



Mapping of relevant policies and regulations for coastal carbon ecosystem management in 5 countries: From climate change to forestry and coastal marine resource management.

MADAGASCAR SUMMARY



This summary document is based on a larger National Policy Assessment [\(to be viewed *\(insert hyperlink\)*\)](#) undertaken as part of the UNEP/GEF Blue Forests Project. The goal of these National Policy Assessments (NPAs) is to bring together the key policy, legal and regulatory frameworks and incentives, which have an implication for the management of blue carbon ecosystems including items from a perspective of national development, climate change, forestry, biodiversity as well as marine resource management.

Coastal carbon ecosystems in Madagascar

Madagascar is an eminent biodiversity hotspot, covering approximately 278, 078 ha of mangroves as of 2005, though there has been loss of approximately 21% between 1990 and 2010.

Madagascan **mangroves** are increasingly under threat due to land conversion for agriculture (“slash an burn”) purposes, timber extraction (woodfuel and construction needs), coastal development and the compounded impacts of deforestation, including erosion, sedimentation and siltation, in addition to the threat of rising sea levels resulting from climate change.

In comparison, there is comparatively little knowledge on **seagrasses**, creating difficulties for stakeholders to effectively integrate seagrass protections into local, regional or national initiatives.

Seagrasses are threatened by degrading water quality, caused by the runoff of nutrients and sediments as well as overfishing.

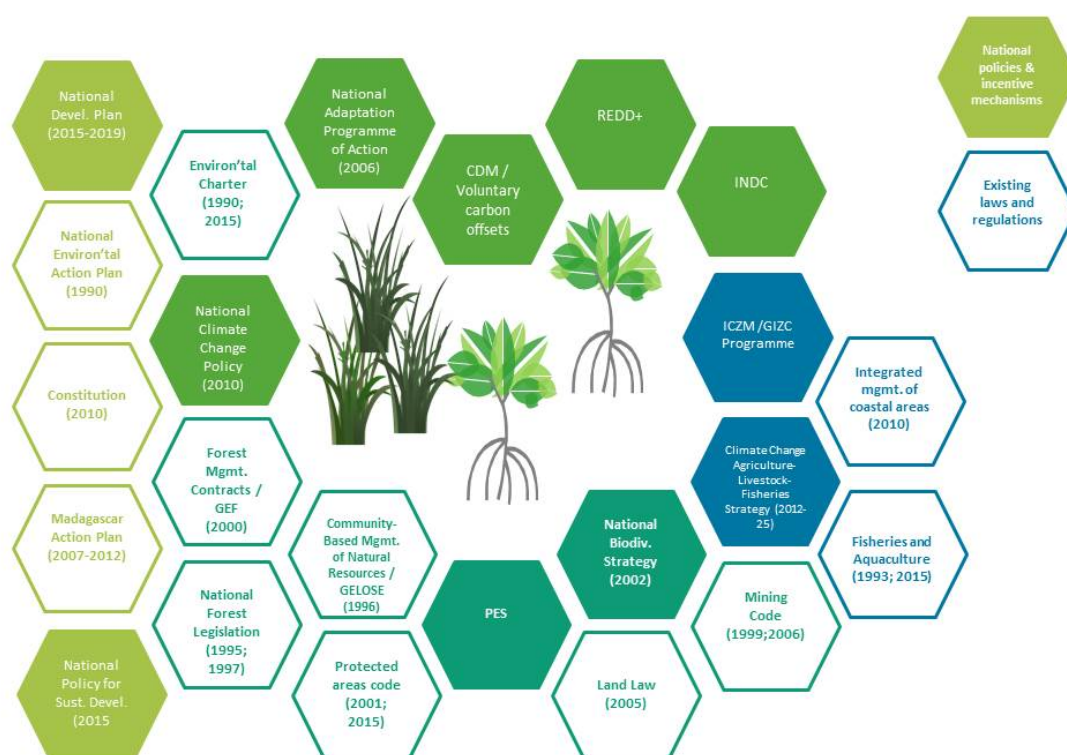
A rapidly growing population, poor governance, encroachment by urban areas, natural disturbances and an increasing demand for energy are broader threats to coastal carbon ecosystems.

Legal protection of mangroves in Madagascar

The **Constitution of the Republic of Madagascar** of 2010 includes, at different government levels – central, local, and traditional (“fokonolona”) – a commitment to environmental protection; mangroves, forests in general, or coastal environments are not specifically referred to in the Constitution, however.

A three-phase/15-year **National Environmental Action Plan** (*Plan National d’Actions Environnementales*, PNAE) was initiated by Law N° 90-033 on 21 December 1990, stipulating that considerations for the environment should be present in the management of other key areas, including health, education, and rural infrastructure, among others. The same law initiated the **Environmental Charter**, since updated on numerous occasions, most recently in 2015, which sets out a number of legally binding provisions. Under Article 13 in the Charter, any proposed public or private investments that may impair or harm the environment must be subjected to an Environmental Impact Assessment (EIA). The development of environmental services schemes and the use of “carbon markets” is encouraged.

The **Environmental Investment Decree** (referred to as “MECIE”, Décret N°99-945 of 1999, amended in 2004) together with inter-ministerial order N° 4355-97 on the definition and delimitation of sensitive areas (*Arrêté No 4355-97*) defines mangroves areas and their immediate impact areas as “sensitive zones”, i.e. areas with specific value and fragility vis-à-vis human activities to which specific rules apply. Among these rules is the mandatory use of Environmental Impact Assessment (EIAs) for any constructions or works inside the areas.



National development - Climate Change – Forestry / Biodiversity – Coastal and Marine Resources
Existing national laws, policies and initiatives with an impact on blue carbon management

The **Protected Areas Code**, stipulated in Law N°2001-05 on the Management Code of Protected Areas, defines three categories of protected areas: Integral Natural Reserve (“*Réserve Naturelle Intégrale*”, RNI), National Park (“*Parc National*”, PN) and Special Reserve (“*Réserve Spéciale*”, RS).

All naturally grown forests, except for those on titled land, are state property under Forestry Law N° 97-1200 and traditionally centrally managed.

Community-based management of natural resources was brought about by the 1996 **Law on Secure Local Management** ("*Gestion Locale Sécurisée*" - GELOSE) (Law No. 96-025), which provides time-bound transfer of management rights ("*transferts de gestion*") for natural resources to local communities.

Further enhancement for local communities was provided in 2000 under the **Forest Management Contracts** ("*Gestion Contractualisée des Forêts*", GCF) decree, which transfers management of the forests to local communities on mutually agreed contractual terms.

Regulation N°2010-137 **regulating the integrated management of coastal and marine areas of Madagascar** ("*portant réglementation de la gestion intégrée des zones côtières et marines de Madagascar*", GIZC) on integrated management of coastal areas sought to create a more integrated and sustainable development path for coastal zones.

The 2015 **Law on the code of fishery and aquaculture** (N°. 2015-053 "*portant code de la pêche et de l'aquaculture*") addresses the governance role of local communities and bans most conversions of mangroves into aquaculture installation.

Individual Responsibilities and Sanctions

The **Charter 2015** obliges any individual – whether a natural person or a legal entity – to repair any damage it has caused and to rehabilitate, where necessary (Article 9).

Under the **Fisheries Code** of 2015, anyone who "cuts, collects, transports or sells mangrove wood without authorization" must pay between 10,000 and 20,000 USD per hectare of mangrove area destroyed "and/or" faces imprisonment between 6 to 12 months (Article 84).

"*Dina*" is a social code that governs interactions in the rural areas in Madagascar and applies to all community members, which has since been integrated into formal policy such as the GELOSE law and the code of protected areas.



Policy objectives and incentive schemes for mangroves in Madagascar

The **National Adaptation Programme of Action** (*“Programme d’Action National d’Adaptation au changement climatique”*, PANA) from December 2006 defines the priority activities for Madagascar, balancing immediate needs and urgency with long-term sustainable development and national planning activities.

Madagascar holds a **national policy on climate change** (*“Politique nationale de lutte contre le changement climatique”*, PNLCC 2010), with relevant outlooks for 1) climate financing and 2) priority adaptation action including in the coastal zone (Ministère de l’Environnement et des Forêts 2010).

Madagascar recently issued a new **National Development Plan** (*“Plan National de Développement”*, PND, 2015-2019). The PND outlines the major constraints relevant to coastal systems, including the regulation of the fishing and aquaculture sector and mining.

Madagascar’s **Intended Nationally Determined Contribution** (INDC) makes specific reference to the dual role of forest, mangroves and biodiversity for ecosystem-based adaptation and mitigation, stating that the sustainable management of forests and mangroves should be paired with a reduction in GHG emissions through limiting deforestation practices. Madagascar looks to increase the absorptions in the LULUCF sector at approx. 61 MtCO₂ by 2030, but this does not specify the role of mangrove ecosystem carbon sequestration or reduced emissions into account.

The National Strategy for Sustainable Management of Biodiversity in Madagascar (SNGDB) was developed with input from local communities, public institutions, the private sector, researchers, and international NGOs and implemented in 2002. It has not been updated since this time, although recent development such as the 2010 CBD targets or the new national priorities under the Madagascar Action Plan (MAP) have been integrated into the implementation process.

REDD: A REDD+ national strategy is currently under development by the Technical REDD Committee and the Ministry of Agriculture, while two existing REDD+ projects, FORECA (2007-2011) and PHCF (2008-) are working with local communities to conserve forest resources through local management transfer in order to study carbon stocks.

Main challenges

Improving institutional capacity and enforcement

It is essential to have efficient enforcement bodies, in order to ensure that environmental regulations are followed.

For example, while MECIE stipulates that an EIA be undertaken when planning projects in sensitive areas, the quality and rigour of the assessments is not always guaranteed.

Overlapping jurisdictions and governance

As of now, the management of mangroves fall under the responsibility and codes of both the MEEF and MRHP. This overlap creates confusion and can hamper effective action.

The turn to more horizontal governance focusing on the self-management role of local communities is widely seen as progress, but implementation is lagging behind, and the value of the sustainable management contracts concluded has been put in question.

Clarifying land tenure and ownership

The lack of clarity regarding land (and therefore carbon) ownership creates difficulties in securing communities' management rights or benefits of ecosystem services from blue carbon ecosystems.

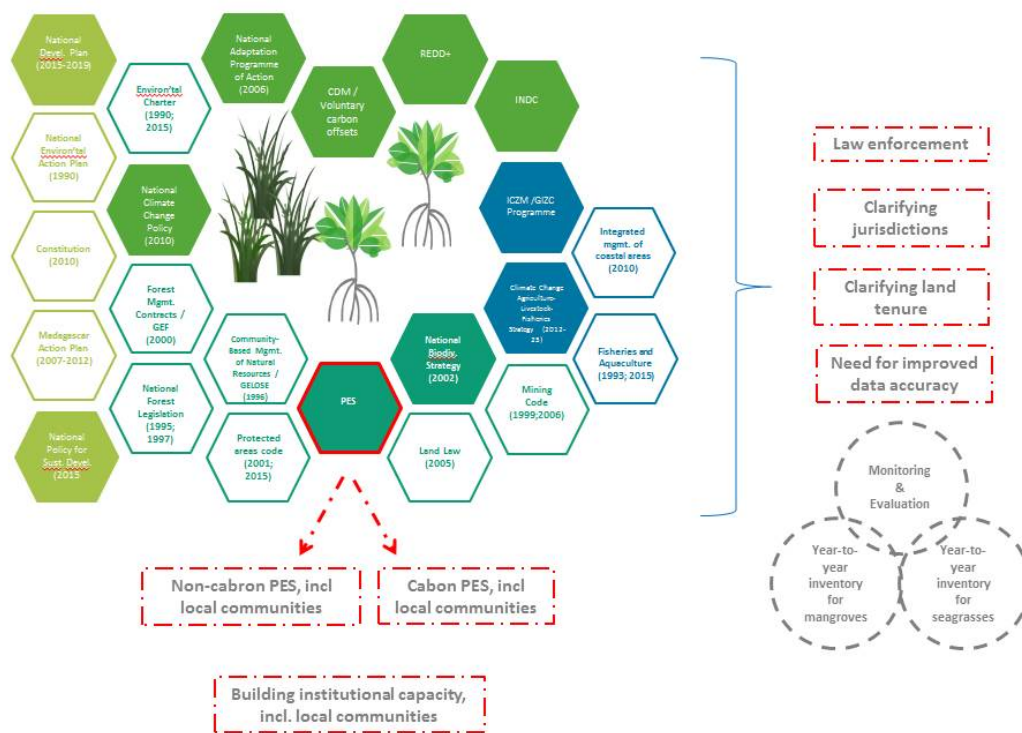
The current national land tenure reform programme (*Programme Nationale Foncière – PNF*) generally looks at simplifying the land tenure registration process, but does not necessarily bring a solution to the contested claims to customary tenure holdings.

Main opportunities

Increased data collection and knowledge

An opportunity for better management of blue carbon ecosystems lies in increased data collection and knowledge, especially in understanding the causes of loss.

Undertaking an Ecosystem Service Valuation (ESV) in order to understand the “non-price values” will contribute to a better understanding of the consequences of loss of these blue carbon ecosystems.



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Opportunities within existing national laws, policies and initiatives with an impact on blue carbon management

Monitoring and evaluation

Monitoring the implementation of blue carbon protections on a decentralised level is difficult.

Establishing a baseline would allow the government to monitor changes in distribution and abundance of blue carbon ecosystems.

Though a specific REDD policy/law is not currently in place, the REDD-MRV system, that is, Measurement, Reporting and Verification, will require robust data collection and monitoring systems in order to reliably account for the changes in the amount of forest carbon over time. This will create transparency and allow for comparability to other REDD policies in other countries.

Involvement with local communities

Policy processes should be more inclusive of Malagasy people of all levels at the development stage.

Accepting input from multiple stakeholders at the developmental stage may help to encourage policy reform to create more realistic or effective policies.

Sustainable management contracts may be further simplified and specific benefit incentives (increased timber quotas or fishing rights, carbon proceeds, other) may be included.

Blue carbon interventions could be coupled with interventions in smart agriculture and energy supply (e.g. cook stove programmes).



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