister of the Environment and Sustainable Development, recommends the BN-CCRED as the structure responsible for supporting the coordination of all initiatives and actions related to climate change and REDD+. To this end, it plays a strategic role. However, the office, which reports to the Secretary General of the MEDD, faces several challenges, including a lack of human and financial resources. In addition, climate actions are fragmented across several ministries, which can make their intersectoral coordination complex.

Furthermore, the current positioning of the BN-CCREDD could only limit its power of mobilization, making coordination activities less effective.

II.4. Gaps in the monitoring and evaluation of the NAP

Monitoring and evaluation (M&E) serve as critical mechanisms for driving progress, ensuring accountability, and achieving meaningful outcomes in any initiative or program. Analysis of the National Adaptation Plan (NAP) and its M&E framework revealed several key observations.

According to Article 7, point 9 of the Paris Agreement, *“Each Party shall, as appropriate, undertake adaptation planning processes and implement measures that include establishing or strengthening relevant plans, policies and/or contributions, including*

through: (...) (d) Monitoring and evaluation of adaptation plans, policies, programmes and measures and lessons learned; (...)”

II-4-1- Existence of a monitoring and evaluation framework for the NAP process but absence of a clear mechanism

Integrating a monitoring and evaluation (M&E) framework into the National Adaptation Plan (NAP) provides a structured approach to tracking progress, assessing the impact of adaptation measures and informing necessary adjustments.

The National Adaptation Plan (NAP) includes a monitoring and evaluation (M&E) framework.

However, the mechanism for achieving the monitoring and evaluation objectives of the NAP process is not clearly defined.

Global monitoring and evaluation indicators are available, but they mainly focus on processes such as integration, ownership, financing, communication, coordination, climate data management, capacity building of actors and implementation of priority actions.

While these indicators effectively measure the integration process of the NAP, they do not provide a comprehensive assessment of the impact or effectiveness of its actions.

II-4-2- Absence of a monitoring and evaluation (M&E) plan for adaptation measures

The NAP requires the establishment and development of a monitoring and evaluation system based on the identification of indicators, making it possible to assess the progress of the process, as well as the results of the implementation of the NAP.

Significant gaps remain in the monitoring and evaluation of the NAP, as no formal monitoring plan has been established and documentation remains incomplete. Efforts are currently underway to secure the necessary funding for the implementation of effective monitoring and evaluation.

However, a platform called "**e-voary**" allows for monitoring and evaluation of the activities of the entire ministry.

This platform includes, among others, the following systems:

- The system for monitoring reforestation and restoration activities.
- The Information System for Planning, Monitoring and Evaluation in Madagascar.
- The waste management, pollution and complaints monitoring system.
- The Information System for Monitoring Forest Exploitation in Madagascar.

The existing platform, however, does not distinguish between the activities of the ministry and those specific to the NAP, as it lacks dedicated monitoring and evaluation mechanisms tailored to the plan. As a result, the monitoring and evaluation of the implementation as well as the achievements of the PNA are carried out offline.

Furthermore, monitoring and evaluating adaptation presents greater challenges due to the lack of adaptation-specific indicators. Establishing adaptation indicators is particularly

difficult because they are often qualitative in nature. For example, measuring population resilience remains a complex task.

This lack of a dedicated monitoring and evaluation mechanism for the NAP prevents the accurate measurement of achievements. As a result, conducting a mid-term evaluation every five years becomes challenging, making it difficult to identify necessary corrective actions to enhance the plan's effectiveness.

The organizational, legislative, and regulatory framework for adaptation has been established, all governmental and non-governmental stakeholders have been involved in the NAP development process. A monitoring and evaluation framework for the NAP has also been defined. However, challenges remain, particularly in securing active requiring further attention to enhance effectiveness and accountability.

To improve the effectiveness of National Adaptation Plan (NAP) governance, the Court recommends, in the short term:

c) To the Government, under the leadership of the Ministry of Environment and Sustainable Development:

- *Clearly define and formalize the roles and responsibilities of non-governmental stakeholders to ensure their meaningful participation in the implementation of the NAP;*
- *Strengthen stakeholder engagement by developing inclusive strategies that actively involve all relevant actors throughout the various phases of the NAP, thereby fostering a sense of ownership;*
- *Improve and institutionalize effective, continuous communication among ministries, departments, and other public sector entities to ensure coordinated and coherent implementation efforts;*
- *Expedite the approval of the National Strategy for Corporate Social Responsibility (CSR) to facilitate the integration of private sector contributions into the NAP framework.*

d) To the Ministry of Environment and Sustainable Development:

- *Integrate the following components into the overarching monitoring and evaluation (M&E) framework:*
 - *Systematic data collection, reporting, and analysis;*
 - *Clearly defined performance indicators to track progress;*
 - *Regular reviews to evaluate outcomes and identify implementation challenges;*
 - *Capacity-building initiatives to enhance the competencies of personnel involved in M&E activities.*
- *Develop and operationalize a dedicated M&E system for the National Adaptation Plan (NAP), hosted on a suitable digital platform to ensure accessibility, transparency, and operational efficiency;*
- *Promote the routine use of the existing dashboard as a central tool for tracking NAP implementation;*
- *Strengthen the consistent collection and reporting of sector-specific data within the dashboard.*

III- CONSIDERATION OF INCLUSIVENESS IN THE NATIONAL ADAPTATION PLAN

Inclusiveness is a fundamental principle outlined in the Paris Agreement to ensure the effectiveness of the NAP. It guarantees that all individuals, regardless of economic status, ethnicity, gender, or other difference, are considered in efforts to combat climate change.

III.1. Absence of vulnerable people and marginalized groups during the consultation

In accordance with Article 7.5 of the Paris Climate Agreement, “adaptation action should follow a country-driven, gender-sensitive, participatory and fully transparent approach, taking into account vulnerable groups, communities and ecosystems (...)”

The National Adaptation Plan or NAP has integrated consultation workshops and a regional symposium in 2019 and 2021 involving the 22 regions of Madagascar into its development process.

These consultations engaged public and private stakeholders across multiple sectors affected by climate change. Indeed, the analysis of the workshop reports from the various areas highlighted the number and profiles of the various stakeholders.⁹

Stakeholders from key sectors were considered, including representatives from agriculture, livestock, fisheries, land use planning and housing, public works, water resources, education, disaster risk reduction, public health, etc., but vulnerable and marginalized people were not represented or consulted.

As an illustration, during the workshop organized on the Eastern axis, a question about the representation of the populations most impacted by climate change was raised: *"It seems that the populations most impacted by CC are not represented. Why not take them into account?"*¹⁰.

Furthermore, the issue of women's participation was addressed during the Southeast Axis workshop, to which the organizers responded that "the integration of the gender dimension is foreseen in the NAP. The current process is supported by the Global NAP Network, which provides guidance on how to integrate the gender dimension."¹¹

However, it is important to note that Madagascar adopted a National Gender and Climate Change Strategy in 2023. This National Strategy "is in line with the commitments made by Madagascar for the implementation of the Second Nationally Determined Contribution as well as the Revised National Policy to Combat Climate Change, and its action plan, and the National Adaptation Plan."¹²

⁹Appendix No. 4: xxxxx

¹⁰East Axis Workshop Report, page 8.

¹¹Report of the South-East axis workshop, page 8.

¹²National Strategy for Gender and Climate Change, page 9.

The question of the representativeness of the populations most affected by climate change was often raised during these workshops and the response provided was "it is obvious that we cannot call everyone and that during a workshop, we bring together the people concerned who are relatively at the same level (e.g. STDs, Regions). Hence the imperative awareness and responsibility of CTDs and STDs regarding their roles, on the sharing of information/training with communities. To do this, they can collaborate with members of civil society who are often closer to the population. Referring to this workshop, it will be up to them to raise awareness/inform officials who must decline at their respective levels."

This situation may limit the motivations of vulnerable people and marginalized groups to integrate the actions of the National Adaptation Plan because they may not correspond to their needs in the face of the impacts of climate change.

III.2. Difficulties in identifying vulnerable and marginalized groups

Sustainable Development Goal or SDG 17.18 states that "by 2020, strengthen support for capacity development in developing countries, in particular least developed countries and small island developing States, to substantially increase the availability of quality, timely and reliable data disaggregated by income, sex, age, race, ethnicity, migration status, disability, geographic location and other characteristics relevant in national contexts."

Gender was specifically mentioned in the National Adaptation Plan. Although the various consultation workshops did not specifically address the identification of vulnerable individuals or groups, as mentioned previously, the National Adaptation Plan specifies that "the consultations were intended to be inclusive (...), with particular attention being paid to the representation of women (...)"¹³

Furthermore, "it is recommended that the programs and actions of the NAP be implemented in an inclusive manner, with equal but differentiated responsibilities taking into account gender specificities."¹⁴

However, the various officials of the Ministry of the Environment do not have data on vulnerable people and marginalized groups in the climate field.

The absence of a clear definition of vulnerable populations and marginalized groups in climate policy hampers their identification and limits the availability of relevant data. This data gap at the national level poses a significant challenge to the effective planning and implementation of targeted programs.

III.3. Actions in favor of vulnerable individuals and marginalized groups not explicitly mentioned in the PNA

The principle of "leaving no one behind" is one of the six guiding principles of the United Nations Sustainable Development Cooperation Framework. Furthermore, adaptation measures must include measures to strengthen the resilience of poor and vulnerable populations, inspired by Article 7.1 of the Paris Agreement.

¹³National Adaptation Plan, page 8, second paragraph.

¹⁴National Adaptation Plan, page 8, second paragraph.

Support measures for vulnerable and marginalized groups are not explicitly described in the plan. However, they are integrated into the actions defined in the various priority sectoral programs.

For example, the Agriculture, Livestock, Fisheries sectoral action program specifies in its strategic priority No. 1: promoting resilient agricultural systems that "the first step will be to support rural populations (men and women, including people with disabilities) in establishing agriculture that is resilient to climate change, also contributing to strengthening the fight against food and nutritional insecurity, with particular attention to the most vulnerable groups and agricultural activities that differentiate between men and women."¹⁵

The sectoral action programme on climate and disaster risk management, in its strategic priority No. 2: strengthening political commitment to disaster risk reduction (DRR) and adaptation to climate change, specified in these awareness-raising and information actions for state and sectoral officials, as well as elected officials at all levels, to take into account "systematically the specificity according to gender (men, women, people with disabilities, the elderly, children by age category), the consideration of which is important in DRR actions".¹⁶

The plan adopts both a sectoral and programmatic approach. The 12 programs outlined in the NAP target different sectors, with each priority sector tailoring its actions to support vulnerable and marginalized groups according to their specific needs and characteristics.

However, the scope of actions for vulnerable people and marginalized groups may be limited in the NAP. For example, the sectoral action program for coastal areas, in its strategic priority 3: developing and promoting sustainable economic activities in coastal areas, only refers to men and women in its actions related to the promotion of sustainable tourism in coastal areas: "Pilot initiatives will also be developed to promote tourism-related income-generating activities (e.g., ecotourism) that provide opportunities for both women and men."¹⁷

III.4. Lack of a monitoring and evaluation mechanism for inclusiveness

Implementing a monitoring and evaluation system is essential for assessing impacts and tracking progress in inclusivity. While the NAP dedicates a chapter to monitoring and evaluation, it lacks specific mechanisms for measuring inclusivity.

In fact, the online information system for planning, monitoring and evaluation set up by the MEDD only concerns joint interventions within the MEDD.¹⁸

The conclusions on the impacts of adaptation projects presented in the communication relating to the adaptation of Madagascar or AdCom of Madagascar 2022 specify that "*the*

¹⁵National Adaptation Plan, page 40, 3rd paragraph.

¹⁶National Adaptation Plan, page 79, 1st paragraph.

¹⁷National Adaptation Plan, page 73, last paragraph.

¹⁸Memorandum from the SG of the MEDD dated August 1, 2024.

*integration of the gender dimension, finally, is essential in the definition of adaptation actions and the implementation methods, including monitoring and evaluation."*¹⁹

Furthermore, strategic axis No. 5 of the national gender and climate change strategy provides for the establishment of a system for collecting data disaggregated by sex and indicators for monitoring the integration of gender in climate actions.²⁰

But currently, this data is not yet being reported. Indeed, the report on the process of the national adaptation plan responding to gender issues in Madagascar, established in 2019, indicates that "in all sectors, the lack of data disaggregated by sex (and other social criteria) limits the analysis of the differentiated needs and interests of women and men to support their development."²¹

Sectors operate in silos, making data reporting fragmented and complex. Furthermore, initiatives targeting vulnerable populations and marginalized groups are scattered across different sectoral programs, lacking coordination and a unified approach.

Data gaps regarding vulnerable populations hamper the development of policies that effectively address gender-related and other social vulnerabilities.

Furthermore, these gaps hinder the ability to assess both the positive and negative impacts of adaptation measures on women, men, and other vulnerable or marginalized groups, thus limiting the ability to implement equitable and informed solutions.

Inclusivity was not adequately integrated into the NAP. Although each priority sector identified actions to support vulnerable and marginalized groups, these groups were not actively consulted during the development process. Moreover, the absence of a dedicated monitoring and evaluation mechanism prevents the measurement of inclusivity in the implementation of the NAP.

From the above, the Court recommends to the Government in the short term:

- ***Identify social criteria that can help define vulnerable people and marginalized groups;***
- ***Provide baseline data for each sector based on people's vulnerability (gender, race, social class, disability, etc.);***
- ***Establish indicators addressing vulnerability issues to facilitate monitoring and evaluation of the principle of inclusiveness in the implementation of the NAP.***

¹⁹2022 Adjunct Committee, page 29.

²⁰National Strategy for Gender and Climate Change, page 19.

²¹For a National Adaptation Plan (NAP) process that addresses gender issues in Madagascar, page 7.

IV- ALIGNMENT OF THE NATIONAL BIODIVERSITY STRATEGY AND FORESTRY POLICY WITH THE NATIONAL ADAPTATION PLAN

For the National Adaptation Plan (NAP) to be effective, it must be supported by sectoral NAPs specific to its key constituent sectors, thus ensuring appropriate alignment between these sectoral plans and the NAP.

The analysis of the 2021 National Adaptation Plan (NAP), both in its entirety and through sectoral case studies from biodiversity and forestry, led to the following conclusions.

IV.1. Alignment of sectoral plan objectives with the NAP

Madagascar officially adopted its National Adaptation Plan (NAP) in 2021, aligning with the principles of the Paris Agreement to strengthen climate resilience

However, several priority sectors had already developed their respective adaptation plans before the National Adaptation Plan (NAP) was officially formulated. For instance, the biodiversity-specific NAP, launched in 2015, set a strategic framework for adaptation measures extending until 2025. Likewise, in the forestry sector, Madagascar adopted a forest policy in 2017, followed by a master plan (2019-2029), which defines key actions for implementation.

Despite the development of these sectoral NAPs prior to the 2021 NAP, their alignment with this NAP, which constitutes a framework document, remains crucial.

Logically, sectoral NAPs should serve as detailed versions of the objectives described in the overall NAP, adapted to the specific sector in question.

The National Adaptation Plan (NAP) identifies six strategic priorities for the biodiversity and forest sectors²² while the sectoral plan for biodiversity, through its action plan, defines four strategic objectives encompassing 20 objectives²³.

With regard to the forestry sector, the relevant policy defines three strategic orientations supported by 12 objectives.

The following tables summarize the strategic objectives of these three documents.

²²Appendix No. 2

²³Appendix No. 5

Table No.2: Strategic objectives of the NAP and the National Biodiversity Strategy and Action Plans 2015-2025

PNA 2021		SPNAB 2015-2025	
Strategic axis 1	Strengthening governance and integration of adaptation	Strategic Goal A	Addressing the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society: a 'mainstreaming strategy'.
Strategic axis 2	Implement a priority sectoral action program	Action plan	Strategic Objective 6: By 2025, all exploited fish stocks and other living marine and fresh/brackish water resources are sustainably valued and managed and destructive harvesting practices are eliminated
Strategic axis 3	Financing adaptation to climate change.	Strategic Goal C	Strategic orientation of objective 11: Establish sustainable management and financing mechanisms, (...)

Sources: PNA 2021 and SPNAB 2015-2025

Table No.3: Strategic objectives of the PNA and the Forest Policy

PNA 2021		POLFOR 2017	
Strategic axis 1	Strengthening governance and integration of adaptation	Strategic direction 1	Ensure the sustainable and efficient management of Malagasy forest capital
		Strategic direction 2	Improving forest governance
Strategic axis 2	Implement a priority sectoral action program	20 Intervention Program Sheets	P4: Restoration of pine forests in the perimeter of Haute Matsiatra P5: Restoration and sustainable management of mangroves
Strategic axis 3	Financing adaptation to climate change.	Strategic direction 3	Establish sustainable financing systems

Sources: PNA 2021 and POLFOR 2017

It is clear from these two tables that the three strategic axes of the PNA are traced in the two sectoral plans.

Furthermore, the strategic priorities of the biodiversity and forestry sector of the 2021 NAP are compared with the strategic orientations of the two sectoral plans on biodiversity and forestry.

Table No.4: Strategic priorities of the Biodiversity and Forestry Sector of the National Adaptation Plan (NAP 2021) and the National Biodiversity Strategy and Action Plans (SPANB 2015-2025)

PNA 2021	SPANB 2015-2025
Biodiversity and Forestry Sector Strategic Priority 2: Implement a large-scale restoration program for the most threatened ecosystems	Strategic Goal D: Increase the benefits for all from biodiversity and ecosystem services: “a strategy for conservation opportunities and development support” Strategic orientation of objective 15: Establish mechanisms for restoring degraded ecosystems (terrestrial, marine and coastal, wetlands) to contribute to the fight against the effects of climate change and desertification, including land degradation.
Strategic Priority 4: Strengthening the management of protected areas and securing land in protected areas	Strategic Goal C: improve the state of biological diversity by preserving ecosystems, species and genetic diversity: “intervention strategy” Strategic direction of objective 11: Establish sustainable management and financing mechanisms, a participatory approach with local communities in the System of Terrestrial, Marine and Coastal Protected Areas that are representative and unique in Madagascar
Strategic Priority 6: Review and strengthen the implementation of legislation and policies relating to the sustainability, conservation and restoration of habitats in degraded ecosystems	Aim Strategic E: Strengthening implementation through participatory planning, knowledge management and capacity building: “SAPNB implementation and financing strategy” Goal 17: In 2017, the Malagasy State adopted a political and legal instrument for implementing the national biodiversity strategy and effective action plans. Strategic orientation of objective 17: Establish a mechanism for synergy of actions at the national level highlighting interministerial and intersectoral coordination for the implementation of the SPANB (administrative, technical, organizational, legal, financing).

Table No.5: Strategic priorities of the Biodiversity and Forestry Sector of the PNA, the Forest Policy (POLFOR 2017) and the National Forest Master Plan (PDFN 2019-2029)

PNA 2021	POLFOR 2017 and PDFN 2019-2029
Biodiversity and Forestry Sector Strategic Priority 1: Maintain existing forest cover and create a network of conservation forest corridors	Strategic direction 1: Ensure sustainable and effective management of Malagasy forests • Objective 1.1: Promoting actions to restore forest landscapes • Objective 1.2: Develop the databases and tools needed to rebalance and enforce forest use zoning • Objective 1.3: Intensify the fight against deforestation and forest degradation
Strategic Priority 3: encourage the sustainable use of timber resources by strengthening legislation on the exploitation of precious woods and other natural resources for which there is strong pressure through close and operational collaboration, on a permanent basis, between the MEDD, Justice and law enforcement.	Strategic direction 2: Improving governance of the forestry sector • Objective 2.3: Reorganize the forest control systems on the one hand, by (i) adapting the legal framework and administrative procedures to reality and on the other hand, by (ii) strengthening collaboration with the entities for the actual control, including: the community, the local grassroots community, law enforcement, justice and civil society.

The strategic priorities of the biodiversity and forestry sector provided for in the PNA are also reflected in the two sectoral plans.

IV.2. Necessity of Sectoral updating adaptation plans

To ensure the effectiveness of the National Adaptation Plan (NAP), its 17 activities must be integrated into the corresponding sectoral plans. However, a comparative analysis of the NAP and the sectoral plans for biodiversity and forestry reveals that certain NAP activities are not reflected in these sectoral strategies.

For instance, the following activities illustrate this concept:

- Strategic Priority 1 - Action 3: Restore and protect riparian forest corridors important for species migration.
- Strategic priority 2 - action 1: Secure in situ the most threatened ecosystems (dry forests, rainforests, mangroves, coral reefs, lakes and ponds) which constitute buffer elements during extreme events
- Strategic Priority 5 - Action 1: Conduct a detailed assessment of the constraints of the tourism industry in Madagascar that limit its development potential
- Strategic Priority 5 - Action 2: Conduct a detailed assessment of local development constraints around Protected Areas
- Strategic Priority 5-Action 3: Based on the previously detailed assessments, strengthen the development and implementation of AGR development programs on the periphery of Protected Areas

- Strategic priority 6 - action 3: Create a mixed brigade (gendarmerie and forestry agents) within the directorate or entity responsible for the repression of forestry offenses at the MEDD level (strike force)

The strategic objectives of the NAP and the sectoral plans on biodiversity and forestry are aligned. However, even if some NAP activities are not included in these sectoral plans, these plans are not in conflict.

Accordingly, the Court recommends to the Ministry of Environment and Sustainable Development, in the short term, to:

- ***Develop a new national biodiversity strategy and action plans in alignment with the 2021 NAP given that the current plan will expire in 2025;***
- ***Update the forest policy along with the National Forest Master Plan 2019-2029.***

V- EFFECTIVENESS OF THE NATIONAL ADAPTATION PLAN THROUGH THE CASES OF BIODIVERSITY AND FORESTRY

The National Adaptation Plan (NAP) serves as a guiding framework for medium- and long-term actions to adapt to climate change. This document promotes a sectoral approach and presents key programs aligned with Madagascar's development priorities.

Three programs of the 2021 NAP specifically address issues related to the biodiversity and forestry sectors:

Program 1: “Establishment of a Green Belt to strengthen the fight against desertification and resilience to climate change”,

Program 7: “Accelerating reforestation through the operationalization of the REDD+ mechanism and the development of ecosystem services” and

Program 8: “Improving the conservation of natural forests and the management of protected areas, including the development of climate refuge zones within and on the peripheries.”

The analysis of the three programs led to the following observations.

V.1. Consistency of the 3 programs with the objectives of the PNA

To ensure the effectiveness of the National Adaptation Plan (NAP), it is essential crucial that the objectives of related programs are fully aligned with the overarching goals set forth in the plan. This alignment facilitates seamless implementation, minimizes overlaps, and ensures that all efforts collectively contribute to achieving the intended climate change adaptation outcomes.

V-1-1- Program 1: Establishment of a Green Belt to strengthen the fight against desertification and resilience to climate change

The objective of this Program 1, being to "Accelerate the creation of the positive impact of the Ministry of the Environment and Sustainable Development (MEDD) on the forest landscape and the life of local communities through the promotion of sustainable management of natural resources, combined with the improvement of the living conditions of the populations of the targeted areas" , aligns with strategic priorities n°1, n°2 and n°5 of the Biodiversity and Forestry sector of the National Adaptation Plan (NAP).

The Ministry of Environment and Sustainable Development (MEDD) and the Ministry of Agriculture, Livestock, and Fisheries (MinAgri) oversee the implementation of this program;

V-1-2- Program 7: Acceleration of reforestation through the operationalization of the REDD+ mechanism and the development of ecosystem services

The Land Use, Land Use Change and Forestry (LULUCF) sector is a key sector in the fight against climate change in Madagascar, and this program aims to contribute to the national objective set by the Nationally Determined Contribution (NDC) in terms of reducing emissions, and to strengthen the country's resilience to climate change by significantly increasing the national forest area. The activities of this program are consistent with the strategic priorities of the Biodiversity and Forestry sector of the NAP.

To illustrate, Program No. 7 includes activities aimed at promoting the efficient and sustainable use of wood resources, as well as the development of watersheds. As part of strategic priorities No. 2 and No. 3, the PNA will focus on watershed development and the encouragement of sustainable wood resource utilization.

The MEDD, ONE and various partner NGOs are responsible for implementing the program.

V-1-3- Program 8: Improvement of the conservation of natural forests and the management of protected areas integrating the development of climatic refuge zones inside and on the peripheries

The National Adaptation Plan (NAP) has identified biodiversity and forestry as key priority sectors. The primary objective of Strategic Priority 1 within these sectors is to preserve existing forest cover and establish a network of forest conservation corridors .

To achieve this, three key actions were recommended:

- Protect travel corridors, opportunities (“stepping stones”) and refuges for species.
- Manage remaining natural forests to maximize the potential for species migration in response to climate change.
- Restore and protect riparian forest corridors important for species migration.

Program No. 8, on the other hand, aims to preserve the ecological functions of ecosystems and prevent further degradation. Its activities include:

- Protect natural forests and reduce timber harvesting.
- Implement a large-scale restoration program for the most threatened ecosystems
- Maintain existing forest cover and continue to create a network of conservation forest corridors.

Programme 8 supports the adaptation needs and priorities outlined in the NAP and aligns with its overall objectives. This alignment ensures coherence in implementation and simplifies the mobilization of financial resources, as the NAP is implemented through these programmes.

V.2. Difficulties in evaluating the activities of the three programs

To ensure the effectiveness of the National Adaptation Plan (NAP), it is crucial that the supporting activities are successfully implemented. Their success is measured by the achievement of activity indicators outlined within each program. However, due to the absence of a specific NAP report, the analysis has been conducted based on the Ministry of Environment and Sustainable Development (MEDD)'s 2022 activity report.

The following sections provide an analysis of the progress made in implementing activities across these three programs.

V-2-1- Program 1: Establishment of a Green Belt to strengthen the fight against desertification and resilience to climate change

Analysis of the 2021 activity report of the Ministry of the Environment and Sustainable Development (MEDD) reveals the following achievements:

- **Activity 1:** By 2030, protect fragile areas in 12 districts through the creation of green belts using innovative reforestation techniques.

According to the MEDD's 2022 activity report²⁴, 56,503 ha of land area have been reforested, including 4,000 ha in the Anosy region, around 1,000 ha in the Androy region, more than 12,000 ha in the Boeny region and more than 2,000 ha in the Menabe region. It should be noted that these regions are mainly concerned by program 1.

- **Activity 2:** Strengthening the resilience of local populations by promoting the green economy and protecting forest resources.

according to the 2022 MEDD report²⁵, promoting the green economy supports economic development while ensuring environmental preservation. As part of this effort, 14 decent green jobs have been created across various sectors, including beekeeping, ecological briquettes, and ecotourism.

- **Activity 3:** Provide local, quality services to local stakeholders and populations.

According to the NAP, this initiative has led to the establishment of new, well-equipped, energy-efficient infrastructure for MEDD's decentralized services across 12 districts and an information, education and communication strategy encourages the target populations to adhere to the action.

In light of the 2022 MEDD report²⁶, local infrastructure has been built in 5 regions including the Boeny region. The Anosy region was provided with 2 motorcycles by the PACARC and TALAKY projects.

²⁴MEDD 2022 Activity Report, page 53

²⁵MEDD 2022 Activity Report, page 69

²⁶MEDD 2022 Activity Report, page 30

In addition, 2,400 broadcasts of awareness spots, production and distribution of 3 films as well as the production of 3,000 awareness posters and brochures with 178 IECs were carried out during the year 2022.²⁷.

V-2-2- Program 7: Acceleration of reforestation through the operationalization of the REDD+ mechanism and the development of ecosystem services

Seven activities contribute to achieving the program's objectives, namely:

- **Activity 1:** Implement the REDD+ mechanism (REDD+ strategy and REDD+ decree);
- **Activity 2:** Large-scale reforestation and restoration of degraded forests;
- **Activity 3:** Better management of meadows, reduction of areas cleared for various needs and above all the practice of “tavy”;
- **Activity 4:** Support the arboriculture and agroforestry sector;
- **Activity 5:** Promote the efficient and sustainable use of wood resources;
- **Activity 6:** Create wood supply areas with suitable species;
- **Activity 7:** Developing watersheds.

The MEDD's 2022 activity report specified that for activity 2, for example, 9,922,556 ha are reported²⁸ of areas conserved in protected areas and 258,063 ha²⁹ restored.

V-2-3- Program 8: Improvement of the conservation of natural forests and the management of protected areas integrating the development of climatic refuge zones inside and on the peripheries

Seven key activities play a crucial role in achieving this program's objectives. Among them are the following:

- **Activity 1:** Protect natural forests and reduce timber harvesting;
- **Activity 2:** Strengthen the implementation of legislative texts and policies relating to sustainability, conservation and restoration of habitats in degraded ecosystems;
- **Activity 3:** Secure the land status of Protected Areas;
- **Activity 4:** Establish a large-scale restoration program for the most threatened ecosystems;
- **Activity 5:** Develop a research program to describe the ecology of all taxa of Malagasy biodiversity with a view to maximizing adaptation opportunities in the implementation of future activities;
- **Activity 6:** Maintain existing forest cover and continue to create a network of conservation forest corridors;
- **Activity 7:** Promote the creation of professions less dependent on natural resources.

The analysis of MEDD activity reports has revealed that:

²⁷MEDD 2022 Activity Report, page 42

²⁸MEDD 2022 Activity Report, page 74

²⁹MEDD 2022 Activity Report, page 75

- For activity 4, forest landscape restoration activities or RPF activities are part of the national strategy for the restoration of forest landscapes and green infrastructure in Madagascar established in 2017.³⁰

The RPF report states that 1,945,589 ha of restored area, which represents 48.64% of the country's RPF commitment according to the MEDD website.³¹

Furthermore, the 2022 MEDD report indicates that 9,922,556 ha³² hectares have been conserved within protected areas and 258,063 ha³³ restored.

To illustrate, 273,894,418 mangrove plants were planted over an area of 17,435 ha in 2022 as part of the restoration of specific species.³⁴

- for activity 5, 54 research projects were carried out at the level of the various research institutions and 72 research authorizations were issued, of which 45 concern fauna, 16 concern flora and 11 concern other areas in 2022³⁵.
- With regard to activity 7, supporting local communities is a way to reduce pressures on protected areas, particularly through the sustainable management of natural resources.

In 2022³⁶, a total of 3,233 households benefited from the value chain, including 816 women. Additionally, three green products: honey, moringa, and charcoal, were promoted to support sustainable development

Based on these examples, the extracts from the MEDD reports align closely with the activities outlined in the three specific programs related to biodiversity and forestry. However, they do not explicitly reference these NAP programs, making it challenging to directly associate these achievements with the NAP activities.

Moreover, the reports lack essential monitoring and evaluation indicators for these programs. For example, key monitoring and evaluation indicators for Program No. 8, such as the number of reconnected forest islands, are not included in the Ministry's 2022 activity report.

This situation arises partly from the overlap with the Ministry's ongoing activities, which fall within its mandated missions and responsibilities. Additionally, the absence of a dedicated progress report, along with a lack of information and established monitoring and evaluation mechanisms specific to the NAP, further contributes to the challenge.

Therefore, developing a dedicated report on the achievements of the NAP is essential to enable an accurate and transparent assessment of its effectiveness.

³⁰National Strategy for the Restoration of Forest Landscapes and Green Infrastructure in Madagascar.

³¹e-voary.mg website: SC-RPF barometer of the RPF protests in Madagascar.

³²MEDD 2022 Report, page 74

³³MEDD 2022 Report, page 75

³⁴MEDD 2022 Report, page 53

³⁵MEDD 2022 Annual Report, pages 44 and 45.

³⁶MEDD 2022 Annual Report, page 69.

V.3. Insufficient resources available for the implementation of programs

To ensure the implementation of the three programs, the availability of funding resources is crucial.

V-3-1- Program 1: Establishment of a Green Belt to strengthen the fight against desertification and resilience to climate change

Initially, according to the PNA, the cost of Program 1 was estimated at \$88,311,200, with \$25,145,500 available, leaving a funding gap of \$58,165,700.

In 2024, according to the NAP implementation status table established by the Climate Adaptation and Resilience Service (SARC), the cost has been revised to \$554,568,000, of which \$139,056,200, or 25%, is already secured. Funding for the gap therefore remains to be sought.

Although the PNA indicates three institutions as sources of funding such as the World Bank, the European Union and the QMM, there is no information mentioning the visibility of resources to address the previously mentioned gap.

V-3-2- Program 7: Acceleration of reforestation through the operationalization of the REDD+ mechanism and the development of ecosystem services

According to the NAP, the estimated budget for this program is USD 60 million over a ten-year period. Identified potential funding sources include technical and financial partners (TFPs) actively involved in reforestation efforts in Madagascar, such as the European Investment Bank (EIB), the World Bank, and the Green Climate Fund (GCF) through Contractualized Forest Management.

In view of the situation table of the implementation of the NAP established by the Climate Adaptation and Resilience Service (SARC), 50 million USD have already been secured for this program within the framework of the "REDD+ mechanism" following the Emission Reduction Payment Agreement (ERPA) with the World Bank.

V-3-3- Program 8: Improvement of the conservation of natural forests and the management of protected areas integrating the development of climatic refuge zones inside and on the peripheries

The estimated cost of implementing all program activities in the early warning zone is \$30 million.³⁷

According to the PNA implementation situation table provided by the Climate Adaptation and Resilience Service (SARC) to BNCCRED+, program no. 8 has benefited from secured financing of USD 29.70 million³⁸ on activities related to forest cover and ecosystem restoration only, in particular activities No. 1, No. 4 and No. 6.

³⁷National adaptation plan, page 96.

³⁸Table of the status of implementation of the NAP, May 24, 2024.

However, the table does not specify the availability period of these funds, making it difficult to determine the timeframe for their utilization.

The NAP is financed on a program basis, with technical and financial partners aligning their contributions according to their vision and policy. Moreover, effectively utilizing the available funding mechanisms requires strong capacity from the stakeholders responsible for implementing the NAP.

The absence of precise and detailed financial information for the program makes it difficult to assess the remaining funding needs required for its successful implementation.

In addition, the inability to secure funding for certain activities may prevent their implementation, potentially hindering the achievement of the program's objectives.

In conclusion, the lack of specific reports on the progress of NAP activities makes it challenging to assess its effectiveness in the biodiversity and forestry sector. Additionally, the implementation of the three programs is hindered by insufficient resources, further complicating efforts to achieve their intended objectives.

To address these shortcomings, the Court recommends to MEDD further actions:

- ***Establish a dedicated monitoring and evaluation mechanism for NAP programs;***
- ***Produce specific and periodic reports on the PNA programmes and activities, clearly outlining the actions taken, expected outcomes, and achieved results;***
- ***Provide program managers with information and training on various climate finance mechanisms to improve their understanding and ability to secure finance effectively.***

GENERAL CONCLUSION

The 2015 Paris Agreement aims to “significantly reduce climate change risks and impacts.” This multilateral agreement requires strong commitment from signatory countries. Its importance lies in providing both a long-term roadmap for global climate action and a dedicated financing mechanism for its implementation.

Therefore, Madagascar's ratification of the Paris Agreement in 2016 entails commitments to the development, adoption, and implementation of a National Adaptation Plan (NAP). While various upstream policies and sectoral plans addressing climate change adaptation already exist, the NAP has been designated as the primary reference document for climate action since 2021.

Accordingly, this report focuses on the performance audit of the National Climate Change Adaptation Plan's actions within the biodiversity and forestry sectors, given their heightened vulnerability to climate change.

The audit results concluded that, despite its clear alignment with the objectives of the Paris Agreement, the NAP faces several structural and operational limitations, which compromise its overall effectiveness. These challenges include:

- An incomplete analysis of territorial and social vulnerabilities;
- A significantly underestimated cost assessment;
- Limited capacity to mobilize all possible external financing mechanisms;
- Insufficient private sector involvement in achieving NAP objectives;
- Gaps in monitoring and evaluation processes;
- Inadequate financial resources;

Given the challenges outlined above, establishing a climate-specific governance model, supported by a robust monitoring and evaluation system, is essential for achieving the objectives set by the NAP by 2031.

In addition, strengthening vulnerability analysis (by incorporating disaggregated data and addressing neglected regions) will help refocus priorities on at-risk populations. Revising the funding mobilization strategy is also necessary to ensure the effectiveness and sustainability of Madagascar's adaptation efforts.

Finally, the announcement of the United States' withdrawal from the Paris Agreement in 2025 introduces significant global uncertainties, particularly in the realm of climate financing. As a key player in climate funding, the U.S. contributes over 20%.³⁹ of the budget of the United Nations Framework Conference on Climate Change. The impacts of this disengagement remain uncertain for developing nations like Madagascar, especially in light of the provisions outlined in Article 9.1 of the Paris Agreement.

³⁹latribune.fr published on 01/23/25 at 10:37

DELIBERATION

This Report was adopted following deliberation by the Court of Accounts during its hearing held **on October 14, 2025**, in accordance with Order No. 106/25-FJ on October 9, 2025, issued by the President of the Court of Accounts appointing the members of the Review Commission.

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APPENDICES

Appendix 1: Number of strategic priorities and actions by priority sector

Appendix 2: Strategic priorities: Biodiversity and forestry

Appendix 3: List of the 12 PAN programs

Appendix 4: Participants in regional workshops

Appendix 5: The 4 strategic objectives with their respective objectives or targets of the national strategy and action plans for the conservation of biodiversity 2015-2025

Appendix 6: Technical data of 3 programs related to biodiversity and forestry

Appendix 7: List of departments and services visited

Appendix1: Number of strategic priorities and actions by priority sector

Priority areas	Number of strategic priorities	Number of shares	COMMENTS
Agriculture-Livestock-Fishing	13	38	
Agriculture	5	17	
Cattle	4	8	
Fisheries	4	13	
Water resources	4	13	
Public health	2	8	
Biodiversity and forestry	6	17	
Coastal areas	3	8	
Infrastructure and regional planning	5	0	No details on activities
Risk and disaster management	3	0	No details on activities
Housing and new towns	2	5	
TOTAL	38	89	

Appendix 2: Strategic priorities: Biodiversity and forestry

STRATEGIC PRIORITY	ACTS
Strategic Priority 1: Maintain existing forest cover and create a network of forest conservation corridors	1. Protect travel corridors, opportunities (“stepping stones”) and refuges for species 2. Managing remaining natural forests to maximize species migration potential in response to climate change 3. Restore and protect riparian forest corridors important for species migration
Strategic Priority 2: Implement a large-scale restoration program for the most threatened ecosystems	4. Secure in situ the most threatened ecosystems (dry forests, tropical forests, mangroves, coral reefs, lakes and ponds), which act as buffers during extreme events. 5. Continue a program to restore ecosystems that serve as refuges against climate change. 6. Develop local industries capable of producing quality plants adapted to climate change and deploying effective restoration protocols in the Malagasy context. 7. Watershed management
Strategic Priority 3: Encourage the sustainable use of wood resources	8. Strengthen legislation on the exploitation of precious woods and other natural resources for which there is strong pressure, and regulate the market 9. Create timber supply areas with suitable species (integrated ecosystem services)
Strategic Priority 4: Strengthen the management of protected areas and secure land tenure in protected areas	10. Improving protection in existing protected areas and conservation areas 11. Investing in tourism to increase park revenues with MNP (Madagascar National Parks)
Strategic Priority 5: Create income-generating activities less dependent on natural resources	12. Carry out a detailed assessment of the constraints weighing on the tourism industry in Madagascar and which limit its development potential. 13. Carry out a detailed assessment of local development constraints around protected areas 14. Based on the assessments detailed above, strengthen the development and implementation of income-generating activity (IGA) development programs on the periphery of protected areas
Strategic Priority 6: Review and strengthen the implementation of legislation and policies related to the sustainability, conservation and restoration of habitats in degraded ecosystems	15. Integrate the issue of biodiversity into sectoral policies in order to prevent unsustainable activities that affect biodiversity. 16. Establish an environmental police force at national and regional level 17. Create a mixed brigade (gendarmerie and water and forestry officers) within the service or entity responsible for forest control at the MEDD level (strike force).

Appendix 3: List of the 12 programs of the National Adaptation Plan

The twelve national programs structuring the NAP are:

1. Establishment of a Green Belt to strengthen the fight against desertification and resilience to climate change
2. Strengthening the adaptation of the agricultural sector and the resilience of rural populations in the far south of Madagascar
3. Strengthening the resilience of rural populations through the development and organization of export sectors
4. Strengthening the adaptation of the fishing industry and development of alert systems and associated action plans
5. Improving access to drinking water in urban and rural areas;
6. Strengthening early warning systems for health sector resilience to climate change;
7. Accelerating reforestation through the operationalization of the REDD+ mechanism and the development of ecosystem services
8. Improving the conservation of natural forests and the management of protected areas, including the development of climate refuge zones within and on the peripheries;
9. Protection of coastal infrastructure and economic activities (including tourism) against sea level rise;
10. Improving cyclone early warning systems as part of a regional effort in the Indian Ocean
11. Development of resilient rice paddies with lower methane emissions
12. Optimizing the resilience of new cities and sustainable and innovative housing with a view to modernizing Madagascar

Appendix 4: Participants in regional workshops

Axis	NORTH	CENTER	EAST	SOUTH	SOUTH EAST
<i>Participants Day 1</i>	49	93	42	57	70
<i>J2 Participants</i>	50	75	37	46	68
Total	99	168	79	103	138
<i>Regions</i>	Diane Sofia Sava Boeny Betsiboka	Analamanga Bongolava Itasy Melaky Menabe Vakinankaratra	Atsinanana Analanjirifo Alaotra Mangoro	Atsimo Andrefana Androy Anosy	Upper Matsiatra Vatovavy Phytovinany Atsimo Atsinanana Ihorombe Amoron'i Mania
<i>Participant Profile</i>	- Regional Directorates (Environment, Health, Agriculture, Fisheries, Livestock, Regional Planning, Communication, Public Works, Estates, Economy and Regional Planning, National Education, Meteorology, Water) - National Office for Risk and Disaster Management (BNGRC) - Emergency Management Prevention and Support Unit (CPGU) - National Environment Office (ONE) - Non-governmental organizations (NGOs) - Fishing federations - Economic operators - Communities (Prefecture, Urban Municipalities, Rural Municipalities) - Media - Researchers - Vondrona Fototra Ifotony (VOI) - National parks - Technical and Financial Partners (TFP)				

Source: Workshop reports

Appendix 5: The 4 strategic objectives with their respective objectives or targets of the national strategy and action plans for the conservation of biodiversity 2015-2025

STRATEGIC OBJECTIVE A: ADDRESSING THE UNDERLYING CAUSES OF BIODIVERSITY LOSS BY MAINSTREAMING BIODIVERSITY INTO GOVERNMENT AND SOCIETY: "INTEGRATION STRATEGY"

OBJECTIVE 1: "By 2025, political decision-makers and 65% of the Malagasy population are aware of the values of biodiversity and the measures they can take to protect and use it sustainably."

- 1.1. Develop and implement a communication, education and public awareness (CEPA) strategy on biodiversity
- 1.2. Implement the National Environmental Information and Communication Strategy for Sustainable Development in Madagascar
- 1.3. Integrate the CESP biodiversity strategy into school curricula at all school levels
- 1.4. Undertake targeted awareness-raising activities among decision-makers and planners in socio-economic sectors so that the private sector integrates the environmental dimension
- 1.5. Strengthen public awareness of environmental policies and legislation, rules, standards and institutional arrangements related to the environment, with particular attention to law enforcement

OBJECTIVE 2: "By 2025 at the latest, the values of biodiversity, as well as the opportunities and benefits arising from its conservation and sustainable use, will be recognized and integrated into the country's socio-economic development activities."

- 1.6. Taking biodiversity values into account in sectoral strategies and programs
- 1.7. Develop and implement pilot programs to integrate biodiversity into the plans of decentralized local authorities, including land use plans;
- 1.8. Communicate and promote the results obtained within the framework of WAVES to assist decision-making by the competent authorities and ensure good governance of natural resources and the sustainability of economic growth
- 1.9. Accounting for natural capital and ecosystem services
- 1.10. Planning and budgeting by the supervisory authority and key sectors to facilitate the integration of biodiversity into national and sectoral programme budgets

OBJECTIVE 3: "By 2025 at the latest, inappropriate and negative incentives for biodiversity will be eliminated or progressively reduced to minimize negative impacts; while positive incentives for the conservation and sustainable use of biodiversity and natural resources will be developed and implemented."

- 1.11. Demonstrate PES systems that promote the conservation and sustainable use of biodiversity

OBJECTIVE 4: "By 2025, the Malagasy State and stakeholders at all levels will take appropriate measures to implement rational resource management plans and maintain the impact of natural resource use within safe ecological limits."

STRATEGIC OBJECTIVE B: REDUCING DIRECT PRESSURES ON BIOLOGICAL DIVERSITY AND ENCOURAGING THE SUSTAINABLE USE OF NATURAL RESOURCES: "CONSERVATION STRATEGY"

The objective of this goal is to address the major consequences of human and natural pressures on the ecological environment, including landscape modification and habitat fragmentation that reduce the resilience of diverse ecosystems and disrupt the stability and functions of these ecosystems.

OBJECTIVE 5: By 2025, the rate of degradation, fragmentation and loss of habitats or ecosystems is reduced"
OBJECTIVE 6: “By 2025, all exploited fish stocks and other living marine and fresh/brackish water resources are sustainably valued and managed, and destructive harvesting practices are eliminated.”
OBJECTIVE 7: “By 2025, all areas dedicated to agriculture, aquaculture and forestry will be managed according to the sustainable production plan, ensuring an integrated approach to biodiversity conservation.”
OBJECTIVE 8: “By 2025, pollution from maritime and land-based activities is reduced to levels compatible with the functioning of ecosystems and the sustainability of biological diversity”
OBJECTIVE 9: “By 2025, alien and/or invasive species and their pathways are identified and prioritized, priority species are controlled or eradicated; management measures are in place to prevent introduction, manage pathways and mitigate establishment of these species and to promote beneficial species.”
OBJECTIVE 10: “By 2025, multiple anthropogenic pressures on coral reefs and other vulnerable marine and coastal ecosystems affected by climate change or ocean acidification will be minimized, in order to maintain their integrity and functioning.”

STRATEGIC OBJECTIVE C: IMPROVING THE STATE OF BIOLOGICAL DIVERSITY BY SAFEGUARDING ECOSYSTEMS, SPECIES AND GENETIC DIVERSITY: “INTERVENTION STRATEGY”

This objective aims to address the human consequences of biodiversity loss, which constitute, on the one hand, risks to the sustainability of biodiversity and, on the other hand, obstacles to national development, including the resurgence of poverty, diseases, various conflicts, food insecurity, falling incomes and unemployment at household and national levels.

OBJECTIVE 11: “By 2025, 10% of terrestrial ecosystems and 15% of coastal and marine areas, primarily areas of particular importance for biodiversity and ecosystem services, are adequately conserved in ecologically representative systems and protected areas and are effectively managed through a variety of strategic approaches.”
OBJECTIVE 12: “By 2025, the extinction of threatened species is reduced and their conservation status is improved.”
OBJECTIVE 13: “By 2025, the genetic diversity of cultivated plants, domestic animals and their wild relatives, as well as other species of social and cultural value, will be maintained and sustainably enhanced.”

STRATEGIC OBJECTIVE D:VALUING THE BENEFITS OF BIODIVERSITY AND ECOSYSTEM SERVICES FOR ALL: “A STRATEGY FOR CONSERVATION OPPORTUNITIES AND DEVELOPMENT SUPPORT”

OBJECTIVE 14: By 2025, terrestrial ecosystems, including forests, marine and coastal fresh and brackish waters, including mangroves and lentic environments, that provide
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essential services, including water supply and those contributing to health, livelihoods and human well-being, are protected and restored. Equitable access to ecosystem services is ensured for all, taking into account the gender approach.

OBJECTIVE 15: "By 2025, the adaptive capacity of ecosystems and the contribution of terrestrial, freshwater and marine biodiversity to climate change mitigation and adaptation are enhanced, including through the restoration of at least 15% of degraded ecosystems and the fight against desertification.

OBJECTIVE 16: "By 2025, the Nagoya Protocol on Access and the Fair and Equitable Sharing of Benefits Arising from the Utilization of Genetic Resources will be in force and operational, in accordance with national legislation and the effective needs of the Malagasy people."

STRATEGIC OBJECTIVE E: STRENGTHENING IMPLEMENTATION THROUGH PARTICIPATORY PLANNING, KNOWLEDGE MANAGEMENT AND CAPACITY BUILDING: "SAPNB IMPLEMENTATION AND FINANCING STRATEGY"

OBJECTIVE 17: "In 2017, the Malagasy State adopted a political instrument and a legal framework for the implementation of the national biodiversity strategy and effective action plans."

OBJECTIVE 18: By 2025, initiatives implemented to protect the traditional knowledge, innovations, and practices of local communities are relevant to biodiversity. Traditional sustainable use of biodiversity and its contribution to conservation are respected, preserved, and maintained.

OBJECTIVE 19: "By 2025, knowledge and scientific basis relating to biodiversity, its values, functioning and condition are widely shared with decision-makers and applied, and all trends and consequences of its loss are mitigated and ameliorated."

OBJECTIVE 20: "By 2020, human and financial capital for the implementation of the Convention will have increased to levels sufficient and adequate to achieve the objectives of the NBSAP"

Appendix 6: Technical data of 3 programs related to biodiversity and forestry

 PLAN EMERGENCE SUD MADAGASCAR  	
PROGRAMME NATIONAL 1 : MISE EN PLACE D'UNE CEINTURE VERTE POUR RENFORCER LA LUTTE CONTRE LA DESERTIFICATION ET LA RESILIENCE AU CHANGEMENT CLIMATIQUE	
Région : Androy, Anosy, Boeny, Menabe et Analanjirofo Districts : Ambovombe, Tsihombe, Bekily, Beloha, Amboasary, Taolagnaro, Betroka, Ambato-Boeny, Marovoay, Morondava, Soanierana Ivongo	Lutte contre le changement climatique : Adaptation et Atténuation
Contexte : Madagascar est connu pour sa biodiversité exceptionnelle (5% de la biodiversité mondiale) avec un degré d'endémisme important (80% pour la flore et 95% pour la faune) ce qui a valu à la Grande Ile d'être classée parmi les pays à « Hotspot de biodiversité ». Cependant, ces ressources naturelles sont en dégradation continue à cause d'une pression continue d'origines anthropique et climatologique. Dans la partie sud de l'île, la sécheresse caractérisée par une moyenne de 400 mm de pluie par an est à l'origine du fait que des dizaines de milliers d'hectares de champs sont transformés en poussière selon l'ONU (Organisation des Nations Unies) en 2019. A cause de la sécheresse associée à la dégradation des ressources et par ricochet à la détérioration de l'économie de subsistance, plus d'un million de personnes vivant dans la partie Sud du pays sont menacées par la famine et quelques 14.000 personnes sont déjà dans des conditions proches de la famine, selon l'alerte lancée par le Programme alimentaire mondial de l'ONU (PAM, juin 2021) à Madagascar. Par conséquent, la sécheresse prolongée et le processus de désertification contraignent une grande partie des populations à se déplacer à l'intérieur des Districts des deux Régions du sud et une autre partie vers la Région de Menabe jusqu'à la partie Nord-Ouest et Nord de l'île pour la survie tout en pratiquant des activités dépendantes des ressources naturelles. En parallèle, le parc national d'Ankarafantsika, une deuxième zone de destination des migrants est un site sous haute pression due à des incendies répétés perpétrés par les populations en quête de pâturage et de terrain de culture. Ainsi, selon l'évaluation faite par la DREDD de Boeny en septembre 2021, ce Parc a perdu près de 3 200 hectares de ses forêts.	
Objectif : Accélérer la création de l'emprunte positive du MEDD sur le paysage forestier et la vie des communautés locales à travers la promotion d'une gestion durable des ressources naturelles associée à l'amélioration des conditions de vie des populations vivant dans les zones cibles.	
Cadre de résultats et actions du programme :	
Effet 1 : D'ici 2030, les zones fragiles au niveau de 12 Districts sont protégées par des ceintures vertes mises en place à l'aide des techniques innovantes en reboisement (07 districts d'Anosy et Androy, 2 District autour du Parc de Menabe Antimena, 2 Districts autour du Parc d'Ankarafantsika, 1 District de Soanierana Ivongo)	Produit 1.1 : Un système de production de plants de proximité est mis en place et fonctionnel ; Produit 1.2 : Des dispositifs de protection des sols et/ou de fixation des dunes utilisent des techniques variées et adaptées aux conditions locales ; Produit 1.3 : Des sites de démonstration des nouvelles techniques de reboisement, de l'agroforesterie et de protection contre les feux renforcent les connaissances et capacités des populations locales en matière de protection de leur environnement ; Produit 1.4 : La sécurité foncière des zones reboisées et terrains aménagés est matérialisée par des statuts juridiques clairs
Effet 2 : La promotion de l'économie verte et la protection des ressources forestières renforcent la résilience des populations locales	Produit 2.1 : Les capacités des pépiniéristes locaux (privés ou communautaires) pour la production et la vente des plants de qualité (plantes endémiques et plantes exotiques) sont renforcées ; Produit 2.2 : La production du matériel végétal (jeunes plants, graines forestières, etc.) associée au développement des chaînes de valeur prioritaires (arboricultures fruitières et produits forestiers non ligneux, etc.) et la protection des forêts se transforment en activités génératrices de revenus pour les communautés locales
Effet 3 : Des services de proximité et de qualité sont mis à la disposition des acteurs et populations au niveau local	Produit 3.1 : Les Services déconcentrés du MEDD disposent de nouvelles infrastructures bien équipées et éco-énergétiques au niveau des Districts ; Produit 3.2 : Les 4 Régions et les 12 Districts cibles sont dotés de services requis et de personnel suffisant ; Produit 3.3 : Un système de suivi de l'évolution des ressources naturelles interconnecté avec les Régions et l'administration centrale (SIG, suivi des points de feux, rapports divers, etc.) est mis en place ; Produit 3.4 : Une stratégie d'information, d'éducation et de communication favorise l'adhésion des populations cibles à l'action.
Maître d'œuvre et partenaires institutionnels : Ministère de l'Environnement et Développement Durable et Ministère de l'Agriculture, de l'Elevage et de la Pêche.	
Coût : 83 311 200 USD dont 25 145 500 USD disponible (58 165 700 USD à rechercher)	Indicateurs de résultat 168 km de brise vent 18.334 ha de dune stabilisés 18.122 ha de ceintures vertes installées
Financement : Banque Mondiale, Union Européenne, QMM Durée : 10 ans	

 PROGRAMME NATIONAL 7 : ACCÉLÉRATION DU REBOISEMENT À TRAVERS L'OPÉRATIONNALISATION DU MÉCANISME REDD+ ET LE DÉVELOPPEMENT DE SERVICES ÉCOSYSTÉMIQUES		
Localisation : Diana, Boeny, Haute Matsiatra, Vakinankaratra, Itasy, Melaky	Lutte contre le changement climatique : Atténuation - Adaptation	
Contexte : Les forêts de reboisement réparties dans le pays ne comptent actuellement qu'une superficie de 415 000 ha. Avec le mécanisme REDD+, Madagascar prévoit, pour le secteur UTCATF, d'atteindre 61 MtCO2 de Réductions d'Emissions (REs) d'ici 2030. D'autre part, un engagement de 270 000 ha de reforestation en essences autochtones a été déclaré, en vue d'accroître le stockage de carbone. En vue d'améliorer le bien-être de la population locale, de développer durablement l'économie, et de conserver la richesse en biodiversité, d'ici 2030, le taux de déforestation sera maîtrisé, et le couvert forestier sera augmenté afin de contribuer à la réduction de 14% des émissions de GES du secteur forestier. Cette déclaration vise à inverser la tendance de régression de la couverture forestière et à mettre en place une gestion durable des ressources forestières, tout en améliorant les stocks de carbone et les conditions de vie des populations riveraines.		
Objectif(s) : Le secteur UTCATF est un secteur clé de la lutte contre le changement climatique à Madagascar et ce programme vise à contribuer à l'objectif national fixé par la CDN en termes de réduction des émissions, et à renforcer la résilience aux changements climatiques du pays en augmentant de façon significative la surface forestière nationale. Activités du programme : • Mettre en œuvre le mécanisme REDD+ (stratégie REDD+ et décret REDD+) ; • Reboiser à grande échelle et restaurer les forêts dégradées ; • Mieux gérer les prairies, réduire les superficies défrichées pour divers besoins et surtout la pratique du « tavy » ; • Soutenir le secteur arboricole et l'agroforesterie ; • Promouvoir l'utilisation efficace et durable de la ressource en bois ; • Créer des zones d'approvisionnement en bois avec des essences adaptées ; • Aménager des bassins versants.		
Maître d'œuvre et partenaires institutionnels potentiels : MEDD, ONE et les ONG partenaires.		
Coût : 60 millions USD <i>Estimation effectuée sur la base du document de proposition d'un projet similaire GCF.</i>	Indicateurs : Tonnes de dioxyde de carbone équivalent réduits ou évités (y compris l'augmentation des stocks) sur 10 ans ; Surfaces additionnelles de terres bénéficiant d'une meilleure résilience au changement climatique ; Nombre d'hectares avec une augmentation de la couverture arborée et végétale (réduction des glissements de terrain et de l'érosion, résistance aux inondations) ; Superficies reboisées ; Nombre de pépinières créées au niveau de chaque Région ; Taux de bassins versants aménagés.	
Sources potentielles de financement : PTF déjà engagés dans la reforestation à Madagascar (non exhaustif) : EIB, World Bank, GCF.		
Durée : 10 ans.		

 PROGRAMME NATIONAL 8 : AMÉLIORATION DE LA CONSERVATION DES FORÊTS NATURELLES ET DE LA GESTION DES AIRES PROTÉGÉES INTÉGRANT L'AMÉNAGEMENT DE ZONES DE REFUGE CLIMATIQUE À L'INTÉRIEUR ET DANS LES PÉRIPHÉRIES		
Localisation : Analanjirofo, Anosy, Atsimo Atsinanana, Atsinanana, DIANA, SAVA, Sofia, Vatovavy Fitovinany (Corridor de l'Est) ; Atsimo Andrefana, Melaky, Menabe, (Forêts épineuses).	Lutte contre le changement climatique : Atténuation - Adaptation	
Contexte : Les forêts naturelles couvrent 8,9 millions d'hectares en 2014. L'ensemble du territoire est soumis à un taux annuel croissant de déforestation, s'élevant à 1,18 %/an pour la période 2010-2014 (Tableau de Bord Environnemental National -TBEN, 2019). Le taux de déforestation varie selon les régions mais en moyenne, les forêts situées à moins de 800 m d'altitude sont les plus touchées par la déforestation, avec un taux de 1 % par an. D'une manière générale, les causes principales de la déforestation relèvent en grande partie de plusieurs facteurs interdépendants au niveau social et au niveau économique, mais un facteur prépondérant est le besoin en bois-énergie. La perte de superficie forestière se traduit par la perte d'habitat qui fragilise de ce fait, non seulement les écosystèmes et leurs fonctions écologiques, mais tout un environnement social, économique et culturel, et le changement climatique est un facteur exacerbant dans ce prisme de dégradation.		
Objectif(s) : Les objectifs visés par ce programme sont le maintien des fonctions écologiques des écosystèmes et la limitation des nouvelles dégradations.		
Activités du programme : • Protéger les forêts naturelles et réduire le prélèvement de bois ; • Renforcer l'application des textes législatifs et des politiques relatives à la durabilité, à la conservation et à la restauration des habitats dans les écosystèmes dégradés ; • Sécuriser le statut foncier des Aires protégées ; • Mettre en place un programme de restauration à grande échelle des écosystèmes les plus menacés ; • Développer un programme de recherche, afin de décrire l'écologie de l'ensemble des taxons de la biodiversité Malagasy en vue de maximiser les opportunités d'adaptation dans la mise en place des activités futures ; • Maintenir la couverture forestière existante et continuer à créer un réseau de corridors forestiers de conservation ; • Promouvoir la création d'occupations moins dépendantes des ressources naturelles.		
Maître d'œuvre et partenaires institutionnels potentiels : Ministère en charge de l'environnement, DSPAM, MNP et des Partenaires Techniques et Financiers prêts à se positionner, FAO, ONE, ONG.		
Coût : 30 millions USD <i>Estimation sur la base des projets GCF déjà financés sur le sujet.</i>	Indicateurs : Superficie des restaurations forestières réalisées ; Nombre d'îlots forestiers reconnectés ; Taux de prélèvement de bois ; Taux de régénération par espèce végétale ou faunistique ; Période/durée de migration par espèce par année.	
Sources potentielles de financement : FAO, PNUD, FEM.		
Durée : 10 ans.		

Appendix 7: List of departments and services visited

- National Office for Climate Change and Reduction of Emissions from Deforestation and Forest Degradation (BNCCREDD+)
- Carbon Fund and External Financing Service (SFCFE)
- Database and Monitoring-Evaluation Service (SBD-SE)
- Climate Adaptation and Resilience Service (SARC)
- Madagascar National Parks (MNP)
- Directorate General for Environmental Governance (DGGE)
- Department of Programming and Monitoring-Evaluation (DPSE)
- Directorate of Protected Areas, Renewable Natural Resources and Ecosystems (DAPRNE)
- Sustainable Financing Mechanism Directorate (DMFD)
- Sustainable Financing Mechanisms Service (SMFD)