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Ocean Country Partnership Programme: Madagascar Review of marine species protection Legislation



Phase 1 – Precautionary update of existing wildlife protection legislation to add priority marine species

**FINAL REPORT WITH APPROVED PROTECTED
SPECIES LISTS AND REVISED LEGAL TEXT
(English version 200825)**



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EXECUTIVE SUMMARY

Under the Ocean Country Partnership Programme (OCPP), JNCC provided support to the Government of Madagascar (ministries for environment and fisheries) in relation to marine biodiversity, specifically in the form of a review of the marine species requiring legal protection in Madagascar.

The principal regulation for protected species in Madagascar is decree 2006-400 under ordinance 60-096 which classes species as protected, game and pest species. The decree focuses on terrestrial species and birds. The 5 sea turtles occurring in Madagascar are the only marine species listed. Many prominent endangered and internationally protected species of marine megafauna are omitted, including coelacanth, sawfish, dugong, whales & dolphins and many sharks and rays. Endangered bony fish and invertebrates are also not protected.

Revision of Decree 2006-400 was identified as the most rapid route to the legal protection of priority marine species such as endangered marine megafauna, while the long-term conservation of commercially important but threatened marine species needs to be addressed in a sustainable manner through appropriate regulations under CITES or the fisheries legislation 2015-053.

The present activity focused on a review of Madagascar's legal obligations under international treaties, consideration of the IUCN Red List, CITES and other conventions to formulate criteria for determining marine species that should be fully protected or regulated. The review resulted in proposed lists for protected marine megafauna (mammals, reptiles, sharks and rays, coelacanth) and bony fish. The criteria and lists were workshopped in the presence of experts to generate validated lists. At the request of the MEDD, a list of invertebrates was prepared following the workshop using the same criteria.

The workshop itself was held on 26 March 2025 at the Forests Directorate of MEDD, with good attendance. All key government entities were represented, including the ministries for environment and fisheries, ASH, national marine scientific institutes (IHSM, CNRO), leading NGOs concerned with marine conservation (WCS, AACF, CI, WWF, Blue Ventures, Cetamada) and supporting consultants. JNCC was represented via FCDO throughout and directly through an online link in the summing up session.

The workshop approved the criteria for species selection and category, taking account of the IUCN Red List, Convention on Migratory Species (CMS), Convention on international trade in endangered species (CITES), Nairobi & Africa conventions, IOTC regulations, prior or existing Malagasy law, toxicity regulations, endemism, EDGE status (evolutionarily distinct and globally endangered), distinct populations or lineages, localised or fragmented distribution, stakeholder willingness, scientific evidence and economic value.

In total, **a total of 201 species were considered eligible for protection** (96 under category 1.1, 105 under category 1.2), **of which 167 species were recommended for protection** (95 as 1.1 and 72 as 1.2). Specifically, the work resulted in recommendations for the **strict legal protection of 95 species of marine megafauna** including the coelacanth, all marine mammals (whales, dolphins and dugong), all 5 sea turtles, the whale shark, 33 other sharks, 6 mobulid rays, sawfish and 15 other rays, and **the regulated protection of 72 species of marine mega and macrofauna**, including 50 sharks, 21 rays and one (01) bony fish (the spiny seahorse). Protection of 34 other taxa (including 11 other bony fish and 28 invertebrates including the coconut crab *Birgus latro*) was proposed but ultimately inconclusive. Such species could be addressed in a second phase which will focus on threatened species of marine macrofauna important for fisheries or trade (Table 0).

Table 0 – Summary of species category proposals, validations and deferrals

Taxon	Species / no.	Proposed category		Validated	Deferred
		Cat. 1.1	Cat 1.2		
Sirenians	<i>Dugong dugon</i>	1		1	
Baleen whales	10 species	10		10	
Beaked whales	5 species	5		5	
Dolphins	13 species	13		13	
Killer whales	3 species	3		3	
Sperm whales	3 species	3		3	
Turtles	5 species	5		5	
Sharks	83 species	33	50	83	
Mobulid rays	6 species	6		6	
Sawfish	<i>Pristis pristis</i>	1		1	
Other rays	35 species	14	21	35	
Coelacanth	<i>Latimeria chalumnae</i>	1		1	
Bony fish	11 species		11	0	11
Spiny seahorse (VU)	<i>Hippocampus histrix</i>		1	1 ¹	
Sea cucumbers	5 species		5	0	5
Coconut crab	<i>Birgus latro</i>	1		0	1
Corals	9 species		9	0	9
Gastropod molluscs	8 species		8	0	8
SUB-TOTALS	201 proposed	96	105	167 validated	34 deferred

The workshop also resulted in a **proposed legal text for the revised decree** which added prohibited actions more adapted to protected marine species, including transporting, killing, selling, transshipment, transformation, commercialisation, egg collection, degradation of critical habitat, disturbance and wounding.

In conclusion, the project was successful in identifying and achieving expert and institutional consensus on the criteria and legal protection of endangered species of marine megafauna, while deferring questions on the legal protection of smaller or commercially significant marine species of macrofauna. The sourcing of data to inform the process was effective, as were the legislative strategy (simple addition to decree 2006-400) and the participatory approach.

For the next phase, it is recommended to maintain the leadership of the MEDD but to integrate the MPEB and the marine species CITES scientific authority, IHSM, in the consideration of smaller and commercially important species and to reinforce the national CITES regulatory mechanism for marine species. The lists of bony fishes and invertebrates would provide the basis for **case studies for implementation**. A technical proposal for Phase 2 is to be submitted to JNCC by Resolve by July 14, 2025, for complete implementation imperatively before the end of 2025.

¹ Proposed by MPEB after the workshop – see Annex 3

INTRODUCTION

JNCC and the Ocean Country Partnership Programme

JNCC is a delivery partner for the Ocean Country Partnership Programme (OCP), a UK government-led programme provided for using Official Development Assistance (ODA Funding) under the Blue Planet Fund. More information on the OCP can be found here: <https://www.gov.uk/government/publications/blue-planet-fund/ocean-country-partnership-programme-ocpp>.

Through OCP, JNCC aims to support countries to strengthen marine science expertise, develop science-based policy and management tools and create educational resources for coastal communities. There are three main objectives for the OCP:

- **Marine Pollution:** supporting countries to be equipped with the skills and expertise needed to tackle, reduce and mitigate marine pollution through the development of science led policy and improve our understanding of the impacts of pollution, as well as identifying and supporting effective responses, we will make sure that communities are better equipped to prevent and manage marine pollution. This will improve health and livelihoods.
- **Sustainable Seafood:** supporting the development of the skills and expertise needed to adopt sustainable seafood practices to reduce risks such as the spread of zoonotic diseases from unsustainable or unsafe activities and support trade in safe seafood. Assisting countries to crack down on illegal, unreported and unregulated fishing by supporting the development of better management, monitoring and enforcement capabilities.
- **Marine Biodiversity:** supporting countries to develop the skills and expertise needed to establish designated, well-managed and enforced marine protected areas to support healthy ecosystems with thriving biodiversity and fisheries that communities rely on for food and livelihoods. Achieving these objectives by strengthening marine science expertise, developing evidence-based policy and management tools, and creating educational resources for coastal communities.

JNCC, on behalf of the OCP, is working in collaboration with the Madagascan Government to provide technical assistance focused on marine biodiversity, including the development of evidence-based policy and management tools (such as marine protected species regulations in the present case). This contract is being delivered on behalf of the Madagascan Government's Ministries of the Environment and Sustainable Development (MEDD) and of Fisheries and Blue Economy (MPEB).

Marine protected species in Madagascar

Madagascar's principal existing species protection legislation (Decree 2006-400) is based on older legislation (ordinance 61-096) relating to the hunting of terrestrial wildlife which classifies species as:

- Category 1.1 - Absolutely protected (cannot be **hunted, captured or detained**) (limitative listing)

- Category 1.2 – Protected but can be hunted or captured under regulated conditions and subject to an annual quota fixed for each species by the CITES authority (limitative listing)
- Category 2 – Pests (can be hunted freely at all times)
- Category 3 – Game (subject to hunting licence) (indicative, non-limitative listing)

Decree 2006-400 covers no marine species other than the 5 species of sea turtles occurring in Madagascar's waters and a number of seabirds, most of which were classified by IUCN as 'LC' (Least Concern) at the time. Dugong (*Dugong dugon*) and sawfish (*Pristis spp.*) (which were already known to be on the brink of extinction in Madagascar), coelacanth which was already classified as IUCN CR, whale shark (for which Madagascar had sponsored CITES-listing previously) and cetaceans, several of which were already classed by IUCN as threatened in 2006, are all striking omissions from decree 2006-400.

This omission became particularly significant when Madagascar abrogated the fisheries ordinance of 93-022, under which marine mammals (and therefore dugongs and cetaceans) enjoyed blanket protection, and replaced it with Fisheries Law 2015-053, which protected only species to be listed under the law. Since no lists have been issued under law 2015-053 both dugong and all cetaceans fell out of legal protection with the abrogation of ordinance 93-022 in 2015.

Independent academic analysis of the 2006-400 decree subsequently confirmed only partial correlation between threatened status and the degree of protection provided, and that several marine species which Madagascar was under an international legal obligation to protect were not included (Rakotoarivelo et al 2011). Furthermore, threatened fishes such as certain chondrichthyans (sharks and rays), the coelacanth *Latimeria chalumnae* (IUCN CR), some threatened teleost fish (such as the bumphead parrotfish *Bolbometapon muricatum* IUCN VU) and various marine invertebrates were not included, despite the existence of IUCN threatened status, robust scientific evidence for high levels of threat or the existence of obligations to protect under international conventions. In short, for marine species (with the exception of marine turtles), decree 2006-400 was a missed opportunity.

A review of the process used to develop the 2006-400 decree, interviewing some of those concerned, has confirmed that it was a relatively rapid and simple process. Supported by a project of the French Embassy and coordinated by the Durrell NGO, thematic experts were invited to provide lists of species in their specialty taxon that should be fully or partially protected. No marine experts were consulted. The decree was approved through a simple consultation process and the updated decree was adopted relatively quickly. This demonstrates that updating decree 2006-400 to add marine species offers the opportunity for a relatively rapid and simple procedure to secure legal protection for selected priority marine species while awaiting a more comprehensive review and regulations for a broader range of marine species.

The opportunity for a more comprehensive process for marine species exists under Madagascar's fisheries legislation. In 2015 Madagascar promulgated a new Fisheries and Aquaculture Law (2015-053) (replacing fisheries ordinance 93-022), whose general aims include the science-based conservation of marine resources, precautionary and ecosystem approaches and critical habitat protection. By Article 18, the law provides for protection of threatened marine species (such as corals, marine mammals, seabirds, marine turtles and aquatic organisms) to be prescribed on a list established by regulations and which are the subject of conservation measures. No such regulations have yet been passed under the fisheries law. Nevertheless, law 2015-053 ultimately offers a more modern framework that is better adapted to the conservation of marine species in the context of an ecosystem approach.

A positive feature of the decree 2006-400 is the taxonomic classification of species in accordance with the main vertebrate Classes (mammals, birds, reptiles, amphibians, fish) and the helpful classification of mammals by Order or lower taxonomic level (primates, carnivores, tenrecs and rodents). Such a classification is in accordance with international best practice and is indispensable for the effective application of the decree. Such a classification will certainly be important for marine species in the revised decree.

A further positive feature of decree 2006-400 is the use of Malagasy, French and English vernacular names where available. While vernacular names are often variable and imprecise, they can provide a valuable starting point for the precise identification of a species. Malagasy vernacular names for marine species are well developed and have been used in several marine identification guides and scientific publications.

Given Madagascar's unique marine ecology, the importance of subsistence fishing activity to its people and the contribution of fisheries to the nation's economy, it is vital that the legal protection of species takes account of the significant ecological and socioeconomic impacts that would arise in the event of protection measures. The Fisheries law of 2015-053, which explicitly takes account of the needs of fishing communities, provides a well-adapted basis for such an approach.

Proposed approach to establishing legal protection for threatened marine species

The present project seeks to benefit from **the opportunities to** achieve the rapid and ultimately comprehensive legal protection of threatened marine species through a 2-step process:

Step 1 (February-March 2025) – Achieve rapid precautionary protection of priority threatened taxa by updating Decree 2006-400 using a relatively simple process taking account of Madagascar's obligations under international agreements and the best available scientific evidence for conservation status. The opportunity will be taken to list under Category 1.2, marine species which are listed under Appendix 2 of CITES (unless already included in Category 1.1). Step 1 essentially corrects for the evident omissions of Decree 2006-400.

Step 2 (April 2025- March 2026) – Achieve sustainable and comprehensive legal protection of a wider range of threatened marine taxa under Madagascar's modern fisheries law 2015-053 based on a comprehensive assessment of species' status and consideration of the needs of small-scale fishing communities, supported by newly collected data. Step 2 will take account of Madagascar's obligations under CITES in relation to marine species in international trade (such as tuna, sharks and sea cucumbers) but will also take full account the significant ecological and socioeconomic impacts that would arise in the event of protection measures.

The present activity for rapid small-scale funding (Feb-Mar 2025) focuses on Step 1.

A subsequent proposal, for more substantial financing between April 2025 and March 2026 (which will be developed and submitted by WCS) **will focus on Step 2.**

To achieve the required outcome, Resolve will continuously engage with MEDD, MPEB, relevant national institutions, WCS and the JNCC to compile a proposed list of selected priority marine species for rapid legal protection based on available data and a range of previous studies.

Project Aims and theory of change

The ultimate goal of the project is a comprehensive, science-based / evidence-based, update of Madagascar's marine species protection legislation which is adapted to local context and responsive to global conditions.

The theory of change is that such an update is best achieved by a 2-step process in which:

- **Step 1 is a precautionary update of Decree 2006-400** to include priority marine species for which data are available and Madagascar's international legal obligations are clear. This step will help key stakeholders prepare for Step 2.
- **Step 2 is to achieve a comprehensive and sustainable revision of protected marine species regulations** under the Fisheries Law of 2015-053 within the framework of an ecosystem approach taking account of fishing communities and global targets on the conservation of biodiversity.

The achievement of Step 2 could be advantageously accompanied by parallel work to reinforce Madagascar's capacity in relation to the regulation of marine species listed under CITES, notably for chondrichthyans and sea cucumbers.

The aims of the project will be met through the development and establishment of outputs listed in Section 4.

To meet the overall aims of this project (Section 0), the specific objectives are:

1. **Undertake a rapid review** of priority taxonomic groups to identify and compile a list of globally threatened marine species occurring in Madagascar's waters and marine species which Madagascar has a legal obligation to protect under international agreements or for which there is strong evidence for the need for conservation.

(Note: For the purpose of this first stage, the priority taxonomic groups will be Cetaceae, Sirenia, Chelonia, Chondrichthyes, Coelacanthid and Teleost fish. Invertebrate phyla or classes of macrofauna including **Mollusca**, Cnidaria, Echinodermata, Crustacea and other taxonomic groups will be considered only where Madagascar is under a clear and explicit legal obligation to protect under international agreements).

2. **Organise and conduct a national technical workshop** including key stakeholders and national experts in the priority taxa to review, revise and approve the proposed list of marine species for immediate protection, and to make recommendations on next steps (**the workshop has been programmed for Wednesday 26th March, at DGF, Nanisana, Antananarivo and online**).

Project Objectives: Detailed Tasks

The project objectives are:

1. **Work Package 1: Produce a marine threatened species list for updating Decree 2006-400** for each priority taxonomic group supported by an overview document (this report) which justifies the species proposed for immediate protection under Decree 2006-400 and including proposed consequential revisions to the text of Decree 2006-

400 to take account of the specific characteristics of marine species (primarily consultancy work).

2. **Work Package 2: Hold a national technical workshop** to present and review the proposed list of species for immediate protection under Decree 2006-400, resulting in a finalised list supported by formal recommendation to the MEDD and MPEB (primarily workshop organisation).

All outputs (WP1 and WP2) should be accompanied by a detailed, fully reproducible methodology with referenced data sources, to enable regular updates of the protected species lists and legal mechanisms over time.

METHOD

Detailed methodology

Work Package 1: Produce a marine threatened species list for updating Decree 2006-400

A list will be prepared for each priority taxonomic group supported by justifications and **an overview document** (this report) which justifies the species proposed for immediate protection under Decree 2006-400.

The production of a list of species which are proposed for legal protection involves the sequential steps of compiling, reviewing and analysing data followed by the application of

criteria for the selection and categorisation of species. These can be broken into the following main phases or steps:

- Phase 1 – Data and information compilation
- Phase 2 – Review and Analysis of data and legal texts
- Phase 3 – Selection and categorisation of species
- Phase 3a – legal analysis and drafting of modifying decree
- Phase 4 – Write overview report

Phase	Task
Data and information compilation	<p>Retrieve original 2006-400 decree list in Excel format</p> <p>Retrieve Resolve submission to REBIOMA of 2009 on marine species</p> <p>Review MCD paper on decree 2006-400 by Rakotoarivelo et al 2011</p> <p>Retrieve WCS compilation for chondrichthyans and other marine species undertaken in 2023, together with all relevant submissions by WCS to GoM, Nairobi Convention, IOTC etc.</p> <p>Review compilations and drafts prepared by other consultants</p> <p>Compile bibliography of published and grey literature relevant to the status of Madagascar's marine species</p> <p>Compile existing and past legal texts relevant to marine species protection</p> <p>Extract vernacular names (Malagasy, French, English) for chondrichthyans and marine mammals</p>
Data review and analysis	<p>Confirm the marine species which Madagascar is <u>legally obliged</u> under international agreements to protect</p> <p>Confirm marine species which were protected under previous legislation but which has been repealed</p> <p>Identify marine species for which there is scientific evidence of endangered status in Madagascar</p> <p>Review the legal aspects of marine species protection and identify necessary adjustments of the text of decree 2006-400 for marine species</p> <p>Finalise working criteria for the selection and categorisation of marine species</p>
Selection and categorisation with justifications	<p>Interview legal consultant responsible for the MEDD draft revised decree and species list to discuss categories etc.</p> <p>Apply the working criteria to Madagascar marine species to generate lists by category 1.1, 1.2, 2 and 3</p> <p>Develop precautionary argumentation for the listing and categorisation of protected marine species</p> <p>Select marine species for Category 1.1 (including marine species in CITES Annex 1)</p> <p>Select marine species for Category 1.2 (including marine species listed under CITES Annex 2)</p> <p>Write concise justifications for the listing of each taxon</p> <p>Draft a more general 'Expose des Motifs' to accompany the proposed revised decree</p>

Working criteria for species selection and categorization

Our working set of criteria for listing species as protected under Categories 1.1 or 1.2 are set out below. These should be considered as a working set of criteria and will be continuously reviewed and updated as the work proceeds and discussed, revised and validated at the technical workshop.

IUCN Red List – if a species is listed by IUCN as CR or EN, category 1.1 will be applied. If VU or less, category 1.2 will be applied (with exceptions – see further criteria below).

Notes:

We propose CR and EN for category 1.1. EN still means a significant population decline, and the term "Endangered" (although not all definitions align) is the term used in many conventions and documents (CITES, Nairobi Convention, FAO Code of Conduct for Responsible Fisheries etc.). Many international texts call for the protection of 'endangered species'.

Alignment with Nairobi Convention - In this regard, WCS itself has proposed that all 'EN' species should be fully protected to every WIO government and to the Nairobi Convention and is obliged to maintain these recommendations for consistency).

Alignment with fisheries texts - Note also that many key texts call for 'sustainable fisheries' and 'halting extinction' and do not allow fishing of an 'Endangered species', which according to IUCN definition is a species "facing a very high risk of extinction in the wild". So, by definition, any species with EN cannot be fished sustainably, and should therefore be listed as Category 1.1.

Regarding VU and NT IUCN status, we propose a minimum of Category 1.2 (VU means "facing high risk of extinction in the wild" while NT (Near Threatened) means "not yet threatened but could become so in the near future if current pressures are not reduced". Category 1.2 does not call for catch prohibition but requires a more careful approach to management through some controls.

Alignment with Nairobi convention - Note that WCS has itself proposed VU and NT for Annex III (requires harvest control) of the Nairobi Convention Protocol on Protected Areas and Wild Fauna and proposed these categories for requiring some level of management at national level, to most WIO states. WCS is obliged to follow this policy.)

Alignment with CITES - Finally, it should be noted that many shark/ray species that are listed in CITES Appendix II and/or in CMS Appendix II but which are not strictly protected anywhere, are either VU or NT under the IUCN Red List and would therefore qualify for category 1.2 at a minimum.

CITES Appendices 1 & 2 - if a species is in CITES Appendix 1, it will be listed as fully protected under category 1.1. If a species is in Appendix 2, category 1.2 will apply. This aligns with Malagasy government practice, which has tended to regard CITES Appendix I species as protected under national law, even though strictly speaking CITES regulates only international trade.

CMS status Appendices 1 & 2 - if a species is listed in Appendix 1 of CMS, category 1.1 will apply. If listed in CMS Appendix 2, category 1.2 will apply.

Alignment with Indian Ocean Tuna Commission (IOTC) status - Species with retention ban under IOTC will be classed as Category 1.1. (Note: the only additional species banned under IOTC but not covered by CMS Appendix I are thresher sharks, which should also be considered here for category 1.1. This is how WCS has proposed the treatment of IOTC-banned species to the Nairobi Convention countries.

Equal or stronger protection than under existing decree 2006-400 - it is proposed NOT to downgrade any species from their existing status under Decree 2006-400 unless there is good justification for it. Therefore, all species of sea turtles will remain integrally protected.

Equal or stronger protection than other existing or previous national decrees - any other law or regulation protecting a species should be considered, adopting the highest level of protection in the present or past legislation. Thus, dugong, which were integrally protected under the laws of the 1960s, will be restored to protected status.

Species prohibited for health reasons - certain species of large-bodied sharks are prohibited from human consumption for the health risks they pose, such as ciguatoxicity. Where any decree does not allow *consumption*, catch should not be allowed and Category 1.1 should be applied. This does not apply to the purely seasonal or ad hoc banning of species for reasons of ecotoxicity, such as is practised for small pelagic fish in the warm season, for example.

Other factors to be taken into consideration:

- **Status under regional conventions (Africa Convention, Nairobi convention etc.)** – the Nairobi Convention currently lists only a few marine mammal species, and no sharks or rays.
- **Existing Annex II of the Protocol on protected areas and Wild Fauna of the Nairobi Convention** calls for strict protection of listed species which will be classed as Category 1.1.
- **Annex III of the protocol** (defined as "harvestable species requiring protection") is aligned with category 1.2 under Decree 2006-400.
- **Endemicity** – endemicity (regional, national or local) generally favours a higher level of protection. Unless regional conventions propose a higher category, it is proposed that **national or local endemic status** will raise a species by one category, because of the higher biodiversity importance.
- **EDGE status** – Species listed as 'EDGE' (Evolutionarily Distinct and Globally Endangered) such as sawfish and dugong will be considered as Category 1.1. A similar practice is already being adopted for the plants of Madagascar by MBG.
- **Additional genetic distinctiveness status** – account will be taken of the genetic status of species populations and lineages in Madagascar. For example, Madagascar dugongs form part of a restricted range lineage.
- **Localised / fragmented distribution** – a local or fragmented distribution would also raise a species by one category (although data are often too limited to determine this).
- **Stakeholder willingness to protect** – for some species in certain areas, agreement not to harvest has been negotiated with local stakeholders (such as for the bumphead parrotfish *Bolbometapon muricatum* in the NNE), which would favour a higher protected status at least in those areas. To be judged on a case-by-case basis.

If species do not meet the above criteria they could be considered for non-limitative listing as *gibier* (game) (Category 3) or as pests (Category 2). However, this goes beyond the current activity which is **limited to protecting priority marine species**.

Note that it will be important eventually to define what is a 'pest' species in the context of marine ecosystems (e.g. invasive marine species) and to reverse the order of categories 2

and 3 to establish a more logical sequence of protected > game > pest species within a single decree.

Work Package 2: Hold a national technical workshop and follow-up actions

A national workshop will be held to present and review the proposed list of species for immediate protection under Decree 2006-400, resulting in finalised lists supported by formal recommendations to the MEDD and MPEB (primarily workshop organisation).

The method for work package 2 is to:

- Make enquiries with MEDD about suitable venues and make a reservation
- Advise and mobilise key participants of the date and venue
- Consult the judicial service of the MPEB on the approach to be taken
- Develop a set of terms of reference for the workshop for approval by MEDD
- Identify the list of participants and seek approval of MEDD
- Prepare a PowerPoint presentation to be given in 2 parts (Resolve and WCS)
- Hold, facilitate and report on the workshop, taking account of participant recommendations
- Undertake any further consultations or actions required
- Prepare agreed final species lists and decree text for non-objection of the workshop participants and relevant authorities (MPEB and MEDD)
- Finalise overview document and marine protected species lists and make final revisions to the decree text

Timescale

Provisional dates for delivery of the contract outputs are set out below. Exact dates are to be agreed at the start-up meeting based on Contractor and JNCC staff availability.

Output	Planned Date
Start-up meetings (via video call) between MEDD, MPEB, JNCC, WCS-Resolve and IHSM as required to agree methodology and work plan	28 February 2025
First draft of proposed list of marine species by priority taxonomic group for protection under Decree 2006-400 based on existing available data and previous studies together with supporting arguments	24 March 2025
Expert stakeholder workshop to present, review and validate proposed species lists and mechanisms	26 March 2025 (or up to 1 week later if needed)
Interim products delivered including workshop report	28 March 2025
Final report, final lists and draft decree text	July 2025

RESULTS

Phase 1 – Data and information compilation

Identified data and information sources

The following key documentary resources have contributed to this report in order of exploitation:

- Annex to Decree 2006-400 (original Excel version)
- Tabulation of marine protected species by Resolve prepared for REBIOMA (2009)
- Chapter 7 (Marine & Coastal Ecosystems and Conservation) in New Natural History of Madagascar, Princeton University Press (ed. S Goodman)
- Report by WCS dated July 2024 entitled ‘Revision of Madagascar’s Decree on classification of wild fauna species’
- Proposed updated annex to decree 2006-400 prepared by WCS (marine and terrestrial species)
- Draft revised Decree 2006-400 and annex prepared by MEDD consultants (including proposed draft decree for game (*gibier*) species)
- Annotated Checklist of the Fishes of Madagascar (Fricke et al 2018)
- List of Fishes of Madagascar listed in IUCN Red List (Mongabay, 2019)

The analysis of these documentary resources as supported and informed by several online data and information sources, notably:

- IUCN Red List of threatened species
- Text and annexes of key international conventions (CMS, CITES, CBD etc.)
- Text and annexes of regional conventions (African convention, Nairobi convention)
- Regional fisheries agreements and annexes (notably the IOTC)
- Online scientific journals

The key findings from the above documents and sources include:

Information source	Key findings
Decree 2006-400 with annex (Annex 1)	Only 5 marine species are covered – 5 sea turtle species Many endangered or threatened marine species are omitted Decree annex provides vernacular as well as scientific names Decree proposes 4 categories of species: 1.1. Integrally protected (limitative) 1.2. Protected subject to management (limitative) 2. Nuisance species (indicative) 3. Game species (indicative)
Resolve table 2009 prepared for REBIOMA (Annex 2)	The table identified the following types of protected species: Marine mammals (cetaceans and dugong) – a list of 28 species Marine birds – a list of 22 seabird species Marine reptiles (sea turtles) – all 5 species occurring in Madagascar Bony fishes (16 species for possible protection identified with IUCN ratings) Cartilaginous fishes (123 sharks, rays and chimeras) with IUCN ratings (including just 1 CR <i>Pristis pristis</i> and 1 EN (bottlenosed skate or <i>Rostroraja alba</i>)

	Marine invertebrates listed under international agreements (17 taxa of varying scope and 8 single species)
Ch7 of New Natural History – see publication	Provides additional evidence for the endangered status of: Coelacanth <i>Latimeria chalumnae</i> (IUCN CR) Chondrichthyan fishes (sharks, rays & chimeras – 117 species) Whale shark <i>Rhincodon typus</i> (IUCN VU) Sawfish <i>Pristis pristis</i> (IUCN CR) (with historical records) Sea turtles (updates on status of all 5 species in Madagascar) Dugong <i>Dugong dugon</i> (IUCN VU) (including historical capture records and status of the Madagascar-Comoros lineage) All cetacean species in Malagasy waters (26 species reported) Omura's whale <i>Balaeonoptera omurai</i> (IUCN DD) Humpback whale <i>Balaeonoptera novaeangliae</i> (IUCN LC)
Internal report by WCS July 2024 (Annex 1)	Presents the case for the legal protection of 124 shark and ray species, 29 marine mammals and 5 turtles in Madagascar
Proposed updated annex to 2006-400 (WCS)	Exhaustive draft annex includes both terrestrial and marine species (not only sharks and rays)
Draft revised decree 2006-400 by MEDD consultants (separate file)	Proposes separate decrees for game species and protected and pest species (the present work considered only species for protection under categories 1.1 or 1.2 and did not consider 'game' species)
Annotated checklist of fishes (Fricke et al 2018)	Identifies all fish species in Madagascar, giving their IUCN ratings
List of IUCN listed Madagascar fishes (Mongabay 2019)	Extracted from Fricke et al 2019

Review of parallel work by MEDD consultants to update Decree 2006-400

In the course of discussions with MEDD it was discovered that parallel but only partially completed work had been undertaken by a senior lawyer working with national scientists on an update of the same wildlife decree 2006-400.

Copies of the partially completed work products were shared by MEDD and reviewed. Key findings of this review were:

- An attempt had been made to include all potentially threatened terrestrial and marine species into an updated annex to decree 2006-400
- The different fauna groups were not arranged according to standard taxonomical practice
- Incomplete indications were given of the international conservation status of the species (IUCN Red List, CITES, CMS etc.)
- Both the terrestrial and marine lists were found to have significant gaps, because numerous well-known IUCN CR and EN species had been omitted, including species that are already included in the current version of the decree.
- It was concluded that the work of identifying species for protection was preliminary and incomplete and that the provisional lists should not be relied on
- The legal text of the decree had been revised to propose separate decrees for game species, to be covered in one decree, and protected and pest species, to be covered by another decree.

In particular, it was proposed to create a separate decree for game (*gibier*) species for which hunting would be permissible under a permit. One stated reason for this was that it would

facilitate the authorisation of game hunting to community-based associations (CoBa or VOI) under the law of management transfer to local communities (96-025).

However, reasons against such separation were identified and include:

- It is more logical to have all species in a single hierarchically structured regulation, progressing through the protected (1.1, 1.2), game (3) and pest (2) categories.
- Authorisation for the hunting of game (or fishery) species would still be possible under the game species section of the annex.

In discussions of the terminology of the decree, it was agreed that additional terms could be added to better adapt the regulation to marine species. For example:

- The term 'fished' could be added after 'hunted' for clearer application to marine species
- The terms 'directed or unintentional' could be added to highlight that by-catch of protected species would also be covered under the law.
- The term 'hidden' could be added to the illegal acts given the common practice of hiding the evidence of illegal capture adopted by fishers, such as sea turtles caught accidentally in gill nets.

The senior lawyer concurred with these assessments and the conclusion that the scientific work behind the existing draft annexes was preliminary and incomplete. Nonetheless, useful legal thought and analysis had been undertaken and the discussions were constructive.

Therefore, the senior lawyer was invited to join the Resolve team to reinforce its legal expertise, which the lawyer kindly accepted.

Phase 2 – Review and Analysis of data and legal texts

All assembled data and legal texts were reviewed and analysed. The main preliminary conclusions were as follows:

Data available on marine megafauna species

Most if not all of Madagascar's marine megafauna species have been assessed for IUCN Red List status, including marine mammals, reptiles, chondrichthyans, coelacanth and large teleost fishes.

Most megafauna species have been given an IUCN rating (CR, EN, VU, NT, LC), with a few exceptions which are listed as DD (Data Deficient) notably Omura's whale.

Several marine megafauna populations within Madagascar have been scientifically studied, notably:

- Cetaceans – Humpback whale, Omura's whale, humpback dolphins – multiple surveys around the country, especially along the west coast
- Sirenia – *Dugong dugon* – collection of data on sightings, captures, with data collated going back to 1902
- Sea turtles – research over the past 30-40 years on migration, nesting and hunting around Madagascar's coasts with data going back to the 1900s
- Chondrichthyans – studies on shark fin trade, value chains, monitoring of chondrichthyan fisheries (especially in Nosy Be and the southwest), surveys on the occurrence of sawfish, going back to the 60s but especially since the 1990s.
- Coelacanth, which has been the subject of several scientific studies.
- Large bony fish – while several large bony fishes are threatened or endangered, there have been no population assessments of any species in Madagascar.

Data available on invertebrate species

Larger invertebrates are frequently the subject of fishing and trade, and studies have been made internationally.

Few studies have been made on the conservation status of invertebrates in Madagascar with some notable exceptions:

Shrimp, mud crab, lobster, octopus and **sea cucumber** stock evaluations were undertaken by SWIOFish2 (Resolve/IHSM/IRD 2022). Of these, only mud crab *Scylla serrata*, lobster *Panulirus homarus* and octopus *Octopus cyanae* were assessed to species level. In any event, none of these species are globally threatened and none is considered endangered by IUCN. Shrimp is a multi-species fishery, with at least 5 species targeted in Madagascar, none of which is globally threatened.

In contrast, **sea cucumbers** support a multi-species fishery of over 20 species, of which 3 species exploited in Madagascar are globally threatened (IUCN), one 'Data Deficient' and four are listed in CITES Appendix 2):

- ***Thelenota ananas* (EN – CITES Annex 2)**
- *Thelenota anax* (DD – CITES Annex 2)

- ***Holothuria nobilis* (EN – CITES Annex 2)**
- ***Holothuria fuscogilva* (VU – CITES Annex 2)**

Legal texts

The review of international texts identified the following conventions ratified by Madagascar which include directions on protected marine species:

- Convention on Migratory Species (CMS)
- Convention on International Trade in Endangered Species of Flora and Fauna (CITES)
- Africa Convention
- Nairobi Convention
- Indian Ocean Tuna Commission (IOTC) convention

The review of applicable national legal texts confirmed that Decree 2006-400 is the only text protecting species of fauna in Madagascar.

However, it was learned during the review that the Ministry for Fisheries and Blue Economy (MPEB) had recently employed regional fishing bans for sea cucumbers in the North of Madagascar as part of a tradition of independent regulation to protect over-exploited marine species.

A consultation was therefore held with the head of the legal service at the MPEB to determine the status of species regulation by the fisheries ministry. Historical texts on fishery species regulation were also extracted from a key baseline report supported by FAO (Beurrier 1982).

The above findings and data were used to generate the first draft lists of proposed protected species for consideration at the national workshop.

Phase 3 – Selection and categorisation of species

Criteria for species selection and category

The following criteria were presented and approved by participants of the workshop:

Criteria for Species Selection and Categorization

IUCN Red List

- If a species is listed by the IUCN as CR or EN, category 1.1 will be applied.
- If it is VU or NT, a minimum of category 1.2 will be applied

CITES Annexes 1 & 2

- If a species is listed on CITES Appendix 1, it will be listed as fully protected in Category 1.1.
- If a species is listed on CITES Appendix 2, Category 1.2 will apply.

CMS Status Annexes 1 and 2

- If a species is listed in CMS Appendix 1, Category 1.1 will apply.
- If it is listed in Appendix 2 of CMS, Category 1.2 will apply.

Indian Ocean Tuna Commission (IOTC)

- Species prohibited from retention under the IOTC will be classified in category 1.1

Equal or greater protection compared to Decree 2006-400

- It is proposed that a species should NOT be downgraded from its current status under Decree 2006-400 unless there is a good rationale for doing so. (Therefore, all sea turtle species will remain in Category 1.1.)

Equal or better protection than other existing or previous national decrees

- Any other legislation or regulations protecting a species should be considered, adopting the highest level of protection provided for in current or past legislation. Thus, dugongs, which were fully protected under the laws of the 1960s and under Ordinance 93-022 on fishing, will be restored to their protection status (category 1.1).

Species banned for health reasons

Some species of large sharks are prohibited for human consumption because of the health risks they pose, such as ciguatoxicity.

- Where consumption is prohibited, catches should not be allowed and category 1.1 should be applied.

(NB: This does not apply to the purely seasonal or one-off prohibition of species for reasons of ecotoxicity, as is the practice for small pelagic fish during the warm season, for example.)

Other factors to consider

- **Status under regional conventions (Africa Convention, Nairobi Convention, etc.)** – the Nairobi Convention currently lists only a few species of marine mammals, and no sharks or rays.
- **The existing Annex II of the Protocol on Protected Areas and Wildlife of the Nairobi Convention** calls for the strict protection of listed species that will be classified as Category 1.1.
- **Annex III of the protocol** (defined as "exploitable species in need of protection") is aligned with category 1.2 of Decree 2006-400.
- **Endemicity** – Endemicity (regional, national, or local) generally justifies a higher level of protection. Unless the regional conventions propose a higher category, it is proposed that the national or local endemic status elevates a species by one category, due to the higher importance for biodiversity.
- **EDGE Status** – Species listed as "EDGE" (Evolutionarily Distinct and Globally Endangered), such as sawfish and dugong, will be considered Category 1.1.
- **Additional genetic distinction status** – the genetic status of species, populations and lineages in Madagascar will be taken into account. For example, dugongs from Madagascar are part of a lineage with a restricted range.
- **Localized/fragmented distribution** – a local or fragmented distribution would also elevate a species to a higher category (although the data are often too limited to determine this).
- **Willingness of stakeholders to protect** – for some species in certain areas, a no-harvest agreement has been negotiated with local stakeholders (as for the humpback parrotfish *Bolbometapon muricatum* in the NNE) (IUCN VU), which would justify a higher protection status at least in these areas. To be judged on a case-by-case basis.

- **Scientific evidence** – if there is strong scientific evidence of the endangered or threatened status of a marine species considered to be at or above the IUCN VU status, it will be considered. In exceptional cases, scientific evidence alone will be sufficient to place the species in category 1.2 or even 1.1.
- **Economic value** - economic values can be considered on a case-by-case basis as a secondary factor for determining protection status.

Species tables presented at the workshop

The above review and analysis have resulted in the production and/or verification of a series of tables of priority species for legal protection, summarised as follows:

Marine Mammals and Reptiles – all marine mammals of Madagascar (including 34 cetaceans and the dugong) – proposed for full protection under Category 1.1. Marine reptiles included the confirmed list of 5 species of sea turtles for continuing full protection as Category 1.1. **[Note:** While sea snakes (Elapidae) are reported to occur in Madagascar, there is an almost total lack of data on their distribution or conservation status and no evidence of any threats to these rare species].

Chondrichthyan fishes (sharks and rays) – a comprehensive list of 125 chondrichthyan species including 54 species to be protected under Category 1.1 and 70 species to be protected under category 1.2. was prepared by WCS and finalised at the workshop.

Fishes (Coelacanth and bony fishes) – a single species, the Indian Ocean Coelacanth *Latimeria chalumnae* CR (CITES app. 1) is proposed for full protection under category 1.1. Evidence for the need for protection is found in relevant scientific publications. 16 species of bony fishes were identified for potential protection, including 5 EN, 10 VU, 1 LC and 1 DD. All except the Southern meagre *Argyrosomus hololepidotus* DD were proposed as **Category 1.2** species, including the Bumphead parrotfish *Bolbometapon muricatum* (IUCN VU).

Invertebrate species – given the large number of invertebrate species and the comparative lack of data, it was not initially proposed by the consultants to add invertebrate species to the annex of Decree 2006-400, preferring to leave invertebrates for a subsequent comprehensive review of species to be protected under fisheries legislation (Phase 2 of the present work).

The workshop specifically considered the lists of proposed protected species for marine mammals (whales, dolphins, dugong), reptiles (sea turtles), sharks and rays and large fishes, but did not consider invertebrates.

Species tables validated at the workshop (marine mammals, marine reptiles and sharks & rays)

The lists for marine mammals, reptiles and sharks and rays, subject to minor subsequent corrections and adjustments, were reviewed and validated at the workshop with the assistance of expert participants from IHSM/AACF²/Cetamada (marine mammals) and CNRO/WCS (sharks and rays).

² African Aquatic Conservation Fund

Species tables reviewed but finalised after the workshop (fish)

The list of fishes was reviewed and made the subject of subsequent review and validation by expert staff from MEDD and MPEB (including ASH), and then subsequently circulated to participants for non-objection. In an official response and subsequent exchanges, the MPEB disagreed to the protection of species already subject to international or regional fisheries regulation (e.g. Southern Bluefin tuna *Thunnus macoyii*) but did accept the full protection of the coelacanth *Latimeria chalumnae* under category 1.1 and recommended the protection of the Spiny Seahorse *Hippocampus histrix* under Category 1.2. The official MPEB letter and subsequent email are provided in annexes 4 and 5.

Species tables developed and still to be finalised (invertebrates)

At the end of the workshop the MEDD insisted robustly that invertebrate species should also be considered, especially sea cucumbers, of which several are now IUCN and CITES-listed. It was agreed to conduct an additional review to consider sea cucumbers and other marine invertebrate species that are threatened and CITES listed. The review was conducted by Resolve/WCS and circulated to participants for non-objection. The invertebrate list includes species that are:

- **Sea cucumbers** (Stichopodidae & Holothuridae) listed by IUCN or in CITES annexes (5 species)
- **Marine invertebrate species listed under CITES and other conventions** ratified by Madagascar (Africa, Nairobi) including:
 - **Corals** (9 species including black, whip, stony, blue, organ pipe, fire and lace corals)
 - **Molluscs** (including five (5) bivalves (giant clams (*Tridacna* spp etc.), the Nautilus, three (3) gastropods (conch, triton, trochus) – highly prized for the ornamental shell trade,
 - **Decapod crustaceans** (7 species including 6 species of lobsters and the coconut crab *Birgus latro* IUCN VU – highly threatened throughout its range, potentially still present in Madagascar, and universally protected throughout the Indian Ocean).

The final lists for the marine species considered at the workshop (marine mammals, marine reptiles, sharks, rays and fish) are assembled in Annexes 2a – 2d.

The proposed list of 16 fishes was agreed at the workshop subject to 5 species requiring further consideration by the MPEB. However, in the MPEB's response (Annex 4), the Secretary General chose to question the entire list of fishes, recommending that only the coelacanth *Latimeria chalumnae* and one species of seahorse, the Spiny Seahorse *Hippocampus histrix* (IUCN VU) (of which Madagascar has many species) should be protected.

The proposed list for protected invertebrate species is presented in Annex 2e. Regarding invertebrates, a comment was received from ASH to the effect that the list had not been considered in the workshop and by implication could not be the subject of non-objection by the workshop participants (see ASH email in Annex 5).

Since several of the invertebrates, in particular the sea cucumbers, are important for fisheries and trade, and were outside the scope of phase 1, it is recommended to treat these species together with the bony fishes as case studies for the next phase and to address them in the Phase 2 proposal, which will include development of a scientific advisory and regulatory mechanisms for threatened marine macrofauna species important for fisheries and trade.

Summary species tables

Overall result

In total, the work resulted in recommendations for the strict legal protection of the coelacanth, 35 marine mammals (including whales, dolphins and dugong), 5 sea turtles, whale shark, 6 mobulid rays, 33 sharks and 15 non-mobulid rays. Protection of 11 bony fish and 28 invertebrates including the coconut crab *Birgus latro* was proposed but ultimately inconclusive (Table 1). Such species could be deferred to a second phase which focuses more on threatened species of threatened macrofauna important for fisheries or trade.

Table 1 – Species considered and validated for legal protection

Taxon	Species / no.	Proposed category		Validated
		Cat. 1.1	Cat 1.2	
Sirenians	<i>Dugong dugon</i>	1		1
Baleen whales	10 species	10		10
Beaked whales	5 species	5		5
Dolphins	13 species	13		13
Killer whales	3 species	3		3
Sperm whales	3 species	3		3
Turtles	5 species	5		5
Sharks	83 species	33	50	83
Mobulid rays	6 species	6		6
Sawfish	<i>Pristis pristis</i>	1		1
Other rays	35 species	14	21	35
Coelacanth	<i>Latimeria chalumnae</i>	1		1
Bony fish	11 species		11	0
Spiny seahorse (VU)	<i>Hippocampus histrix</i>		1	1 ³
Sea cucumbers	5 species		5	0
Coconut crab	<i>Birgus latro</i>	1		0
Corals	9 species		9	0
Gastropod molluscs	8 species		8	0
SUB-TOTALS	201 considered	96	105	167 validated

Table series 2a – Marine mammals and reptiles

A total of 39 species of IUCN-listed marine mammal and reptile megafauna (35 species of marine mammals (34 cetaceans and the dugong) and 5 sea turtles) were identified as occurring in Madagascar with the following spread of IUCN designations:

Table 2.a.1 - Marine mammals and reptiles - IUCN Red List Status

Marine mammals and reptiles - IUCN RED LIST STATUS						
CR	EN	VU	NT	LC	DD	TOTAL
1	5	6	3	21	3	39

All 39 species are CITES listed (18 in App 1, 21 in App 2) and most (30) are listed under CMS (15 in App. 1, 15 in App. 2), 35 under IOTC, 11 under IWC and 8 are listed as 'EDGE' species (evolutionarily distinct and globally endangered).

³ Proposed by MPEB after the workshop – see Annex 3

Table 2.a.2 – Marine mammals and reptiles – Status under conventions & EDGE

CITES		CMS		IOTC	IWC	EDGE
App 1	App 2	App 1	App 2			
18	21	15	15	35	11	8

The detailed table of marine mammals and reptiles identified and reviewed is set out below. All 35 marine mammals were recommended for classification under Category 1.1 (fully protected). The existing categorisation of the 5 marine turtles should be maintained (all Category 1.1).

In addition to the established criteria, participants highlighted the high scientific interest of protecting all marine mammals and the high socio-economic interest for marine mammal watching (notably whale and dolphin watching). For certain species, participants highlighted the importance of Madagascar as breeding habitat, for restricted range species (including the sea turtles), for flagship status or for the threat of hunting (especially for dolphins, dugong and turtles). For dugong, the restricted genetic lineage of Madagascar's population was highlighted.

Table 2.a.3 – Marine mammals and reptiles – validated protection category

Class	Species	Vernacular name	IUCN	CITES	CMS	Cat.
Mammalia	<i>Eubalaena australis</i>	Southern Right whale	LC	1	1	1.1
Mammalia	<i>Balaenoptera musculus intermedia</i>	Southern Blue Whale, Antarctic blue whale	EN	1	1	1.1
Mammalia	<i>Balaenoptera musculus brevicauda</i>	Pygmy blue Whale	EN	1	1	1.1
Mammalia	<i>Balaenoptera physalus</i>	Fin Whale	VU	1	1	1.1
Mammalia	<i>Balaenoptera borealis schlegelii</i>	Southern sei Whale	EN	1	1	1.1
Mammalia	<i>Balaenoptera edeni edeni</i>	Bryde's Whale	LC	1	1	1.1
Mammalia	<i>Balaenoptera omurai</i>	Omura's Whale	DD	1	2	1.1
Mammalia	<i>Balaenoptera bonaerensis</i>	Antarctic Minke Whale	NT	1	2	1.1
Mammalia	<i>Megaptera novaeangliae</i>	Humpback Whale	LC	1	1	1.1
Mammalia	<i>Orcinus orca</i>	Killer Whale	DD	2	2	1.1
Mammalia	<i>Pseudorca crassidens</i>	False Killer Whale	NT	2		1.1
Mammalia	<i>Feresa attenuata</i>	Pygmy Killer Whale	LC	2		1.1
Mammalia	<i>Peponocephala electra</i>	Melon-headed Whale, tuiyiu	LC	2		1.1
Mammalia	<i>Globicephala macrorhynchus</i>	Short-finned pilot whale	LC	2		1.1
Mammalia	<i>Grampus griseus</i>	Risso's Dolphin	LC	2	2	1.1
Mammalia	<i>Lagenodelphis hosei</i>	Fraser's Dolphin	LC	2	2	1.1
Mammalia	<i>Stenella attenuata</i>	Pantropical Spotted Dolphin	LC	2	2	1.1
Mammalia	<i>Stenella coeruleoalba</i>	Striped Dolphin	LC	2	2	1.1
Mammalia	<i>Delphinus delphis</i>	Common Dolphin	LC	2	2	1.1
Mammalia	<i>Tursiops truncatus</i>	Common Bottlenose Dolphin	LC	2	1 & 2	1.1
Mammalia	<i>Tursiops aduncus</i>	Indo-Pacific Bottlenose Dolphin	NT	2	2	1.1
Mammalia	<i>Sousa plumbea</i>	Indian Ocean Humpback Dolphin	EN	1	2	1.1
Mammalia	<i>Stenella longirostris</i>	Spinner dolphin	LC	2	2	1.1
Mammalia	<i>Kogia breviceps</i>	Pygmy Sperm Whale	LC	2		1.1
Mammalia	<i>Kogia sima</i>	Dwarf Sperm Whale	LC	2		1.1
Mammalia	<i>Physeter macrocephalus</i>	Sperm Whale	VU	1	1 & 2	1.1

Mammalia	<i>Ziphius cavirostris</i>	Cuvier's Beaked Whale	LC	2	1	1.1
Mammalia	<i>Indopacetus pacificus</i>	Longman's Beaked Whale	LC	2		1.1
Mammalia	<i>Mesoplodon densirostris</i>	Blainvilles's Beaked Whale	LC	2		1.1
Mammalia	<i>Mesoplodon eueu</i>	Ramari's Beaked Whale	LC			1.1
Mammalia	<i>Dugong dugon</i>	Dugong, Sea cow	VU	1	2	1.1
Mammalia	<i>B. acutorostrata ssp.</i>	Dwarf Minke Whale	LC	1		1.1
Mammalia	<i>M. ginkgodens</i>	Ginkgo-toothed Beaked Whale	DD	2		1.1
Mammalia	<i>Steno bredanensis</i>	Rough-toothed Dolphin	LC	2		1.1
Mammalia	<i>S. coeruleoalba</i>	Striped Dolphin	LC	2	2	1.1
Reptilia	<i>Eretmochelys imbricata</i>	Hawksbill Turtle	CR	1	1	1.1
Reptilia	<i>Chelonia mydas</i>	Green Turtle	EN	1	1	1.1
Reptilia	<i>Dermochelys coriacea</i>	Leatherback turtle	VU	1	1	1.1
Reptilia	<i>Caretta caretta</i>	Loggerhead Turtle	VU	1	1	1.1
Reptilia	<i>Lepidochelys olivacea</i>	Olive Ridley	VU	1	1	1.1

Table series 2b – Chondrichthyans (sharks)

A total of 81 species of sharks identified as occurring in Madagascar, all of which have been evaluated by IUCN, with the following spread of designations.

Table 2.b.1 – Chondrichthyans (sharks) – IUCN Red List status

Chondrichthyans (sharks) – IUCN Red List Status							
CR	EN	VU	NT	LC	DD	NE	TOTAL
4	17	20	16	14	10	0	81

A total of 32 shark species have been listed under CITES (all in Appendix 2), while just 6 have been listed under CMS (3 in Appendix 1 and 3 in Appendix 2). Five species are IOTC prohibited, 7 SIOFA listed and a full 19 are EDGE species.

Table 2.b.2 – Chondrichthyans (rays) - Conventions and EDGE status

Chondrichthyans (sharks) – Status under various conventions						
CITES		CMS		IOTC	SIOFA	EDGE
App 1	App 2	App 1	App 2	Prohibited		
0	32	3	3	5	7	19

The summary table of 81 sharks identified and reviewed is set out below. All except one (the Whitetail weasel shark *Paragaleus leucomatus* VU) of 81 sharks were recommended for protected status, including 32 under Category 1.1 (fully protected) and 48 under Category 1.2 (regulatory protection).

In addition to the established criteria, participants highlighted the high degree of overexploitation for certain species as justification for full protection under Category 1.1 (Pigeye shark *Carcharhinus amboinensis*), Silky shark *Carcharhinus falciformis*, Blacktip reef shark *Carcharhinus melanopterus*, Spot-tail shark *Carcharhinus sorrah* and Tiger shark *Galeocerdo cuvier*.

Table 2.c.3 – Chondrichthyans (sharks) – validated protection category

Class	Species	Vernacular name	IUCN	CITES	CMS	Cat.
Chondrichthyes	<i>Carcharhinus albimarginatus</i>	Silvertip shark	VU	2		1.1

Chondrichthyes	<i>Carcharhinus altimus</i>	Bignose shark	NT	2		1.2
Chondrichthyes	<i>Carcharhinus amblyrhynchos</i>	Grey reef shark	EN	2		1.1
Chondrichthyes	<i>Carcharhinus amboinensis</i>	Pig eye shark	VU	2		1.1
Chondrichthyes	<i>Carcharhinus brachyurus</i>	Copper shark	VU	2		1.2
Chondrichthyes	<i>Carcharhinus brevipinna</i>	Spinner shark or Blacktip shark	VU	2		1.2
Chondrichthyes	<i>Carcharhinus falciformis</i>	Silky shark	VU	2	2	1.1
Chondrichthyes	<i>Carcharhinus galapagensis</i>	Galapagos Shark	LC	2		1.2
Chondrichthyes	<i>Carcharhinus humani</i>	Human's whaler shark	DD	2		1.2
Chondrichthyes	<i>Carcharhinus leucas</i>	Bull shark	VU	2		1.2
Chondrichthyes	<i>Carcharhinus limbatus</i>	Blacktip shark	VU	2		1.2
Chondrichthyes	<i>Carcharhinus longimanus</i>	Oceanic whitetip shark	CR	2	1	1.1
Chondrichthyes	<i>Carcharhinus melanopterus</i>	Blacktip reef shark	VU	2		1.1
Chondrichthyes	<i>Carcharhinus obscurus</i>	Dusky shark	EN	2	2	1.1
Chondrichthyes	<i>Carcharhinus plumbeus</i>	Sandbar shark	EN	2		1.1
Chondrichthyes	<i>Carcharhinus sorrah</i>	Spot-tail shark	NT	2		1.1
Chondrichthyes	<i>Loxodon macrorhinus</i>	Sliteye shark	NT	2		1.2
Chondrichthyes	<i>Negaprion acutidens</i>	Lemon Shark	EN	2		1.1
Chondrichthyes	<i>Prionace glauca</i>	Blue Shark	NT	2	2	1.2
Chondrichthyes	<i>Rhizoprionodon acutus</i>	Milk Shark	VU	2		1.2
Chondrichthyes	<i>Scoliodon laticaudus</i>	Spadenose Shark	NT	2		1.2
Chondrichthyes	<i>Triaenodon obesus</i>	Whitetip reef shark	VU	2		1.2
Chondrichthyes	<i>Galeocerdo cuvier</i>	Tiger shark	NT			1.1
Chondrichthyes	<i>Hemipristis elongata</i>	Snaggletooth shark	EN			1.1
Chondrichthyes	<i>Paragaleus leucolomatus</i>	Whitetip weasel shark	VU			1.2
Chondrichthyes	<i>Apristurus longicephalus</i>	Longhead catshark	LC			1.2
Chondrichthyes	<i>Bythaelurus clevai</i>	Broadhead cat shark	DD			1.2
Chondrichthyes	<i>Holohalaelurus grennian</i>	East African spotted Izak	DD			1.2
Chondrichthyes	<i>Holohalaelurus punctatus</i>	African spotted catshark	EN			1.1
Chondrichthyes	<i>Pseudotriakis microdon</i>	False Catshark	LC			1.2
Chondrichthyes	<i>Cephaloscyllium sufflans</i>	Balloon shark	NT			1.2
Chondrichthyes	<i>Poroderma africanum</i>	Striped catshark	LC			1.2
Chondrichthyes	<i>Poroderma pantherinum</i>	Leopard catshark	LC			1.2
Chondrichthyes	<i>Scyliorhinus comoroensis</i>	Comoros cat shark	DD			1.2
Chondrichthyes	<i>Sphyrna lewini</i>	Scalloped hammerhead	CR	2		1.1
Chondrichthyes	<i>Sphyrna mokarran</i>	Great Hammerhead	CR	2		1.1
Chondrichthyes	<i>Sphyrna zygaena</i>	Smooth hammerhead	VU	2	2	1.1
Chondrichthyes	<i>Mustelus manazo</i>	Starspotted smooth-hound	EN			1.1
Chondrichthyes	<i>Triakis megalopterus</i>	Sharptooth houndshark	LC			1.2
Chondrichthyes	<i>Rhinochimaera africana</i>	Paddlenose chimaera	DD			1.2
Chondrichthyes	<i>Heptranchias perlo</i>	Sharpnose sevengill shark	NT			1.2
Chondrichthyes	<i>Hexanchus griseus</i>	Bluntnose sixgill shark	NT			1.2
Chondrichthyes	<i>Hexanchus nakamurai</i>	Bigeyed sixgill shark	NT			1.2
Chondrichthyes	<i>Alopias pelagicus</i>	Pelagic Tresher Shark	EN	2		1.1
Chondrichthyes	<i>Alopias superciliosus</i>	Bigeye thresher	VU	2		1.1
Chondrichthyes	<i>Alopias vulpinus</i>	Thresher Shark	VU	2		1.1
Chondrichthyes	<i>Carcharodon carcharias</i>	Great white shark	VU	2	1	1.1
Chondrichthyes	<i>Isurus oxyrinchus</i>	Shortfin mako	EN	2		1.1
Chondrichthyes	<i>Isurus paucus</i>	Longfin mako	EN	2		1.1
Chondrichthyes	<i>Megachasma pelagios</i>	Megamouth shark	LC			1.2

Chondrichthyes	<i>Odontaspis ferox</i>	Small-tooth Sand tiger	EN			1.1
Chondrichthyes	<i>Pseudocarcharias kamoharai</i>	Crocodile shark	LC			1.2
Chondrichthyes	<i>Nebrius ferrugineus</i>	Tawny nurse shark	VU			1.1
Chondrichthyes	<i>Pseudoginglymostoma brevicaudatum</i>	Shorttail nurse shark	CR			1.1
Chondrichthyes	<i>Chiloscyllium caeruleopunctatum</i>	Bluespotted bambooshark	DD			1.2
Chondrichthyes	<i>Rhincodon typus</i>	Whale shark	EN	2	1	1.1
Chondrichthyes	<i>Stegostoma tigrinum</i>	Zebra shark	EN			1.1
Chondrichthyes	<i>Pliotrema kaja</i>	Kaja's sixgill sawshark	DD			1.2
Chondrichthyes	<i>Pristiophorus nancyae</i>	African dwarf sawshark	LC			1.2
Chondrichthyes	<i>Centrophorus granulosus</i>	Gulper shark	EN			1.1
Chondrichthyes	<i>Centrophorus lesliei</i>	African gulper shark	EN			1.1
Chondrichthyes	<i>Centrophorus moluccensis</i>	Smallfin gulper shark	VU			1.2
Chondrichthyes	<i>Centrophorus uyato</i>	Little gulper shark	EN			1.1
Chondrichthyes	<i>Deania calceus</i>	Birdbeak Dogfish	NT			1.2
Chondrichthyes	<i>Deania profundorum</i>	Arrowhead dogfish	NT			1.2
Chondrichthyes	<i>Deania quadrispinosa</i>	Longsnout dogfish	VU			1.2
Chondrichthyes	<i>Dalatias licha</i>	Kitefin shark	VU			1.2
Chondrichthyes	<i>Euprotomicrus bispinatus</i>	Pygmy shark	LC			1.2
Chondrichthyes	<i>Isistius brasiliensis</i>	Cookie cutter shark	LC			1.2
Chondrichthyes	<i>Etmopterus granulosus</i>	Southern lanternshark	LC			1.2
Chondrichthyes	<i>Etmopterus sentosus</i>	Thorny lanternshark	LC			1.2
Chondrichthyes	<i>Oxynotus centrina</i>	Angular roughshark	EN			1.1
Chondrichthyes	<i>Centroscymnus coelolepis</i>	Portuguese Dogfish	NT			1.2
Chondrichthyes	<i>Centroscymnus owstonii</i>	Roughskin dogfish	VU			1.2
Chondrichthyes	<i>Centroselachus crepidater</i>	Longnose velvet dogfish	NT			1.2
Chondrichthyes	<i>Somniosus antarcticus</i>	Greenland shark	LC			1.2
Chondrichthyes	<i>Zameus squamulosus</i>	Smallmouth velvet dogfish	LC			1.2
Chondrichthyes	<i>Cirrhigaleus asper</i>	Roughskin spurdog	DD			1.2
Chondrichthyes	<i>Squalus acutipinnis</i>	Shortnose spurdog	NT			1.2
Chondrichthyes	<i>Squalus blainville</i>	Longnose spurdog	DD			1.2
Chondrichthyes	<i>Squalus mahia</i>	Malagasy skinny spurdog	DD			1.2
Chondrichthyes	<i>Squatina africana</i>	African angelshark	NT			1.2
Chondrichthyes	<i>Stegostoma fasciatum</i>	Zebra Shark	EN			1.1

Table series 2c - Chondrichthyans (rays)

A total of 42 rays were identified as occurring in Madagascar, of which 41 have been IUCN evaluated, with the following spread of designations.

Table 2.c.1 – Chondrichthyans (rays) IUCN Red List Status

Chondrichthyans (Rays) – IUCN RED LIST status							
CR	EN	VU	NT	LC	DD	NE	TOTAL
5	11	6	5	8	6	1	42

Of these 42 species of rays, just 13 are listed under CITES (1 in App. 1, 12 in App. 2) reflecting the relatively lower importance of rays in international trade compared to sharks. Eight species are listed under CMS (7 under App. 1, 1 under App. 2), while eight species are IOTC prohibited and eight are EDGE species.

Table 2.c.2 – Chondrichthyans (rays) CITES, CMS, IOTC and EDGE status

Chondrichthyans (Rays) – Status under various conventions					
CITES		CMS		IOTC	EDGE
App 1	App 2	App 1	App 2	Prohibited	
1	12	7	1	6	8

The summary table of 42 rays identified and reviewed is set out below. All 42 rays were recommended for protected status, including 21 under Category 1.1 (fully protected) and 21 under Category 1.2 (regulatory protection). Notably, the sawfish *Pristis pristis* CR, guitarfishes (3 species, all CR), the Ornate Eagle ray *Aetomylaeus vespertilio* CR, all the six mobulid rays (manta rays and affiliated species, five EN, one VU) and 9 other rays are recommended for full legal protection, reflecting the highly threatened status of many of Madagascar's rays.

In addition to the established criteria, participants highlighted the IOTC banning of Manta ray *Manta birostris* catches in the Indian Ocean (effective since 01.01.2022) and the endemic status of two deep water skates (Madagascar Pygmy skate *Fenestraja maceachrani*, Madagascar skate *Dipturus crosnieri*) as justification for full protection under Category 1.1.

Table 2.c.3 – Chondrichthyans (rays) – Validated protection categories

Class	Species	Vernacular name	IUCN	CITES	CMS	Cat.
Chondrichthyes	<i>Aetobatus ocellatus</i>	Sharpwing eagle ray	EN			1.1
Chondrichthyes	<i>Dasyatis chrysonota</i>	South African blue stingray	NT			1.2
Chondrichthyes	<i>Himantura uarnak</i>	Honeycomb stingray	EN			1.1
Chondrichthyes	<i>Maculabatis ambigua</i>	Baraka's whipray	NT			1.2
Chondrichthyes	<i>Neotrygon caeruleopunctata</i>	Bluespotted maskray	LC			1.2
Chondrichthyes	<i>Pastinachus ater</i>	Broad cowtail ray	VU			1.2
Chondrichthyes	<i>Pateobatis fai</i>	Pink Whipray	VU			1.2
Chondrichthyes	<i>Pateobatis jenkinsii</i>	Dragon stingray	EN			1.1
Chondrichthyes	<i>Pteroplatytrygon violacea</i>	Pelagic stingray	LC			1.2
Chondrichthyes	<i>Taeniura lymma</i>	Ribbontail stingray	LC			1.2
Chondrichthyes	<i>Taeniurops meyeri</i>	Round ribbontail ray	VU			1.1
Chondrichthyes	<i>Urogymnus asperrimus</i>	Porcupine ray	EN			1.1
Chondrichthyes	<i>Gymnura poecilura</i>	Long-tailed butterfly ray	VU			1.2
Chondrichthyes	<i>Mobula alfredi</i>	Reef Manta Ray	VU	2	1	1.1
Chondrichthyes	<i>Mobula birostris</i>	Giant manta ray	EN	2	1	1.1
Chondrichthyes	<i>Mobula eregoodoo</i>	Pygmy devilray	EN	2	1	1.1
Chondrichthyes	<i>Mobula kuhlii</i>	Kuhl's devilray	EN	2	1	1.1
Chondrichthyes	<i>Mobula mobular</i>	Spinetail devil ray	EN	2	1	1.1
Chondrichthyes	<i>Mobula thurstoni</i>	Smoothtail mobula	EN	2	1	1.1
Chondrichthyes	<i>Aetomylaeus vespertilio</i>	Ornate eagle ray	CR			1.1
Chondrichthyes	<i>Rhinoptera jayakari</i>	Oman cownose ray	EN			1.1
Chondrichthyes	<i>Indobatis ori</i>	Black legskate	LC			1.2
Chondrichthyes	<i>Bathyraja tunae</i>	Tuna's Skate	LC			1.2
Chondrichthyes	<i>Notoraja hesperindinca</i>	Western blue skate	LC			1.2
Chondrichthyes	<i>Fenestraja maceachrani</i>	Madagascar pygmy skate	DD			1.1
Chondrichthyes	<i>Dipturus crosnieri</i>	Madagascar skate	VU			1.1
Chondrichthyes	<i>Dipturus springeri</i>	Roughbelly skate	LC			1.2
Chondrichthyes	<i>Raja clavata</i>	Thornback Ray	NT			1.2
Chondrichthyes	<i>Raja straeleni</i>	Biscuit skate	NT			1.2
Chondrichthyes	<i>Rostroraja alba</i>	White skate	EN			1.1

Chondrichthyes	<i>Pristis pristis</i>	Common sawfish	CR	1	1	1.1
Chondrichthyes	<i>Rhina ancylostomus</i>	Bowmouth guitarfish	CR	2		1.1
Chondrichthyes	<i>Rhynchobatus australiae</i>	Whitespotted wedgetfish	CR	2	2	1.1
Chondrichthyes	<i>Rhynchobatus djiddensis</i>	Giant Guitarfish	CR	2		1.1
Chondrichthyes	<i>Acroteriobatus andysabini</i>	Malagasy blue-spotted guitarfish	NE	2		1.2
Chondrichthyes	<i>Rhinobatos austini</i>	Austin's guitarfish	DD	2		1.2
Chondrichthyes	<i>Rhinobatos holcorhynchus</i>	Slender guitarfish	DD	2		1.2
Chondrichthyes	<i>Narcine insolita</i>	Madagascar numbfish	DD			1.1
Chondrichthyes	<i>Heteronarce garmani</i>	Natal electric ray	NT			1.2
Chondrichthyes	<i>Narke capensis</i>	Onefic electric ray	LC			1.2
Chondrichthyes	<i>Torpedo fuscomaculata</i>	Black-spotted torpedo	DD			1.2
Chondrichthyes	<i>Torpedo sinuspersici</i>	Marbled electric ray	DD			1.2

Table series 2d – Marine fish (proposed, deferred)

A total of 18 threatened marine fish species (coelacanth and 15 bony fish) were identified as occurring in Madagascar, evaluated by IUCN and potentially needing legal protection, with the spread of IUCN designations below. One species, the Indian Ocean Coelacanth *Latimeria chalumnae* CR is listed as critically endangered.

Table 2.d.1 – Marine Fish IUCN Red List Status

Fishes (coelacanth & bony fishes) - IUCN Red List status					
CR	EN	VU	LC	DD	TOTAL
1	3	12	1	1	18

Just three species, the coelacanth (App. 1), the Napoelon fish *Cheilinus undulatus* EN (App 2) and the spiny seahorse *Hippocampus hystrix* VU (App 2) are CITES listed, while none are listed under CMS (reflecting the fact that most fishes eligible for protection are non-migratory).

Table 2.d.2 – Marine Fish – Status under various conventions

Fishes (coelacanth & bony fishes) – Status under various conventions					
CITES		CMS		IOTC	EDGE
App 1	App 2	App 1	App 2	Prohibited	
1	3	0	0	0	1

The detailed table of 18 fish identified and reviewed is set out below. Of the 18 species considered, 12 were recommended for protection by the workshop. Just one, the coelacanth *Latimeria chalumnae* CR and an EDGE species, was recommended for full protection (Category 1.1) and 6 for regulated protection under Category 1.2. At the time of the workshop, 5 species were placed in reserve for further consideration by MPEB, including southern bluefin tuna *Thunnus macoyii* EN, Mahsena Emperor *Lethrinus mahsena* EN, brown grouper *Mycteroperca marginata* VU, Marbled Grouper *Epinephelus fuscoguttatus* VU and Camouflaged Grouper *Epinephelus polyphekadion* VU. Following the workshop the MPEB issued an official letter stating reasons for accepting protection (under category 1.2.) only for the coelacanth and the spiny seahorse (Annex 4), subsequently confirming via email that the coelacanth should be Category 1.1 (Annex 5). This highlights that the MPEB may prioritise criteria other than IUCN or CITES status in determining the protection status for fishes of commercial importance.

In addition to the established criteria, participants highlighted the highly restricted range and high scientific value of the coelacanth as grounds for full protection under Category 1.1. For the Napoleon wrasse *Cheilinus undulatus* EN, the slow reproduction rate was cited as additional justification for at least Category 1.2. protection.

Table 2.d.3 – Marine Fish – Proposed protection categories

Class	Species	Vernacular name	IUCN	CITES	Cat.	MPEB
Actinistia	<i>Latimera chalumnae</i>	Indian Ocean Coelacanth	CR	1	1.1	1.1
Actinopterygii	<i>Cheilinus undulatus</i>	Humphead Wrasse	EN	2	1.2	-
Actinopterygii	<i>Lethrinus mahsena</i>	Sky Emperor Snapper	EN	-	MPEB	-
Actinopterygii	<i>Mycteroperca marginata</i>	Dusky grouper	VU	-	MPEB	-
Actinopterygii	<i>Bodianus diana</i>	Diana's hogfish	LC	-	-	-
Actinopterygii	<i>Pomatomus saltratrix</i>	Bluefish	VU	-	-	-
Actinopterygii	<i>Argyrosomus hololepidotus</i>	Mulloway	DD	-	1.1	-
Actinopterygii	<i>Bolbometapon muricatum</i>	Green humphead parrotfish	VU	-	1.2	-
Actinopterygii	<i>Epinephelus fuscoguttatus</i>	Brown-marbled grouper	VU	-	MPEB	-
Actinopterygii	<i>Epinephelus polyphkadion</i>	Camouflage grouper	VU	-	MPEB	-
Actinopterygii	<i>Thalassophryne uranoscopus</i>	Cano Toadfish	VU	-	-	-
Actinopterygii	<i>Makaira nigricans</i>	Blue Marlin	VU	-	1.2	-
Actinopterygii	<i>Istiophorus platypterus</i>	Indo-Pacific sailfish	VU	-	1.2	-
Actinopterygii	<i>Thunnus maccoyii</i>	Southern blue fin tuna	EN	-	MPEB	-
Actinopterygii	<i>Syngathidae spp.</i>	Seahorses (all species)	-	2	-	-
Actinopterygii	<i>Hippocampus histrix</i>	Spiny seahorse	VU	2	1.2	1.2
Actinopterygii	<i>Mola mola</i>	Ocean sunfish	VU	-	1.2	-
Actinopterygii	<i>Oxymonacanthus longirostris</i>	Harlequin filefish	VU	-	-	-
Actinopterygii	<i>Albula Glossodonta</i>	Shortjaw bonefish (Fishbase)	VU	-	-	-

Table series 2e – Invertebrates (proposed, deferred)

At the request of MEDD, following the workshop, the consultants conducted a review of invertebrate species for potential protection. A total of 30 taxa including 19 individual species of invertebrates were identified as occurring in Madagascar and potentially needing legal protection, with the spread of IUCN designations below:

Table 2.e.1 – Marine invertebrates – IUCN Red List status

Marine Invertebrates – IUCN Red List Status							
CR	EN	VU	NT	LC	DD	NA	TOTAL
0	2	3	0	9	1	4	19

Of these species and taxa, 16 are listed on Appendix 2 of CITES, notably 5 species of sea cucumbers, all giant clams, all Nautilus species, queen conch *Strombus gigas*, all black corals *Antipatharia* spp., all stony corals *Scleractinia*, blue coral *Heliopora coerulea*, all organpipe corals *Tubiporidae*, all fire corals *Milleporidae* and all sea pens *Stylasteridae*. Additionally, 6 species are listed under the Nairobi convention, including 6 taxa under Appendix 2 (coconut crab *Birgus latro* VU, giant clams *Tridacnidae* and pearl oysters *Pinctada* spp.), and 6 taxa under Appendix 3 (6 species of lobsters *Panuliridae*).

Table 2.e.2 – Marine invertebrates – Status under CITES, Nairobi & EDGE

CITES		Nairobi Convention		EDGE
App. 1	App. 2	App. 2	App. 3	<i>Birgus latro</i> , <i>Nautilus spp.</i>
0	16	6	6	2

The detailed table of invertebrates identified and reviewed is set out below. Of the 30 taxa and 19 species considered, just two species, the coconut crab *Birgus latro* VU and the *Nautilus* species are EDGE species. The coconut crab is recommended for full legal protection as already vanishingly rare in Madagascar. 23 other threatened invertebrate taxa (all taxa except the lobsters) are recommended for regulated protection under Category 1.2, as all are important in international trade. Of these, two sea cucumbers (*Thelenota ananas* EN and *Holothuria nobilis* EN) are already endangered; while absolute protection may not be feasible, both require active regulation.

Table 2.e.3 – Marine invertebrates – Proposed protection categories

Class	Species	Vernacular name	IUCN	CITES	Nairobi	EDGE	Cat.
Holothuroidea	<i>Thelenota spp.</i>	Sea cucumbers		2		-	1.2
Holothuroidea	<i>Thelenota ananas</i>	Pineapple sea cucumber; Prickly redfish	EN	2		-	1.2
Holothuroidea	<i>Thelenota anax</i>	Amber fish; Giant sea-cucumber	DD	2		-	1.2
Holothuroidea	<i>Holothuria fuscogilva</i>	White teatfish	VU	2		-	1.2
Holothuroidea	<i>Holothuria nobilis</i>	Black teatfish	EN	2		-	1.2
Malacostraca	<i>Birgus latro</i>	Coconut crab, robber crab	VU	2	2	EDGE	1.1
Malacostraca	<i>Panulirus spp.</i>	Spiny lobsters			3	-	-
Malacostraca	<i>Panulirus ornatus</i>	Ornate Spiny Lobster	LC		3	-	-
Malacostraca	<i>Panulirus penicillatus</i>	Pronghorn Spiny Lobster	LC		3	-	-
Malacostraca	<i>Panulirus homarus</i>	Scalloped spiny lobster	LC		3	-	-
Malacostraca	<i>Panulirus versicolor</i>	Painted Spiny Lobster	LC		3	-	-
Malacostraca	<i>Panulirus longipes</i>	Long-legged Spiny Lobster	LC		3	-	-
Bivalvia	<i>Tridacnidae spp.</i>	Giant clams		2		-	1.2
Bivalvia	<i>Tridacna squamosa</i>	Fluted giant clam	LC		2	-	1.2
Bivalvia	<i>Tridacna maxima</i>	Small giant clam	LC		2	-	1.2
Bivalvia	<i>Hippopus hippopus</i>	Horse's hoof clam	VU		2	-	1.2
Bivalvia	<i>Pinctada spp.</i>	Pearl oysters			2	-	1.2
Cephalopoda	<i>Nautilidae spp.</i>	Chambered nautilus <i>N. pompilius</i> .	NA	2		EDGE	1.2
Gastropoda	<i>Strombus gigas</i>	Queen conch	NA	2		-	1.2
Gastropoda - Coenogastropoda	<i>Charonia tritonis</i>	Triton's trumpet	NA		2	-	1.2
Gastropoda - Vestigastropoda	<i>Trochus niloticus</i>	Trochus	NA		2	-	1.2
Hexacorallia	<i>Antipatharia spp.</i>	Black corals		2		-	1.2
Hexacorallia	<i>Antipathes dichotoma</i>	Black coral	NA		2	-	1.2
Hexacorallia	<i>Cihrripathes spp.</i>	Whip corals			2	-	1.2
Hexacorallia	<i>Scleractinia spp.</i>	Stony corals		2		-	1.2
Octocorallia	<i>Heliopora coerulea</i>	Blue coral	LC	2		-	1.2
Octocorallia	<i>Tubiporidae spp.</i>	Organ-pipe corals		2		-	1.2
Octocorallia	<i>Tubipora musica</i>	Organ-pipe coral	LC	2		-	1.2
Hydrozoa	<i>Milleporidae spp.</i>	Fire corals		2		-	1.2
Hydrozoa	<i>Stylasteridae spp.</i>	Lace corals		2		-	1.2

Phase 3a – Proposed text to modify Decree 2006-400

An important aspect highlighted in the research prior to the workshop was the need to make consequential revisions to the precise wording of Decree 2006-400 to better reflect the contemporary methods of exploitation of marine and terrestrial species.

Article 1 of Decree 2006-400 classifies species as ‘protected’ (Categories 1.1 and 1.2), ‘game’ (Category 3) or as ‘harmful’ (Category 2). (Note that the numbering of categories 2 and 3 does not follow the same order as the written text).

Article 2 of Decree 2006-400 provides that fully **protected species** of wild fauna under Category 1.1 enjoy **absolute protection** and cannot be ‘hunted’, ‘captured’ or ‘detained’. Protected species under Category 1.2 can be ‘hunted’ or ‘captured’ subject to a collection quota set by the CITES authority. **Game species** under category 3 can be hunted under a specific hunting licence which respects regulatory seasons. **Harmful species** under Category 2 can be freely exploited.

The terms such as ‘hunting’ ‘game’ or ‘harmful’ do not have obvious application for marine species, while actions other than simple hunting, capture or detention such as disturbance, harassment, wounding, killing, fishing, possession, collection, transshipment, transformation, destruction, concealment, transportation, packing, marketing and exporting are not mentioned in Decree 2006-400 but play an important role in the unsustainable exploitation of both marine species. Addressing these gaps should also serve to reinforce the effectiveness of the decree as regards threatened terrestrial fauna.

Following analysis, the legal expert advised that Decree 2006-400 and its underlying law, Ordonnance 60-126 and laws and regulations passed since Decree 2006-400 (cited in the draft decree), could be invoked to add a subset of the activities identified above, notably: transporting, killing, selling (dead or alive), transshipment, transformation or commercialisation.

In addition, and importantly, it was determined that other laws could be invoked to prohibit other actions affecting all Category 1 species (classes 1 and 2) including collection and retention of eggs from the wild, degradation or destruction of protected species’ critical habitats or disturbance during breeding season and actions that affect the ‘physical integrity’ of species (such as wounding).

A proposed decree modifying the text of Decree 2006-400 was presented at the national workshop and was validated by the participants. This is presented in Annex 6.

It is important to understand that the proposed modifying decree is conceived as a simple addition to the existing decree – it does not *revise* or *revoke* the earlier decree, but just *adds* to it.

DISCUSSION

The project set out to achieve legal protection of marine threatened species via two pathways: 1. Precautionary revision of existing decree 2006-400 to achieve the rapid legal protection priority marine megafauna and 2. A more comprehensive but long-term approach developing

regulations under the fisheries law 2015-053 and CITES regulations which could be a better adapted vehicle for threatened marine macrofauna protection in the long term.

Following discussions with JNCC, it was agreed to split the project into 2 phases: 1. a rapid first phase to achieve precautionary protection of priority species of marine megafauna under decree 2006-400 and 2. a longer second phase to develop a regulatory mechanism for protection of marine macrofauna species including threatened but commercially important species under CITES regulations and/or the fisheries law 2015-053.

The present report relates to pathway 1 and has achieved a national process to deliver technically validated proposed lists of protected marine macrofauna, including marine mammals (cetaceans and dugong), chondrichthyans (sharks and rays) and coelacanth. A proposal for protection of bony fish was mitigated because the fisheries ministry considered that certain bony fish species (such as southern bluefin tuna *Thunnus maccoyii* EN, sailfish and marlin (both VU) should be regulated under international agreements and other fish species under local management arrangements. A proposal for protection of marine *invertebrate* species applying the same criteria was developed and shared with participants after the workshop but was not validated.

The approach has proven successful in that it proved to be possible through a relatively simple process, supported by a modest budget, to achieve the steps necessary to arrive at the proposed species lists for protected **marine megafauna** (marine mammals, reptiles, sharks, rays and coelacanth).

The approach was even welcomed by the legal service of the fisheries ministry, as a simpler way of achieving the required legal protection than could have been achieved under the fisheries law 2015-053 in the time available.

The *sourcing* of the lists and supporting data was also effective. By building on the earlier careful work of WCS, an international NGO, with the support of experts from CNRO, it was possible to develop thoroughly researched and reliable lists for sharks and rays. By sourcing the work and expertise of researchers of AACF and IHSM, it was possible to generate reliable lists for cetaceans. The case for dugong protection was supported through an earlier collaboration between C3 (an NGO), AACF and Resolve (Davis et al 2022), and for coelacanth by an earlier collaboration between Resolve, IHSM and an international coelacanth expert (Cooke, Bruton & Ravoloharinjara 2022 and Bruton et al 2022). Other previous work that contributed usefully included an earlier review of marine species protection published by Resolve and WCS in the *Guide to Marine Biodiversity* (Cooke & Brand 2012) and contributions to The New Natural History of Madagascar (Cooke 2022).

In effect, the only marine species already protected under Decree 2006-400 are sea turtles. Hence, sea turtles do not need to be included in the annexes to the new decree. However, research gathered for the present study added support to the case for the absolute protection of marine turtles (see Walker et al 2022).

The species prioritisation and categorisation approach followed international conservation practice, by developing a series of uncontroversial criteria for the listing of marine species for protection based on Madagascar's international obligations, the IUCN Red List of threatened species and international best practice, including an evidence-based approach.

The legislative strategy developed with the support of the legal expert was to propose modification of the existing decree 2006-400 by *simple addition*, avoiding the pitfalls of a full *revision* which would have required a longer approval process. Thus, the original decree 2006-400 remains in force, while the modifying decree to be proposed to the government proposes

a simple addition to cover marine species, ensuring clarity for stakeholders and limiting the scope for unproductive debate.

Finally, a participatory approach including the contribution of key government institutions and recognised national and international experts has helped to build a consensus based on national ownership, confidence and transparency, facilitating the task of the MEDD which will be charged with presenting the draft legislation for adoption.

CONCLUSION AND RECOMMENDATIONS

In conclusion, the intervention has been effective in identifying marine species in critical need of protection and achieving consensus on the full or regulated protection of **marine mega-fauna**, including the full protection of all marine mammals, all mobulid rays (manta rays and affiliates), sawfish, whale shark, coelacanth and endangered commercially exploited shark and ray species.

A proposed list of bony fishes for protection, using the same criteria, was agreed at the workshop (subject to confirmation on just 5 species), but was subsequently rejected by the fisheries ministry on the basis that the species were commercially and socially important for fishing.

At the request of MEDD, a proposed list of protected invertebrate species was drawn up (including full protection for the coconut crab *Birgus latro* and partial protection for all corals and 4 species of sea cucumbers) but was not adopted on the basis it had not been considered at the workshop (see Annex 5).

We recommend as follows:

- **Compile the complete revised decree** including all agreed species lists and a supporting statement (*Expose des motifs*) and provide a final briefing to MEDD and MPEB to enable the MEDD with the support of the MPEB to take the draft decree to the council of ministers.
- Working with WCS and in consultation with MEDD, **develop a full technical and financial proposal for Phase 2** for presentation to JNCC for the long-term regulated protection of threatened marine macrofauna important for fisheries and trade.
- Take the proposed lists of protected bony fish and invertebrates forward as case studies for the subsequent phase which will focus on engaging MEDD, the fisheries ministry and CITES scientific authority to establish regulatory mechanisms for the protection of threatened marine macrofauna species under appropriate legislation.

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ANNEXES

ANNEX 1 – WCS NOTE ON MARINE SPECIES (July 2024)

A. Purpose of this document

This document is intended to provide recommendations for revisions to certain aspects of the text in Madagascar’s Decree on classification of wild fauna species (*Décret N° 2006 – 400 portant classement des espèces de faune sauvage*), which in turn supports the revision of Madagascar’s Fisheries and Aquaculture Code (*Loi n° 2015-053 du 16 décembre 2015 portant Code de la pêche et de l’aquaculture*). Recommendations made are particularly relevant for marine megafauna species.

B. Articles presented in Decree N° 2006 – 400

Article 1: According to article 1 of Ordinance 60-126 of October 3, 1960, species of wild fauna (birds and other wild animals) are divided into three categories: protected species, game [understood to refer to hunting/fishing species] and harmful species.

Proposed amendment to Article 1:

- The text should be amended to unambiguously include aquatic (freshwater and marine) species.

Article 2: Wild fauna species falling under Category I (“protected species”) are divided into two classes:

- *Category I Class 1: Category I, Class I species benefit from **absolute protection** throughout the territory of the Republic of Madagascar and cannot be hunted, captured or detained except in the cases provided for in article 20 of Ordinance No. 60-126 of October 3, 1960.*
 - [Category I Class 2: in the original decree, a typographical error in the first paragraph on page 4523 of the decree lists this as Class 1]
 - *Category I Class 2: Category I, Class II species **may be granted hunting or capture authorizations, commercial or sporting, under regulatory conditions**. The collection quota for each species in this class is set annually by the CITES Management Authority on the proposal of the CITES Scientific Authority.*
- Proposed amendment to Article 2:
 - Text defining Class 2 should be corrected to state “Class 2”, not “Class 1” as is currently the case.
 - For Category I Class 1, the article clearly defines that species listed in this Class are **species that benefit from absolute protection**, but the article does not define criteria to be met by a species for inclusion in this Class. Text defining such criteria should be added – see later section on proposed criteria for listing of species in each Class.
 - For Category I Class 2, the article does not define the level of protection afforded to species listed in this Class. It should be noted that they are included in Category I which by definition includes “protected species” and should thus be protected (as for Class I). It is proposed to add text to clarify that species listed in this Class are “partially protected species of wild fauna requiring harvesting and/or trade restrictions and/or permit/authorization to the exclusion of other species”.

- For Category I Class 2, the article does not define criteria to be met by a species for inclusion in this Class. Text defining such criteria should be added – see later section on proposed criteria for listing of species in each Class.
- Text should also be amended to provide clarity on the management agency from which such an authorization/permit should be obtained.
- Collection quota may not be an appropriate restriction for some species that are listed, or should be listed, in Category I Class 2. For example, for marine species and commercial fishery species, the total population size may not be known unless a robust stock assessment has been done, which is unlikely for most marine species other than the most dominant commercial fishery target species, such as tuna. Additional measures should be considered for each species, on a case-by-case basis, including potential measures such as:
 - minimum size/age catch/harvest limits, to exclude capture of juveniles (capture and mortality of juveniles prevents those individuals from reproducing and contributing to population growth),
 - slot limits (a minimum legal size and maximum legal size, permitting harvesting only of individuals within this range), to protect both juveniles and large breeding adults,
 - seasonal prohibitions on the capture/landing of certain species to avoid mortality during ecologically sensitive periods (such as aggregations, mating, spawning, pupping, and early nursery stages)
 - spatial closures to protect ecologically important habitats (such as nursery grounds, pupping grounds, mating areas, migration routes)
 - gear restrictions to avoid capture of non-target species (such as prohibition on the use of wire leaders in fisheries targeting tuna, to avoid bycatch of sharks)
 - international trade controls for threatened species to prevent international trade demand from impacting wild populations
- It is unclear why the CITES Scientific Authority is the agency responsible for setting annual catch quotas for each of the species in Category I Class 2, as CITES is concerned predominantly with international trade, more so than domestic harvest quotas, unless the CITES Scientific Authority is also the agency responsible for setting fishery catch limits, undertaking stock assessments and similar responsibilities (i.e. outside of their role as CITES Scientific Authority).

Article 3: Animal species falling under Category II may be hunted at any time as harmful species.

- Proposed amendment to Article 3:
 - We propose switching Category II and Category III. As Category I refers to the most protected species (most strict), Category II should rather refer to those species that can be hunted or captured but under regulation and through regulatory conditions only (moderately strict, current Category III), leaving Category III for species that are treated as nuisance or harmful and may be hunted at any time (i.e. least strict, currently Category II).

Article 4: Wild species constituting game are classified in Category III. They can be hunted or captured under a hunting authorization respecting hunting periods.

- Proposed amendment to Article 4:
 - Text should be amended here to include language relevant also to fishing activities.
 - The article does not define criteria to be met by a species for inclusion in this Category.

- There is no clarity from which management authority such an authorization should be obtained. This should be stated in the text.
- As noted under Article 3, as Category I refers to the most protected species (most strict), Category III should be the least restrictive, for species that are treated as nuisance or harmful and may be hunted at any time, with Category II for those species that can be hunted or captured only under regulation.

Table 1: Proposed Annex Categorisation of all known marine megafauna species in Madagascar's waters.

Class	Ordre	Famille	Genre - espèce	Statut UICN	CITES	CMS	Catégorisation		Remarques (justification de l'inscription)
Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Carcharhinus amblyrhynchos</i>	EN	App 2		Cat. 1	Cl. 1	UICN EN
Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Carcharhinus longimanus</i>	CR	App 2	App 1	Cat. 1	Cl. 1	Arrêté No. 12665/2014; UICN CR; CMS 1; IOTC
Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Carcharhinus obscurus</i>	EN	App 2		Cat. 1	Cl. 1	UICN EN
Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Carcharhinus plumbeus</i>	EN	App 2		Cat. 1	Cl. 1	UICN EN
Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Negaprion acutidens</i>	EN	App 2		Cat. 1	Cl. 1	UICN EN
Chondrichthyes	Carcharhiniformes	Hemigaleidae	<i>Hemipristis elongata</i>	EN			Cat. 1	Cl. 1	UICN EN
Chondrichthyes	Carcharhiniformes	Pentanchidae	<i>Holohalaelurus punctatus</i>	EN			Cat. 1	Cl. 1	UICN EN
Chondrichthyes	Carcharhiniformes	Sphyrnidae	<i>Sphyrna lewini</i>	CR	App 2		Cat. 1	Cl. 1	Arrêté No. 3270-2001; UICN CR
Chondrichthyes	Carcharhiniformes	Sphyrnidae	<i>Sphyrna mokarran</i>	CR	App 2		Cat. 1	Cl. 1	Arrêté No. 3270-2001; UICN CR
Chondrichthyes	Carcharhiniformes	Sphyrnidae	<i>Sphyrna zygaena</i>	VU	App 2	App 2	Cat. 1	Cl. 1	Arrêté No. 3270-2001; UICN VU; CITES 2; CMS 2
Chondrichthyes	Carcharhiniformes	Triakidae	<i>Mustelus manazo</i>	EN			Cat. 1	Cl. 1	UICN EN
Chondrichthyes	Hexanchiformes	Hexanchidae	<i>Hexanchus griseus</i>	NT			Cat. 1	Cl. 1	Arrêté No. 3270-2001; UICN NT
Chondrichthyes	Lamniformes	Alopiidae	<i>Alopias pelagicus</i>	EN	App 2		Cat. 1	Cl. 1	Arrêté No. 3270-2001; Arrêté No. 12665/2014; UICN EN; IOTC
Chondrichthyes	Lamniformes	Alopiidae	<i>Alopias superciliosus</i>	VU	App 2		Cat. 1	Cl. 1	Arrêté No. 3270-2001; Arrêté No. 12665/2014; IOTC
Chondrichthyes	Lamniformes	Alopiidae	<i>Alopias vulpinus</i>	VU	App 2		Cat. 1	Cl. 1	Arrêté No. 3270-2001; Arrêté No. 12665/2014; IOTC
Chondrichthyes	Lamniformes	Lamnidae	<i>Carcharodon carcharias</i>	VU	App 2	App 1	Cat. 1	Cl. 1	CMS 1
Chondrichthyes	Lamniformes	Lamnidae	<i>Isurus oxyrinchus</i>	EN	App 2		Cat. 1	Cl. 1	Arrêté No. 3270-2001; UICN EN
Chondrichthyes	Lamniformes	Lamnidae	<i>Isurus paucus</i>	EN	App 2		Cat. 1	Cl. 1	Arrêté No. 3270-2001; UICN EN
Chondrichthyes	Lamniformes	Odontaspidae	<i>Odontaspis ferox</i>	EN			Cat. 1	Cl. 1	UICN EN
Chondrichthyes	Myliobatiformes	Aetobatidae	<i>Aetobatus ocellatus</i>	EN			Cat. 1	Cl. 1	UICN EN
Chondrichthyes	Myliobatiformes	Dasyatidae	<i>Himantura uarnak</i>	EN			Cat. 1	Cl. 1	UICN EN
Chondrichthyes	Myliobatiformes	Dasyatidae	<i>Pateobatis jenkinsii</i>	EN			Cat. 1	Cl. 1	UICN EN
Chondrichthyes	Myliobatiformes	Dasyatidae	<i>Urogymnus asperrimus</i>	EN			Cat. 1	Cl. 1	UICN EN
Chondrichthyes	Myliobatiformes	Mobulidae	<i>Mobula alfredi</i>	VU	App 2	App 1	Cat. 1	Cl. 1	CMS 1; IOTC
Chondrichthyes	Myliobatiformes	Mobulidae	<i>Mobula birostris</i>	EN	App 2	App 1	Cat. 1	Cl. 1	UICN EN; CMS 1; IOTC
Chondrichthyes	Myliobatiformes	Mobulidae	<i>Mobula eregoodoo</i>	EN	App 2	App 1	Cat. 1	Cl. 1	UICN EN; CMS 1; IOTC
Chondrichthyes	Myliobatiformes	Mobulidae	<i>Mobula kuhlii</i>	EN	App 2	App 1	Cat. 1	Cl. 1	UICN EN; CMS 1; IOTC
Chondrichthyes	Myliobatiformes	Mobulidae	<i>Mobula mobular</i>	EN	App 2	App 1	Cat. 1	Cl. 1	UICN EN; CMS 1; IOTC
Chondrichthyes	Myliobatiformes	Mobulidae	<i>Mobula thurstoni</i>	EN	App 2	App 1	Cat. 1	Cl. 1	UICN EN; CMS 1; IOTC
Chondrichthyes	Myliobatiformes	Myliobatidae	<i>Aetomylaeus vespertilio</i>	CR			Cat. 1	Cl. 1	UICN CR
Chondrichthyes	Myliobatiformes	Rhinopteridae	<i>Rhinoptera jayakari</i>	EN			Cat. 1	Cl. 1	UICN EN
Chondrichthyes	Orectolobiformes	Ginglymostomatidae	<i>Pseudoginglymostoma brevicaudatum</i>	CR			Cat. 1	Cl. 1	UICN CR
Chondrichthyes	Orectolobiformes	Rhincodontidae	<i>Rhincodon typus</i>	EN	App 2	App 1	Cat. 1	Cl. 1	UICN EN; CMS 1; IOTC
Chondrichthyes	Orectolobiformes	Stegostomatidae	<i>Stegostoma tigrinum</i>	EN			Cat. 1	Cl. 1	UICN EN
Chondrichthyes	Rajiformes	Rajidae	<i>Rostroraja alba</i>	EN			Cat. 1	Cl. 1	UICN EN

Class	Ordre	Famille	Genre - espèce	Statut UICN	CITES	CMS	Catégorisation		Remarques (justification de l'inscription)
Chondrichthyes	Rhinopristiformes	Pristidae	<i>Pristis pristis</i>	CR	App 1	App 1	Cat. 1	Cl. 1	UICN CR; CMS 1; CITES 1
Chondrichthyes	Rhinopristiformes	Rhinidae	<i>Rhina ancylostomus</i>	CR	App 2		Cat. 1	Cl. 1	UICN CR
Chondrichthyes	Rhinopristiformes	Rhinidae	<i>Rhynchobatus australiae</i>	CR	App 2		Cat. 1	Cl. 1	UICN CR
Chondrichthyes	Rhinopristiformes	Rhinidae	<i>Rhynchobatus djiddensis</i>	CR	App 2		Cat. 1	Cl. 1	UICN CR
Chondrichthyes	Squaliformes	Centrophoridae	<i>Centrophorus granulosus</i>	EN			Cat. 1	Cl. 1	UICN EN
Chondrichthyes	Squaliformes	Centrophoridae	<i>Centrophorus lesliei</i>	EN			Cat. 1	Cl. 1	UICN EN
Chondrichthyes	Squaliformes	Centrophoridae	<i>Centrophorus uyato</i>	EN			Cat. 1	Cl. 1	UICN EN
Chondrichthyes	Squaliformes	Oxynotidae	<i>Oxynotus centrina</i>	EN			Cat. 1	Cl. 1	UICN EN
Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Carcharhinus albimarginatus</i>	VU	App 2		Cat. 1	Cl. 2	UICN VU; CITES 2
Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Carcharhinus altimus</i>	NT	App 2		Cat. 1	Cl. 2	UICN NT; CITES 2
Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Carcharhinus amboinensis</i>	VU	App 2		Cat. 1	Cl. 2	UICN VU; CITES 2
Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Carcharhinus brachyurus</i>	VU	App 2		Cat. 1	Cl. 2	UICN VU; CITES 2
Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Carcharhinus brevipinna</i>	VU	App 2		Cat. 1	Cl. 2	UICN VU; CITES 2
Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Carcharhinus falciformis</i>	VU	App 2	App 2	Cat. 1	Cl. 2	UICN VU; CITES 2; CMS 2
Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Carcharhinus galapagensis</i>	LC	App 2		Cat. 1	Cl. 2	CITES 2
Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Carcharhinus humani</i>	DD	App 2		Cat. 1	Cl. 2	UICN DD; CITES 2
Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Carcharhinus leucas</i>	VU	App 2		Cat. 1	Cl. 2	UICN VU; CITES 2
Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Carcharhinus limbatus</i>	VU	App 2		Cat. 1	Cl. 2	UICN VU; CITES 2
Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Carcharhinus melanopterus</i>	VU	App 2		Cat. 1	Cl. 2	UICN VU; CITES 2
Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Carcharhinus sorrah</i>	NT	App 2		Cat. 1	Cl. 2	UICN NT; CITES 2
Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Loxodon macrorhinus</i>	NT	App 2		Cat. 1	Cl. 2	UICN NT; CITES 2
Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Prionace glauca</i>	NT	App 2	App 2	Cat. 1	Cl. 2	UICN NT; CITES 2; CMS 2
Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Rhizoprionodon acutus</i>	VU	App 2		Cat. 1	Cl. 2	UICN VU; CITES 2
Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Scoliodon laticaudus</i>	NT	App 2		Cat. 1	Cl. 2	UICN NT; CITES 2
Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Triaenodon obesus</i>	VU	App 2		Cat. 1	Cl. 2	UICN VU; CITES 2
Chondrichthyes	Carcharhiniformes	Galeocerdonidae	<i>Galeocerdo cuvier</i>	NT			Cat. 1	Cl. 2	UICN NT
Chondrichthyes	Carcharhiniformes	Hemigaleidae	<i>Paragaleus leucomatus</i>	VU			Cat. 1	Cl. 2	UICN VU
Chondrichthyes	Carcharhiniformes	Pentanchidae	<i>Bythaelurus clevai</i>	DD			Cat. 1	Cl. 2	UICN DD
Chondrichthyes	Carcharhiniformes	Pentanchidae	<i>Holohalaelurus grennian</i>	DD			Cat. 1	Cl. 2	UICN DD
Chondrichthyes	Carcharhiniformes	Scyliorhinidae	<i>Cephaloscyllium sufflans</i>	NT			Cat. 1	Cl. 2	UICN NT
Chondrichthyes	Carcharhiniformes	Scyliorhinidae	<i>Scyliorhinus comoroensis</i>	DD			Cat. 1	Cl. 2	UICN DD
Chondrichthyes	Chimaeriformes	Rhinochimaeridae	<i>Rhinochimaera africana</i>	DD			Cat. 1	Cl. 2	UICN DD
Chondrichthyes	Hexanchiformes	Hexanchidae	<i>Heptanchias perlo</i>	NT			Cat. 1	Cl. 2	UICN NT
Chondrichthyes	Hexanchiformes	Hexanchidae	<i>Hexanchus nakamurai</i>	NT			Cat. 1	Cl. 2	UICN NT; SIOFA
Chondrichthyes	Myliobatiformes	Dasyatidae	<i>Dasyatis chrysonota</i>	NT			Cat. 1	Cl. 2	UICN NT
Chondrichthyes	Myliobatiformes	Dasyatidae	<i>Maculabatis ambigua</i>	NT			Cat. 1	Cl. 2	UICN NT
Chondrichthyes	Myliobatiformes	Dasyatidae	<i>Pastinachus ater</i>	VU			Cat. 1	Cl. 2	UICN VU
Chondrichthyes	Myliobatiformes	Dasyatidae	<i>Pateobatis fai</i>	VU			Cat. 1	Cl. 2	UICN VU
Chondrichthyes	Myliobatiformes	Dasyatidae	<i>Taeniurops meyeri</i>	VU			Cat. 1	Cl. 2	UICN VU
Chondrichthyes	Myliobatiformes	Gymnuridae	<i>Gymnura poecilura</i>	VU			Cat. 1	Cl. 2	UICN VU
Chondrichthyes	Orectolobiformes	Ginglymostomatidae	<i>Nebrius ferrugineus</i>	VU			Cat. 1	Cl. 2	UICN VU

Class	Ordre	Famille	Genre - espèce	Statut UICN	CITES	CMS	Catégorisation	Remarques (justification de l'inscription)
Chondrichthyes	Orectolobiformes	Hemiscylliidae	<i>Chiloscyllium caeruleopunctatum</i>	DD			Cat. 1 Cl. 2	UICN DD
Chondrichthyes	Pristiophoriformes	Pristiophoridae	<i>Pliotrema kaja</i>	DD			Cat. 1 Cl. 2	UICN DD
Chondrichthyes	Rajiformes	Gurgesiellidae	<i>Fenestraja maceachrani</i>	DD			Cat. 1 Cl. 2	UICN DD
Chondrichthyes	Rajiformes	Rajidae	<i>Dipturus crosnieri</i>	VU			Cat. 1 Cl. 2	UICN VU
Chondrichthyes	Rajiformes	Rajidae	<i>Raja clavata</i>	NT			Cat. 1 Cl. 2	UICN NT
Chondrichthyes	Rajiformes	Rajidae	<i>Raja straeleni</i>	NT			Cat. 1 Cl. 2	UICN NT
Chondrichthyes	Rhinopristiformes	Rhinobatidae	<i>Acroteriobatus andysabini</i>	NE	App 2		Cat. 1 Cl. 2	UICN NE; CITES 2
Chondrichthyes	Rhinopristiformes	Rhinobatidae	<i>Rhinobatos austini</i>	DD	App 2		Cat. 1 Cl. 2	UICN DD; CITES 2
Chondrichthyes	Rhinopristiformes	Rhinobatidae	<i>Rhinobatos holcorhynchus</i>	DD	App 2		Cat. 1 Cl. 2	UICN DD; CITES 2
Chondrichthyes	Squaliformes	Centrophoridae	<i>Centrophorus moluccensis</i>	VU			Cat. 1 Cl. 2	UICN VU
Chondrichthyes	Squaliformes	Centrophoridae	<i>Deania calceus</i>	NT			Cat. 1 Cl. 2	UICN NT; SIOFA
Chondrichthyes	Squaliformes	Centrophoridae	<i>Deania profundorum</i>	NT			Cat. 1 Cl. 2	UICN NT
Chondrichthyes	Squaliformes	Centrophoridae	<i>Deania quadrispinosa</i>	VU			Cat. 1 Cl. 2	UICN VU
Chondrichthyes	Squaliformes	Dalatiidae	<i>Dalatias licha</i>	VU			Cat. 1 Cl. 2	UICN VU; SIOFA
Chondrichthyes	Squaliformes	Somniosidae	<i>Centroscymnus coelolepis</i>	NT			Cat. 1 Cl. 2	UICN NT; SIOFA
Chondrichthyes	Squaliformes	Somniosidae	<i>Centroscymnus owstonii</i>	VU			Cat. 1 Cl. 2	UICN VU
Chondrichthyes	Squaliformes	Somniosidae	<i>Centroselachus crepidater</i>	NT			Cat. 1 Cl. 2	UICN NT; SIOFA
Chondrichthyes	Squaliformes	Somniosidae	<i>Somniosus antarcticus</i>	LC			Cat. 1 Cl. 2	SIOFA
Chondrichthyes	Squaliformes	Somniosidae	<i>Zameus squamulosus</i>	LC			Cat. 1 Cl. 2	SIOFA
Chondrichthyes	Squaliformes	Squalidae	<i>Cirrhigaleus asper</i>	DD			Cat. 1 Cl. 2	UICN DD
Chondrichthyes	Squaliformes	Squalidae	<i>Squalus acutipinnis</i>	NT			Cat. 1 Cl. 2	UICN NT
Chondrichthyes	Squaliformes	Squalidae	<i>Squalus blainville</i>	DD			Cat. 1 Cl. 2	UICN DD
Chondrichthyes	Squaliformes	Squalidae	<i>Squalus mahia</i>	DD			Cat. 1 Cl. 2	UICN DD
Chondrichthyes	Squatiniiformes	Squatinaidae	<i>Squatina africana</i>	NT			Cat. 1 Cl. 2	UICN NT
Chondrichthyes	Torpediniformes	Narcinidae	<i>Narcine insolita</i>	DD			Cat. 1 Cl. 2	UICN DD
Chondrichthyes	Torpediniformes	Narkidae	<i>Heteronarce garmani</i>	NT			Cat. 1 Cl. 2	UICN NT
Chondrichthyes	Torpediniformes	Torpedinidae	<i>Torpedo fuscomaculata</i>	DD			Cat. 1 Cl. 2	UICN DD
Chondrichthyes	Torpediniformes	Torpedinidae	<i>Torpedo sinuspersici</i>	DD			Cat. 1 Cl. 2	UICN DD
Chondrichthyes	Carcharhiniformes	Pentanchidae	<i>Apristurus longicephalus</i>	LC			Cat. 2	UICN LC
Chondrichthyes	Carcharhiniformes	Pseudotriakidae	<i>Pseudotriakis microdon</i>	LC			Cat. 2	UICN LC
Chondrichthyes	Carcharhiniformes	Scyliorhinidae	<i>Poroderma africanum</i>	LC			Cat. 2	UICN LC
Chondrichthyes	Carcharhiniformes	Scyliorhinidae	<i>Poroderma pantherinum</i>	LC			Cat. 2	UICN LC
Chondrichthyes	Carcharhiniformes	Triakidae	<i>Triakis megalopterus</i>	LC			Cat. 2	UICN LC
Chondrichthyes	Lamniformes	Megachasmidae	<i>Megachasma pelagios</i>	LC			Cat. 2	UICN LC
Chondrichthyes	Lamniformes	Pseudocarchariidae	<i>Pseudocarcharias kamoharai</i>	LC			Cat. 2	UICN LC
Chondrichthyes	Myliobatiformes	Dasyatidae	<i>Neotrygon caeruleopunctata</i>	LC			Cat. 2	UICN LC
Chondrichthyes	Myliobatiformes	Dasyatidae	<i>Pteroplatytrygon violacea</i>	LC			Cat. 2	UICN LC
Chondrichthyes	Myliobatiformes	Dasyatidae	<i>Taeniura lymma</i>	LC			Cat. 2	UICN LC
Chondrichthyes	Pristiophoriformes	Pristiophoridae	<i>Pristiophorus nancyae</i>	LC			Cat. 2	UICN LC
Chondrichthyes	Rajiformes	Anacanthobatidae	<i>Indobatis ori</i>	LC			Cat. 2	UICN LC
Chondrichthyes	Rajiformes	Arhynchobatidae	<i>Bathyraja tunae</i>	LC			Cat. 2	UICN LC

Class	Ordre	Famille	Genre - espèce	Statut UICN	CITES	CMS	Catégorisation	Remarques (justification de l'inscription)
Chondrichthyes	Rajiformes	Arhynchobatidae	<i>Notoraja hesperindica</i>	LC			Cat. 2	UICN LC
Chondrichthyes	Rajiformes	Rajidae	<i>Dipturus springeri</i>	LC			Cat. 2	UICN LC
Chondrichthyes	Squaliformes	Dalatiidae	<i>Euprotomicrus bispinatus</i>	LC			Cat. 2	UICN LC
Chondrichthyes	Squaliformes	Dalatiidae	<i>Isistius brasiliensis</i>	LC			Cat. 2	UICN LC
Chondrichthyes	Squaliformes	Etmopteridae	<i>Etmopterus granulosus</i>	LC			Cat. 2	UICN LC
Chondrichthyes	Squaliformes	Etmopteridae	<i>Etmopterus sentosus</i>	LC			Cat. 2	UICN LC
Chondrichthyes	Torpediniformes	Narkidae	<i>Narke capensis</i>	LC			Cat. 2	UICN LC
Mammalia	Artiodactyla	Balaenidae	<i>Eubalaena australis</i>	LC	App 1	App 1	Cat. 1 Cl. 1	CMS 1; CITES 1; IOTC; IWC; UNCLOS
Mammalia	Artiodactyla	Balaenopteridae	<i>Balaenoptera musculus in-termedia</i>	EN	App 1	App 1	Cat. 1 Cl. 1	UICN EN; CMS 1; CITES 1; IOTC; IWC; UNCLOS
Mammalia	Artiodactyla	Balaenopteridae	<i>Balaenoptera musculus brevicauda</i>	EN	App 1	App 1	Cat. 1 Cl. 1	UICN EN; CMS 1; CITES 1; IOTC; IWC; UNCLOS
Mammalia	Artiodactyla	Balaenopteridae	<i>Balaenoptera physalus</i>	VU	App 1	App 1	Cat. 1 Cl. 1	CMS 1; CITES 1; IOTC; IWC; UNCLOS
Mammalia	Artiodactyla	Balaenopteridae	<i>Balaenoptera borealis schlegelii</i>	EN	App 1	App 1	Cat. 1 Cl. 1	UICN EN; CMS 1; CITES 1; IOTC; IWC; UNCLOS
Mammalia	Artiodactyla	Balaenopteridae	<i>Balaenoptera edeni edeni</i>	LC	App 1		Cat. 1 Cl. 1	CITES 1; IOTC; IWC; UNCLOS
Mammalia	Artiodactyla	Balaenopteridae	<i>Balaenoptera omurai</i>	DD	App 1		Cat. 1 Cl. 1	CITES 1; IOTC; IWC; UNCLOS
Mammalia	Artiodactyla	Balaenopteridae	<i>Balaenoptera bonaerensis</i>	NT	App 1		Cat. 1 Cl. 1	CITES 1; IOTC; IWC; UNCLOS
Mammalia	Artiodactyla	Balaenopteridae	<i>Megaptera novaeangliae australis</i>	LC	App 1	App 1	Cat. 1 Cl. 1	CMS 1; CITES 1; IOTC; IWC; UNCLOS
Mammalia	Artiodactyla	Delphinidae	<i>Orcinus orca</i>	DD			Cat. 1 Cl. 1	IOTC; UNCLOS
Mammalia	Artiodactyla	Delphinidae	<i>Pseudorca crassidens</i>	NT			Cat. 1 Cl. 1	IOTC; UNCLOS
Mammalia	Artiodactyla	Delphinidae	<i>Feresa attenuata</i>	LC			Cat. 1 Cl. 1	IOTC; UNCLOS
Mammalia	Artiodactyla	Delphinidae	<i>Peponocephala electra</i>	LC			Cat. 1 Cl. 1	IOTC; UNCLOS
Mammalia	Artiodactyla	Delphinidae	<i>Globicephala macrorhynchus</i>	LC			Cat. 1 Cl. 1	IOTC; UNCLOS
Mammalia	Artiodactyla	Delphinidae	<i>Grampus griseus</i>	LC			Cat. 1 Cl. 1	IOTC; UNCLOS
Mammalia	Artiodactyla	Delphinidae	<i>Lagenodelphis hosei</i>	LC			Cat. 1 Cl. 1	IOTC; UNCLOS
Mammalia	Artiodactyla	Delphinidae	<i>Stenella attenuata</i>	LC			Cat. 1 Cl. 1	IOTC; UNCLOS
Mammalia	Artiodactyla	Delphinidae	<i>Stenella coeruleoalba</i>	LC			Cat. 1 Cl. 1	IOTC; UNCLOS
Mammalia	Artiodactyla	Delphinidae	<i>Delphinus delphis delphis</i>	LC			Cat. 1 Cl. 1	IOTC; UNCLOS
Mammalia	Artiodactyla	Delphinidae	<i>Tursiops truncatus truncatus</i>	LC			Cat. 1 Cl. 1	IOTC; UNCLOS
Mammalia	Artiodactyla	Delphinidae	<i>Tursiops aduncus</i>	NT			Cat. 1 Cl. 1	IOTC; UNCLOS
Mammalia	Artiodactyla	Delphinidae	<i>Sousa plumbea</i>	EN	App 1		Cat. 1 Cl. 1	UICN EN; CITES 1; IOTC; UNCLOS
Mammalia	Artiodactyla	Delphinidae	<i>Stenella longirostris</i>	LC			Cat. 1 Cl. 1	IOTC; UNCLOS
Mammalia	Artiodactyla	Kogiidae	<i>Kogia breviceps</i>	LC			Cat. 1 Cl. 1	IOTC; UNCLOS
Mammalia	Artiodactyla	Kogiidae	<i>Kogia sima</i>	LC			Cat. 1 Cl. 1	IOTC; UNCLOS
Mammalia	Artiodactyla	Physeteridae	<i>Physeter macrocephalus</i>	VU	App 1	App 1	Cat. 1 Cl. 1	CMS 1; CITES 1; IOTC; IWC; UNCLOS
Mammalia	Artiodactyla	Ziphiidae	<i>Ziphius cavirostris</i>	LC			Cat. 1 Cl. 1	IOTC; UNCLOS
Mammalia	Artiodactyla	Ziphiidae	<i>Indopacetus pacificus</i>	LC			Cat. 1 Cl. 1	IOTC; UNCLOS
Mammalia	Artiodactyla	Ziphiidae	<i>Mesoplodon densirostris</i>	LC			Cat. 1 Cl. 1	IOTC; UNCLOS
Mammalia	Artiodactyla	Ziphiidae	<i>Mesoplodon eueu</i>	LC			Cat. 1 Cl. 1	IOTC; UNCLOS
Mammalia	Sirenia	Dugongidae	<i>Dugong dugon</i>	VU	App 1		Cat. 1 Cl. 1	CITES 1; UNCLOS

Class	Ordre	Famille	Genre - espèce	Statut UICN	CITES	CMS	Catégorisation	Remarques (justification de l'inscription)
Reptilia	Testudines	Cheloniidae	<i>Caretta caretta</i>	VU		App 1	Cat. 1 Cl. 1	CMS 1; CITES 1; IOTC
Reptilia	Testudines	Cheloniidae	<i>Chelonia mydas</i>	EN		App 1	Cat. 1 Cl. 1	UICN EN; CMS 1; CITES 1; IOTC
Reptilia	Testudines	Cheloniidae	<i>Eretmochelys imbricata</i>	CR		App 1	Cat. 1 Cl. 1	UICN CR; CMS 1; CITES 1; IOTC
Reptilia	Testudines	Cheloniidae	<i>Lepidochelys olivacea</i>	VU		App 1	Cat. 1 Cl. 1	CMS 1; CITES 1; IOTC
Reptilia	Testudines	Dermodochelyidae	<i>Dermodochelys coriacea</i>	VU		App 1	Cat. 1 Cl. 1	CMS 1; CITES 1; IOTC

ANNEX 2 – FINAL PROPOSED PROTECTED SPECIES TABLES

Annex 2a – Marine mammals (Cetaceans and Sirenia) and reptiles

List as agreed by all participants at the workshop of 26 March 2025

Phylum	Class	Order	Family	Genus - species	Malagasy name	French name	English name	Status IUCN	Convention				EDGE	Proposed Category	
									CITES	CMS	IOTC	IWC			
Chordata	Mammalia	Artiodactyla	Balaenidae	<i>Eubalaena australis</i>	Trozo tsisy vombo	Baleine franche australe ⁴	Southern Right Whale ⁵	LC	1	I	✓	✓		Cat. 1	Cl. 1
Chordata	Mammalia	Artiodactyla	Balaenopteridae	<i>Balaenoptera musculus intermedia</i>	Trozombe	Baleine bleue australe ⁴	Southern Blue Whale, Antarctic blue whale ⁴	EN	1	I	✓	✓	✓	Cat. 1	Cl. 1
Chordata	Mammalia	Artiodactyla	Balaenopteridae	<i>Balaenoptera musculus brevicauda</i>	Trozombe	Baleine bleue pygmée ⁴	Pygmy blue Whale ⁶	EN	1	I	✓	✓		Cat. 1	Cl. 1
Chordata	Mammalia	Artiodactyla	Balaenopteridae	<i>Balaenoptera physalus</i>	Trozona amambombo	Rorqual commun ⁵	Fin Whale ⁵	VU	1	I	✓	✓	✓	Cat. 1	Cl. 1
Chordata	Mammalia	Artiodactyla	Balaenopteridae	<i>Balaenoptera borealis schlegelii</i>	Trozo	Rorqual boréal ⁴	Southern sei Whale ⁶	EN	1	I	✓	✓		Cat. 1	Cl. 1
Chordata	Mammalia	Artiodactyla	Balaenopteridae	<i>Balaenoptera edeni edeni</i>	Trozo	Rorqual de Bryde ou Rorqual Tropical ⁵	Bryde's Whale ⁵	LC	1	I	✓	✓		Cat. 1	Cl. 1
Chordata	Mammalia	Artiodactyla	Balaenopteridae	<i>Balaenoptera omurai</i>	Trozo	Rorqual d'Omura ⁵	Omura's Whale ⁵	DD	1	II	✓	✓		Cat. 1	Cl. 1
Chordata	Mammalia	Artiodactyla	Balaenopteridae	<i>Balaenoptera bonaerensis</i>	Trozo	Petit rorqual Antarctique ⁵	Antarctic Minke Whale ⁵	NT	1	II	✓	✓		Cat. 1	Cl. 1

⁴ inpn.mnhn.fr

⁵ FAO 2019

⁶ inaturalist.org

Chordata	Mammalia	Artiodactyla	Balaenopteridae	<i>Megaptera novaeangliae</i>	Fesodrakoa, Zanahary be	Baleine à bosse, mégaptère, jubarte ⁵	Humpback Whale ⁵	LC	1	I	✓	✓		Cat. 1	Cl. 1
Chordata	Mammalia	Artiodactyla	Delphinidae	<i>Orcinus orca</i>	Fesontsohy	Orque ⁵	Killer Whale ⁵	DD	1	II	✓			Cat. 1	Cl. 1
Chordata	Mammalia	Artiodactyla	Delphinidae	<i>Pseudorca crassidens</i>	Fesotse, Fesoke	Fausse Orque ⁴	False Killer Whale ⁴	NT	1		✓			Cat. 1	Cl. 1
Chordata	Mammalia	Artiodactyla	Delphinidae	<i>Feresa attenuata</i>	Fesontsohy fohy	Orque pygmée ⁵	Pygmy Killer Whale ⁵	LC	1		✓			Cat. 1	Cl. 1
Chordata	Mammalia	Artiodactyla	Delphinidae	<i>Peponocephala electra</i>	Fesotse, Fesoke	Péponocéphale, Dauphin d'Electre ⁴	Melon-headed Whale, tuyiin ⁴	LC	1		✓			Cat. 1	Cl. 1
Chordata	Mammalia	Artiodactyla	Delphinidae	<i>Globicephala macrorhynchus</i>	Razampesotse	Globicéphale tropical ⁴	Short-finned pilot whale ⁴	LC	2		✓			Cat. 1	Cl. 1
Chordata	Mammalia	Artiodactyla	Delphinidae	<i>Grampus griseus</i>	Fesoke atamba	Grampus, Dauphin de Risso ⁵	Risso's Dolphin ⁵	LC	2	II	✓			Cat. 1	Cl. 1
Chordata	Mammalia	Artiodactyla	Delphinidae	<i>Lagenodelphis hosei</i>	Fesotse, Fesoke	Dauphin de Fraser ⁴	Fraser's Dolphin ⁴	LC	2	II	✓			Cat. 1	Cl. 1
Chordata	Mammalia	Artiodactyla	Delphinidae	<i>Stenella attenuata</i>	Fesompia	Dauphin tacheté pantropical ⁵	Pantropical Spotted Dolphin ⁵	LC	2	II	✓			Cat. 1	Cl. 1
Chordata	Mammalia	Artiodactyla	Delphinidae	<i>Stenella coeruleoalba</i>	Fesotse, Fesoke	Dauphin bleu et blanc ⁵	Striped Dolphin ⁵	LC	2	II	✓			Cat. 1	Cl. 1
Chordata	Mammalia	Artiodactyla	Delphinidae	<i>Delphinus delphis</i>	Fesotse, Fesoke	Dauphin commun ⁵	Common Dolphin ⁵	LC	2	I/II	✓			Cat. 1	Cl. 1
Chordata	Mammalia	Artiodactyla	Delphinidae	<i>Tursiops truncatus</i>	Fesojakoa, Lavavombitse	Grand dauphin commun ⁵	Common Bottlenose Dolphin ⁵	LC	2	I/II	✓			Cat. 1	Cl. 1
Chordata	Mammalia	Artiodactyla	Delphinidae	<i>Tursiops aduncus</i>	Fesojakoa, Lavavombitse	Grand dauphin de l'Indopacifique ⁵	Indo-Pacific Bottlenose Dolphin ⁵	NT	2	II	✓			Cat. 1	Cl. 1
Chordata	Mammalia	Artiodactyla	Delphinidae	<i>Sousa plumbea</i>	Fesodobia	Dauphin à bosse de l'océan Indien ⁵	Indian Ocean Humpback Dolphin ⁵	EN	1	II	✓			Cat. 1	Cl. 1
Chordata	Mammalia	Artiodactyla	Delphinidae	<i>Stenella longirostris</i>	Fesompia	Dauphin à long bec ⁴	Spinner dolphin ⁴	LC	2	II	✓			Cat. 1	Cl. 1

Chordata	Mammalia	Artiodactyla	Kogiidae	<i>Kogia breviceps</i>	Trozo	Cachalot pygmée ⁵	Pygmy Sperm Whale ⁵	LC	2		✓			Cat. 1	Cl. 1
Chordata	Mammalia	Artiodactyla	Kogiidae	<i>Kogia sima</i>	Trozo	Cachalot nain ⁵	Dwarf Sperm Whale ⁵	LC	2		✓			Cat. 1	Cl. 1
Chordata	Mammalia	Artiodactyla	Physeteridae	<i>Physeter macrocephalus</i>	Fesoboa	Cachalot, Cachalot macrocéphale, Grand cachalot ⁴	Sperm Whale ⁴	VU	1	III	✓	✓	✓	Cat. 1	Cl. 1
Chordata	Mammalia	Artiodactyla	Ziphiidae	<i>Ziphius cavirostris</i>	Trozo misoram-bavan-gisy	Ziphius, Baleine à bec de Cuvier ⁵	Cuvier's Beaked Whale ⁵	LC	2	I	✓	✓		Cat. 1	Cl. 1
Chordata	Mammalia	Artiodactyla	Ziphiidae	<i>Indopacetus pacificus</i>	Trozo	Baleine à bec de Longman ⁵	Longman's Beaked Whale ⁵	LC	2		✓			Cat. 1	Cl. 1
Chordata	Mammalia	Artiodactyla	Ziphiidae	<i>Mesoplodon densirostris</i>	Trozo	Baleine à bec de Blainville ⁵	Blainville's Beaked Whale ⁵	LC	2		✓			Cat. 1	Cl. 1
Chordata	Mammalia	Artiodactyla	Ziphiidae	<i>Mesoplodon eueu</i>	Trozo	Mésoplodon de Ramari ⁶	Ramari's Beaked Whale ⁷	LC			✓			Cat. 1	Cl. 1
Chordata	Mammalia	Sirenia	Dugongidae	<i>Dugong dugon</i>	Lambohara, Lamboaran', lambondano, trozon dambo, lambondriake, lamboara ⁸	Dugong, Vache marine ⁴	Dugong, Sea cow ⁴	VU	1	II			✓	Cat. 1	Cl. 1
Chordata	Mammalia	Cetacea	Balaenopteridae	<i>B. acutorostrata ssp.</i>	Trozo	Baleine de minke naine ⁹	Dwarf Minke Whale ⁴	LC	1					Cat. 1	Cl. 1
Chordata	Mammalia	Cetacea	Ziphiidae	<i>M. ginkgodens</i>	Trozo	Mésoplodon japonais ⁴	Ginkgo-toothed Beaked Whale ⁴	DD	2					Cat. 1	Cl. 1
Chordata	Mammalia	Cetacea	Delphinidae	<i>Steno bredanensis</i>	Fesotse, Fesoke	Dauphin à bec étroit ⁴	Rough-toothed Dolphin ⁴	LC	2					Cat. 1	Cl. 1

⁷ www.iucnredlist.org

⁸ Davis et al 2022

⁹ auxbulles.com

Chordata	Mammalia	Cetacea	Delphinidae	<i>S. coeruleoalba</i>		Dauphin bleu et blanc	Striped Dolphin	LC	2	II					
Chordata	Reptilia	Testudines	Cheloniidae	<i>Eretmochelys imbricata</i>	Fano haravola, Fano loanko, Fano fandrata	Tortue imbriquée ⁴	Hawksbill Turtle ⁴	CR	1	I	✓		✓	Cat. 1	Cl. 1
Chordata	Reptilia	Testudines	Cheloniidae	<i>Chelonia mydas</i>	Fano zaty, Fano onjoaty, Fano vola, Fano ahitsy, Fanoobe, Fano aomby, Fano bahalahy, Fano betay, Tsikelim-pano, Fano mainty, Saviom-pano, Fano tanga	Tortue verte ⁴	Green Turtle ⁴	EN	1	I	✓		✓	Cat. 1	Cl. 1
Chordata	Reptilia	Testudines	Dermochelyidae	<i>Dermochelys coriacea</i>	Fano valozoro, Fano valorara, Fano voay, Fano fandrato	Tortue luth ⁴	Leatherback turtle ⁴	VU	1	I	✓		✓	Cat. 1	Cl. 1
Chordata	Reptilia	Testudines	Cheloniidae	<i>Caretta caretta</i>	Fano mena, Fano apombo, Fano beloha, Fano lavatanampotsy, Fano tsip-ioko	Tortue caouanne ⁴	Loggerhead Turtle ⁴	VU	1	I	✓		✓	Cat. 1	Cl. 1
Chordata	Reptilia	Testudines	Cheloniidae	<i>Lepidochelys olivacea</i>	Fano tsakoy, Fano fotsy	Tortue olivâtre ⁴	Olive Ridley ⁴	VU	1	I	✓			Cat. 1	Cl. 1

Annex 2b – Chondrichthyans (Sharks, Rays and Chimeras)

List as agreed by all participants at the workshop of 26 March 2025

Phylum	Class	Order	Family	Genus - species	Malagasy name	French name	English name	Status IUCN	Convention/ Organisation				EDGE	Categorisation		Other proposal
									CITES	CMS	IOTC	SIOFA				
Chordata	Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Carcharhinus albimarginatus</i>	Fotsy halahala, Foty rambo, Fitovonto, Maintilambosy ¹⁰	Requin pointe blanche ¹¹	Silvertip shark ¹¹	VU	2				✓	Cat. 1	Cl. 2	Cat.1 Cl.1
Chordata	Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Carcharhinus altimus</i>	Akiho ¹¹	Requin ba-bosse ¹²	Bignose shark ¹²	NT	2					Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Carcharhinus amblyrhynchos</i>	Fesotse ¹³	Requin gris de récif ¹⁴	Grey reef shark ¹³	EN	2					Cat. 1	Cl. 1	
Chordata	Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Carcharhinus amboinensis</i>	Dofokoro, Beloha ¹⁵	Requin ba-lestrine ¹²	Pigeye shark ¹²	VU	2					Cat. 1	Cl. 2	Cat.1 Cl.1
Chordata	Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Carcharhinus brachyurus</i>	Mbato ¹⁵	Requin cuivré ¹²	Copper shark ¹²	VU	2					Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Carcharhinus brevipinna</i>	Fotivonto, Fesoke ¹³	Requin-tisserand ¹²	Spinner shark or Blacktip shark ¹³	VU	2					Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Carcharhinus falciformis</i>	Gofu, Ranorano ¹⁵	Requin so-yeux ¹²	Silky shark ¹²	VU	2	2			✓	Cat. 1	Cl. 2	Cat.1 Cl.1
Chordata	Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Carcharhinus galapagensis</i>	Akiho ¹⁶	Requin des Galapagos ⁴	Galapagos Shark ⁴	LC	2					Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Carcharhinus humani</i>	Akiho ¹⁷		Human's whaler shark ¹⁴	DD	2					Cat. 1	Cl. 2	

¹⁰ Humber 2015, CLANM 2000

¹¹ FAO 1984

¹² Séret 2006

¹³ Humber et al 2016

¹⁴ www.fishbase.se

¹⁵ Humber 2015

¹⁶ RSTE 2020

¹⁷ Fricke et al 2018

Chordata	Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Carcharhinus leucas</i>	Maintindambosy ¹³	Requin-bouledogue ¹²	Bull shark ¹³	VU	2					Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Carcharhinus limbatus</i>	Fesoke ¹³	Requin bordé ¹²	Blacktip shark ¹³	VU	2					Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Carcharhinus longimanus</i>	Meso, Bevombotsy ¹⁵	Requin océanique ¹²	Oceanic white-tip shark ¹²	CR	2	I	PRO			Cat. 1	Cl. 1	
Chordata	Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Carcharhinus melanopterus</i>	Maintepate, Mentitehoky ¹⁵	Requin à pointes noires ⁴	Blacktip reef shark ¹²	VU	2					Cat. 1	Cl. 2	Cat.1 Cl.1
Chordata	Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Carcharhinus obscurus</i>	Foty ¹⁵	Requin sombre ¹²	Dusky shark ¹²	EN	2					Cat. 1	Cl. 1	
Chordata	Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Carcharhinus plumbeus</i>	Bevombotse ¹⁵	Requin gris ¹²	Sandbar shark ¹²	EN	2					Cat. 1	Cl. 1	
Chordata	Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Carcharhinus sorrah</i>	Dofikoro, Fesoke, Lavaoro, Maintipaty, Maragnitsoro, Botramavo ¹³	Requin à queue tachetée ¹¹	Spot-tail shark ¹³	NT	2					Cat. 1	Cl. 2	Cat.1 Cl.1
Chordata	Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Loxodon macrorhinus</i>	Kasioke ¹³	Requin sagrin ⁴	Sliteye shark ¹³	NT	2					Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Negaprion acutidens</i>	Antsantsa valoe-latra ¹⁸	Requin citron faucille ⁴	Lemon Shark ⁴	EN	2				✓	Cat. 1	Cl. 1	
Chordata	Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Prionace glauca</i>	Akiho ¹⁷	Requin bleu ⁴	Blue Shark ⁴	NT	2					Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Rhizoprionodon acutus</i>	Antsingora ambaniava ¹⁹	Requin à museau pointu ¹²	Milk Shark ¹²	VU	2					Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Scoliodon laticaudus</i>		Requin épée ¹⁴	Spadenose Shark ¹⁴	NT	2					Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Carcharhiniformes	Carcharhinidae	<i>Triaenodon obesus</i>	Tomango ¹³	Requin corail ⁴	Whitetip reef shark ¹³	VU	2					Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Carcharhiniformes	Galeocerdonidae	<i>Galeocerdo cuvier</i>	Kary ¹³	Requin tigre ¹²	Tiger shark ¹³	NT						Cat. 1	Cl. 2	Cat.1 Cl.1
Chordata	Chondrichthyes	Carcharhiniformes	Hemigaleidae	<i>Hemipristis elongata</i>	Andranomamy ¹³	Milandre chincor ¹⁴	Snaggletooth shark ¹³	EN					✓	Cat. 1	Cl. 1	
Chordata	Chondrichthyes	Carcharhiniformes	Hemigaleidae	<i>Paragaleus leucolomatus</i>			Whitetip weasel shark ¹⁴	VU						Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Carcharhiniformes	Pentanchidae	<i>Apristurus longicephalus</i>		Holbiche à grande tête ⁴	Longhead catshark ⁴	LC						Cat. 2		Cat.1 Cl.2
Chordata	Chondrichthyes	Carcharhiniformes	Pentanchidae	<i>Bythaelurus clevai</i>			Broadhead catshark ¹⁴	DD						Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Carcharhiniformes	Pentanchidae	<i>Holohalaelurus grennian</i>			East African spotted Izak ⁶	DD						Cat. 1	Cl. 2	

¹⁸ Randriamiarisoa 2006

¹⁹ P. Doukakis et al.

Chordata	Chondrichthyes	Carcharhiniformes	Pentanchidae	<i>Holohalaelurus punctatus</i>		Holbiche à gorge tachetée ¹⁴	African spotted catshark ¹⁴	EN				✓	Cat. 1	Cl. 1	
Chordata	Chondrichthyes	Carcharhiniformes	Pseudotriakidae	<i>Pseudotriakis microdon</i>		Requin à longue dorsale ⁴	False Cat-shark ⁴	LC					Cat. 2		Cat.1 Cl.2
Chordata	Chondrichthyes	Carcharhiniformes	Scyliorhinidae	<i>Cephaloscyllium sufflans</i>		Holbiche soufflée ¹⁴	Balloon shark ¹⁴	NT					Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Carcharhiniformes	Scyliorhinidae	<i>Poroderma africanum</i>	Akiho, Antsantsa, Antsantsangory ¹⁷	Roussette rubanée ¹⁴	Striped cat-shark ¹⁴	LC					Cat. 2		Cat.1 Cl.2
Chordata	Chondrichthyes	Carcharhiniformes	Scyliorhinidae	<i>Poroderma pantherinum</i>		Roussette panthère ¹⁷	Leopard cat-shark ¹⁷	LC					Cat. 2		Cat.1 Cl.2
Chordata	Chondrichthyes	Carcharhiniformes	Scyliorhinidae	<i>Scyliorhinus comoroensis</i>			Comoro cat shark ¹⁴	DD					Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Carcharhiniformes	Sphyrnidae	<i>Sphyrna lewini</i>	Palaloha, Viko, masia ¹³	Requin-marteau halicorne ¹²	Scalloped hammerhead ¹³	CR	2			✓	Cat. 1	Cl. 1	
Chordata	Chondrichthyes	Carcharhiniformes	Sphyrnidae	<i>Sphyrna mokarran</i>	Antenohomaso, satraha ¹⁵	Grand requin-marteau ¹²	Great Hammerhead ¹²	CR	2			✓	Cat. 1	Cl. 1	
Chordata	Chondrichthyes	Carcharhiniformes	Sphyrnidae	<i>Sphyrna zygaena</i>	Viko ¹⁵	Requin-marteau commun ¹²	Smooth hammerhead ¹²	VU	2	2		✓	Cat. 1	Cl. 2	Cat.1 Cl.1
Chordata	Chondrichthyes	Carcharhiniformes	Triakidae	<i>Mustelus manazo</i>		Emissole étoilée ⁴	Starspotted smooth-hound ⁴	EN					Cat. 1	Cl. 1	
Chordata	Chondrichthyes	Carcharhiniformes	Triakidae	<i>Triakis megalopterus</i>		Virli dentu ¹⁴	Sharptooth houndshark ¹⁴	LC					Cat. 2		Cat.1 Cl.2
Chordata	Chondrichthyes	Chimaeriformes	Rhinochimaeridae	<i>Rhinochimaera africana</i>			Paddlenose chimaera ¹⁴	DD					Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Hexanchiformes	Hexanchidae	<i>Heptranchias perlo</i>		Requin perlon ⁴	Sharpnose sevengill shark ⁴	NT					Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Hexanchiformes	Hexanchidae	<i>Hexanchus griseus</i>	Beloha ¹⁸	Requin gris ⁴	Bluntnose sixgill shark ¹⁵	NT					Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Hexanchiformes	Hexanchidae	<i>Hexanchus nakamurai</i>		Requin vache ⁴	Bigeyed sixgill shark ⁴	NT			✓		Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Lamniformes	Alopiidae	<i>Alopias pelagicus</i>		Requin-renard pélagique ⁴	Pelagic Tresher Shark ⁴	EN	2		PRO	✓	Cat. 1	Cl. 1	
Chordata	Chondrichthyes	Lamniformes	Alopiidae	<i>Alopias superciliosus</i>	Garamaso, Tomanimanente, Amboso ¹⁵	Renard à gros yeux ⁴	Bigeye thresher ¹⁵	VU	2		PRO	✓	Cat. 1	Cl. 1	
Chordata	Chondrichthyes	Lamniformes	Alopiidae	<i>Alopias vulpinus</i>	Hiahia, lavarambo, antsantsa vandana ¹⁸	Requin renard ⁴	Thresher Shark ⁴	VU	2		PRO	✓	Cat. 1	Cl. 1	
Chordata	Chondrichthyes	Lamniformes	Lamnidae	<i>Carcharodon carcharias</i>	Farao, akio masiake ¹⁷	Grand requin blanc ⁴	Great white shark ⁴	VU	2	1		✓	Cat. 1	Cl. 1	
Chordata	Chondrichthyes	Lamniformes	Lamnidae	<i>Isurus oxyrinchus</i>	Bevombotse, Fitovonto ¹⁷	Taupe bleue ¹¹	Shortin mako ¹⁵	EN	2			✓	Cat. 1	Cl. 1	
Chordata	Chondrichthyes	Lamniformes	Lamnidae	<i>Isurus paucus</i>	Antsantsa tergal, Bealalavango ¹⁸	Petite Taupe ¹¹	Longfin mako ¹¹	EN	2			✓	Cat. 1	Cl. 1	
Chordata	Chondrichthyes	Lamniformes	Megachasmidae	<i>Megachasma pelagios</i>		Requin grande gueule ¹⁴	Megamouth shark ¹⁴	LC					Cat. 2		Cat.1 Cl.2
Chordata	Chondrichthyes	Lamniformes	Odontaspidae	<i>Odontaspis ferox</i>	Foty ¹⁵	Requin Féroce ⁴	Small-tooth Sand tiger ¹⁵	EN				✓	Cat. 1	Cl. 1	
Chordata	Chondrichthyes	Lamniformes	Pseudocarchariidae	<i>Pseudocarcharias kamoharai</i>	Akiho ¹⁶	Requin crocodile ⁴	Crocodile shark ⁴	LC					Cat. 2		Cat.1 Cl.2
Chordata	Chondrichthyes	Orectolobiformes	Ginglymostomatidae	<i>Nebrius ferrugineus</i>	Ankiogogo ¹⁸	Requin nourrice ³	Tawny nurse shark ⁴	VU				✓	Cat. 1	Cl. 2	Cat.1 Cl.1

Chordata	Chondrichthyes	Orectolobiformes	Ginglymostomatidae	<i>Pseudoginglymostoma brevicaudatum</i>			Shorttail nurse shark ¹⁵	CR					✓	Cat. 1	Cl. 1	
Chordata	Chondrichthyes	Orectolobiformes	Hemiscyllidae	<i>Chiloscyllium caeruleopunctatum</i>	Ankiokary kely, Ankiogny ¹⁸	Requin chabot à taches bleues ¹¹	Bluespotted bambooshark ¹⁵	DD						Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Orectolobiformes	Rhincodontidae	<i>Rhincodon typus</i>	Trozo, Ingahibe ¹⁵	Requin baleine ⁴	Whale shark ⁴	EN	2	1	PRO		✓	Cat. 1	Cl. 1	
Chordata	Chondrichthyes	Orectolobiformes	Stegostomatidae	<i>Stegostoma tigrinum</i>		Requin zèbre ⁴	Zebra shark ⁴	EN						Cat. 1	Cl. 1	
Chordata	Chondrichthyes	Pristiophoriformes	Pristiophoridae	<i>Pliotrema kajae</i>			Kaja's sixgill sawshark ¹⁴	DD						Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Pristiophoriformes	Pristiophoridae	<i>Pristiophorus nan-cyae</i>	Vaevae ¹³	Vae vae ¹⁴	African dwarf sawshark ¹³	LC						Cat. 2		Cat.1 Cl.2
Chordata	Chondrichthyes	Squaliformes	Centrophoridae	<i>Centrophorus granulosus</i>		Squale-chagrun commun ⁴	Gulper shark ⁴	EN						Cat. 1	Cl. 1	
Chordata	Chondrichthyes	Squaliformes	Centrophoridae	<i>Centrophorus leslei</i>		Squale-chagrun Africain ⁵	African gulper shark ¹⁴	EN						Cat. 1	Cl. 1	
Chordata	Chondrichthyes	Squaliformes	Centrophoridae	<i>Centrophorus molluccensis</i>	Balidake, Fatike ¹³	Squale-chagrun cagaou ⁴	Smallfin gulper shark ¹³	VU						Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Squaliformes	Centrophoridae	<i>Centrophorus uyato</i>		Petit squale-chagrin ⁴	Little gulper shark ⁴	EN						Cat. 1	Cl. 1	
Chordata	Chondrichthyes	Squaliformes	Centrophoridae	<i>Deania calceus</i>		Squale savate ⁴	Birdbeak Dogfish ⁴	NT				✓		Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Squaliformes	Centrophoridae	<i>Deania profundorum</i>		Squale savate lutin ⁴	Arrowhead dogfish ⁴	NT						Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Squaliformes	Centrophoridae	<i>Deania quadrispinosa</i>		Squale-savate à long nez ⁴	Longsnout dogfish ⁴	VU						Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Squaliformes	Dalatiidae	<i>Dalatis licha</i>		Squale liche ¹⁴	Kitefin shark ¹⁴	VU				✓		Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Squaliformes	Dalatiidae	<i>Euprotomicrus bispinatus</i>		Squale pygmée ⁴	Pygmy shark ⁴	LC						Cat. 2		Cat.1 Cl.2
Chordata	Chondrichthyes	Squaliformes	Dalatiidae	<i>Isistius brasiliensis</i>		Squalelet féroce ⁴	Cookie cutter shark ⁴	LC						Cat. 2		Cat.1 Cl.2
Chordata	Chondrichthyes	Squaliformes	Etmopteridae	<i>Etmopterus granulosus</i>		Sagre long nez ⁴	Southern lanternshark ⁴	LC						Cat. 2		Cat.1 Cl.2
Chordata	Chondrichthyes	Squaliformes	Etmopteridae	<i>Etmopterus sentosus</i>		Sagre épineux ¹⁴	Thorny lanternshark ¹⁴	LC						Cat. 2		Cat.1 Cl.2
Chordata	Chondrichthyes	Squaliformes	Oxynotidae	<i>Oxynotus centrina</i>		Centrine commune ⁴	Angular roughshark ⁴	EN						Cat. 1	Cl. 1	
Chordata	Chondrichthyes	Squaliformes	Somniosidae	<i>Centroscymnus coelelepis</i>		Pailona commune ⁴	Portuguese Dogfish ⁴	NT				✓		Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Squaliformes	Somniosidae	<i>Centroscymnus owstonii</i>		Pailona rapeux ⁴	Roughskin dogfish ⁴	VU						Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Squaliformes	Somniosidae	<i>Centroselachus crepidater</i>		Pailona à long nez ⁴	Longnose velvet dogfish ⁴	NT				✓		Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Squaliformes	Somniosidae	<i>Somniosus antarcticus</i>		Requin dormeur ¹⁴	Greenland shark ¹⁴	LC				✓		Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Squaliformes	Somniosidae	<i>Zameus squamulosus</i>		Squale-grogneur à queue échancrée ⁴	Smallmouth velvet dogfish ⁴	LC				✓		Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Squaliformes	Squalidae	<i>Cirrhigaleus asper</i>		Aiguillat à peau rugueuse ⁴	Roughskin spurdog ⁴	DD						Cat. 1	Cl. 2	

Chordata	Chondrichthyes	Squaliformes	Squalidae	<i>Squalus acutipinnis</i>		Aiguillat nez court ¹⁴	Shortnose spurdog ¹⁴	NT						Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Squaliformes	Squalidae	<i>Squalus blainville</i>		Aiguillat gal-ludo ⁴	Longnose spurdog ⁴	DD						Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Squaliformes	Squalidae	<i>Squalus mahia</i>		Aiguillat nez court ¹⁷	Malagasy skinny spurdog ¹⁴	DD						Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Squatiformes	Squatinaidae	<i>Squatina africana</i>		Ange de mer africain ¹⁴	African angelshark ¹⁴	NT						Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Orectolobiformes	Stegostomatidae	<i>Stegostoma fasciatum</i>		Requin-zèbre ²⁰	Zebra Shark ¹⁴	EN				✓				Cat.1 Cl.1

	Cl.	Ordre	Famille	Genre - espèce	Nom Malgache	Nom Français	Nom Anglais	Statut UICN	Convention/ Organisation			EDGE	Proposition Catégorisation		Autre Proposition
									CITES	CMS	IOTC				
Chordata	Chondrichthyes	Myliobatiformes	Aetobatidae	<i>Aetobatus ocellatus</i>	Fay tomily ¹⁷	Raie léopard ⁴	Sharpwing eagle ray ⁴	EN					Cat. 1	Cl. 1	
Chordata	Chondrichthyes	Myliobatiformes	Dasyatidae	<i>Dasyatis chrysonota</i>		Pastenague bleue sud-africaine ⁴	South African blue stingray ¹⁴	NT					Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Myliobatiformes	Dasyatidae	<i>Himantura uarnak</i>		Pastenague indienne ⁴	Honeycomb stingray ⁴	EN				✓	Cat. 1	Cl. 1	
Chordata	Chondrichthyes	Myliobatiformes	Dasyatidae	<i>Maculabatis ambigua</i>		maculabatis ambigua	Baraka's whipray ¹⁴	NT					Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Myliobatiformes	Dasyatidae	<i>Neotrygon caeruleopunctata</i>		Raie à points bleus ¹⁷	Bluespotted maskray ¹⁴	LC					Cat. 2		Cat. 1 Cl. 2
Chordata	Chondrichthyes	Myliobatiformes	Dasyatidae	<i>Pastinachus ater</i>		Pastenague à queue de banane, Pastenague à queue de vache	Broad cowtail ray ¹⁴	VU					Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Myliobatiformes	Dasyatidae	<i>Pateobatis fai</i>		Raie grise ⁴	Pink Whipray ⁴	VU					Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Myliobatiformes	Dasyatidae	<i>Pateobatis jenkinsii</i>		Pastenague à nez pointu ¹⁴	Dragon stingray ¹⁴	EN					Cat. 1	Cl. 1	
Chordata	Chondrichthyes	Myliobatiformes	Dasyatidae	<i>Pteroplatytrygon violacea</i>		Pastenague violette ⁴	Pelagic stingray ⁴	LC					Cat. 2		Cat. 1 Cl. 2
Chordata	Chondrichthyes	Myliobatiformes	Dasyatidae	<i>Taeniura lymma</i>		Pastenague queue à ruban ⁴	Ribbontail stingray ⁴	LC					Cat. 2		Cat. 1 Cl. 2
Chordata	Chondrichthyes	Myliobatiformes	Dasyatidae	<i>Taeniurops meyeri</i>	Maromena ¹⁷	Raie à tache noire ⁴	Round ribbontail ray ⁴	VU				✓	Cat. 1	Cl. 2	Cat. 1 Cl. 1
Chordata	Chondrichthyes	Myliobatiformes	Dasyatidae	<i>Urogymnus asperrimus</i>		Raie Africaine ⁴	Porcupine ray ⁴	EN				✓	Cat. 1	Cl. 1	

²⁰ doris.ffesm.fr

Chordata	Chondrichthyes	Myliobatiformes	Gymnuridae	<i>Gymnura poecilura</i>			Long-tailed butterfly ray ⁴	VU						Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Myliobatiformes	Mobulidae	<i>Mobula alfredi</i>		Raie manta de récif ⁴	Reef Manta Ray ⁴	VU	2	1	PRO	✓		Cat. 1	Cl. 1	
Chordata	Chondrichthyes	Myliobatiformes	Mobulidae	<i>Mobula birostris</i>		Raie manta géante ⁴	Giant manta ray ⁴	EN	2	1	PRO	✓		Cat. 1	Cl. 1	
Chordata	Chondrichthyes	Myliobatiformes	Mobulidae	<i>Mobula eregoodoo</i>			Pygmy devilray ¹⁴	EN	2	1	PRO			Cat. 1	Cl. 1	
Chordata	Chondrichthyes	Myliobatiformes	Mobulidae	<i>Mobula kuhlii</i>		Petit diable ¹⁴	Kuhl's devilray ¹⁴	EN	2	1	PRO			Cat. 1	Cl. 1	
Chordata	Chondrichthyes	Myliobatiformes	Mobulidae	<i>Mobula mobular</i>		Diable de mer ⁴	Spinetail devil ray ⁴	EN	2	1	PRO			Cat. 1	Cl. 1	
Chordata	Chondrichthyes	Myliobatiformes	Mobulidae	<i>Mobula thurstoni</i>		Mante vampire ⁴	Smoothtail mobula ⁴	EN	2	1	PRO			Cat. 1	Cl. 1	
Chordata	Chondrichthyes	Myliobatiformes	Myliobatidae	<i>Aetomylaeus vespertilio</i>			Ornate eagle ray ⁴	CR						Cat. 1	Cl. 1	
Chordata	Chondrichthyes	Myliobatiformes	Rhinopterae	<i>Rhinoptera jayakari</i>			Oman cownose ray ¹⁴	EN						Cat. 1	Cl. 1	
Chordata	Chondrichthyes	Rajiformes	Anacanthobatidae	<i>Indobatis ori</i>			Black legskate ¹⁴	LC						Cat. 2		Cat. 1 Cl. 2
Chordata	Chondrichthyes	Rajiformes	Arhynchobatidae	<i>Bathyraja tunae</i>			Tuna's Skate ⁶	LC						Cat. 2		Cat. 1 Cl. 2
Chordata	Chondrichthyes	Rajiformes	Arhynchobatidae	<i>Notoraja hesperindinca</i>			Western blue skate ¹⁴	LC						Cat. 2		Cat. 1 Cl. 2
Chordata	Chondrichthyes	Rajiformes	Gurgesiellidae	<i>Fenestraja maceachrani</i>			Madagascar pygmy skate ¹⁴	DD						Cat. 1	Cl. 2	Cat. 1 Cl. 1
Chordata	Chondrichthyes	Rajiformes	Rajidae	<i>Dipturus crosnieri</i>			Madagascar skate ¹⁴	VU						Cat. 1	Cl. 2	Cat. 1 Cl. 1
Chordata	Chondrichthyes	Rajiformes	Rajidae	<i>Dipturus springeri</i>		Raie de Spinger ¹⁴	Roughbelly skate ¹⁴	LC						Cat. 2		Cat. 1 Cl. 2
Chordata	Chondrichthyes	Rajiformes	Rajidae	<i>Raja clavata</i>	Makoba, fay ¹⁷	Raie bouclée ⁴	Thornback Ray ⁴	NT						Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Rajiformes	Rajidae	<i>Raja straeleni</i>		Raie tachetée ¹⁴	Biscuit skate ¹⁴	NT						Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Rajiformes	Rajidae	<i>Rostroraja alba</i>		Raie blanche ⁴	White skate ⁴	EN				✓		Cat. 1	Cl. 1	
Chordata	Chondrichthyes	Rhinopristiformes	Pristidae	<i>Pristis pristis</i>	Vavana ¹⁷ ; Vavaha, Vavana ²¹ , Vava ²²	Poisson-scie commun ¹²	Common sawfish ¹²	CR	1	1		✓		Cat. 1	Cl. 1	
Chordata	Chondrichthyes	Rhinopristiformes	Rhinidae	<i>Rhina ancylostomus</i>	Tandrally ¹⁵	Raie guitare à bouche arquée ⁴	Bowmouth guitarfish ¹⁵	CR	2			✓		Cat. 1	Cl. 1	
Chordata	Chondrichthyes	Rhinopristiformes	Rhinidae	<i>Rhynchobatus australiae</i>		Raie guitare ⁶	Whitespotted wedgefish ⁴	CR	2	2				Cat. 1	Cl. 1	

²¹ Leeney 2022

²² Cooke et al 1997

Chordata	Chondrichthyes	Rhinopristiformes	Rhinidae	<i>Rhynchobatus djiddensis</i>	Soroboa ¹³	Raie guitare ²³	Giant Guitarfish ¹³	CR	2					Cat. 1	Cl. 1	
Chordata	Chondrichthyes	Rhinopristiformes	Rhinobatidae	<i>Acroteriobatus andysabini</i>			Malagasy blue-spotted guitarfish ¹⁴	NE	2					Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Rhinopristiformes	Rhinobatidae	<i>Rhinobatos austini</i>			Austin's guitarfish ¹⁴	DD	2					Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Rhinopristiformes	Rhinobatidae	<i>Rhinobatos holcorhynchus</i>			Slender guitarfish ¹⁴	DD	2					Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Torpediniformes	Narcinidae	<i>Narcine insolita</i>			Madagascar numbfish ¹⁴	DD						Cat. 1	Cl. 2	Cat. 1 Cl. 1
Chordata	Chondrichthyes	Torpediniformes	Narkidae	<i>Heteronarce garmani</i>			Natal electric ray ¹⁴	NT						Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Torpediniformes	Narkidae	<i>Narke capensis</i>		Poisson engourdeur du Cap ¹⁴	Onefic electric ray ¹⁴	LC						Cat. 2		Cat. 1 Cl. 2
Chordata	Chondrichthyes	Torpediniformes	Torpedinidae	<i>Torpedo fuscomaculata</i>		Torpille tachetée ⁴	Black-spotted torpedo ⁴	DD						Cat. 1	Cl. 2	
Chordata	Chondrichthyes	Torpediniformes	Torpedinidae	<i>Torpedo sinuspersici</i>		Torpille auréolée ⁴	Marbled electric ray ⁴	DD						Cat. 1	Cl. 2	

²³ FOURMANOIR 1963

Annex 2c – Bony Fish and Coelacanth

List as agreed by all participants at the workshop of 26 March 2025 subject to verification of 5 species in pink by MPEB

Phylum	Class	Order	Family	Genus - species	Malagasy name	French name	English name	Status IUCN	CITES	Proposed Cate-gorisation		Other Proposi-tion
										Cat. 1	Cl. 2	
Chordata	Actinistia	Coelacanthiformes	Latimeriidae	<i>Latimera chalumnae</i>	Fiandolo ²⁴ ; an-driandaotra, andrian-driaka ²⁵	Coelacanth de l'Océan Indien	Indian Ocean Coe-lacanth	CR	1	Cat. 1	Cl. 2	Cat.1 Cl.1 (MPEB)
Chordata	Actinopterygii	Perciformes	Labridae	<i>Cheilinus undulatus</i>	Andanso, Bahomby, Tabaka ¹⁴	Napoléon ⁷	Humphead wrasse ¹⁴	EN	2	Cat. 1	Cl. 2	Cat.1 Cl.2
Chordata	Actinopterygii	Perciformes	Lethrinidae	<i>Lethrinus mahsena</i>	Menahelika, Ange-like ²⁶	Empereur mah-sena ¹⁴	Sky Emperor snap-per ⁷	EN		Cat. 1	Cl. 2	
Chordata	Actinopterygii	Perciformes	Serranidae	<i>Mycteroperca marginata</i>	Alovo, fiantsilaka, lovo, lovhara, sasaka, tsarataka, tarataka ²⁵	Mérou brun ⁷	Dusky grouper ¹⁴	VU		Cat. 1	Cl. 2	
Chordata	Actinopterygii	Perciformes	Labridae	<i>Bodianus diana</i>		Labre Diane ¹⁴	Diana's hogfish ¹⁴	LC		Cat. 1	Cl. 2	No protec-tion
Chordata	Actinopterygii	Perciformes	Pomatomidae	<i>Pomatomus saltatrix</i>		Tassergal ²⁰	Bluefish ¹⁴	VU		Cat. 1	Cl. 2	No protec-tion
Chordata	Actinopterygii	Perciformes	Sciaenidae	<i>Argyrosomus hololepi-dotus</i>	Fiandava, Votsybol ¹⁴	Maigre Du Sud ²⁷	Mulloway ¹⁴	DD				Cat.1 Cl.1
Chordata	Actinopterygii	Perciformes	Scaridae	<i>Bolbometopon muricatum</i>		Perroquet bossu vert ¹⁴	Green humphead parrotfish ¹⁴	VU		Cat. 1	Cl. 2	
Chordata	Actinopterygii	Perciformes	Epinephelidae	<i>Epinephelus fuscoguttatus</i>		Mérou marbré ¹⁴	Brown-marbled grouper ⁷	VU		Cat. 1	Cl. 2	
Chordata	Actinopterygii	Perciformes	Epinephelidae	<i>Epinephelus polypheka-dion</i>		Mérou camou-flage ²⁰	Camouflage grouper ¹⁴	VU		Cat. 1	Cl. 2	
Chordata	Actinopterygii	Istiophoriformes	Istiophoridae	<i>Makaira nigricans</i>		Makaire bleu ¹⁴	Blue marlin ¹⁴	VU		Cat. 1	Cl. 2	
Chordata	Actinopterygii	Istiophoriformes	Istiophoridae	<i>Istiophorus platypterus</i>	Ndoaro, Androaro ²⁶ , ndwaro ²⁵	Voilier de l'Indo-Pa-cifique ¹⁴	Indo-Pacific sailfish ⁷	VU		Cat. 1	Cl. 2	
Chordata	Actinopterygii	Scombriformes	Scombridae	<i>Thunnus maccoyii</i>	Angoho, amalofotsy, amalampiraka, amalompotaka, amalompotsy ²⁵	Thon rouge du sud ¹⁴	Southern blue fin tuna ¹⁴	EN		Cat. 1	Cl. 2	

²⁴ Cooke et al 2021

²⁵ CLANM 2000

²⁶ OSTROM 1994

²⁷ Mongabay

Chordata	Actinopterygii	Scombriformes	Scombridae	<i>Thalassophryne uranoscopus</i>		Crapaud tacheté ¹⁴	Cano toadfish ¹⁴	VU		Cat. 1	Cl. 2	No protection
Chordata	Actinopterygii	Syngnathiformes	Syngnathidae	<i>Syngnathidae spp.</i>		Hippocampes (toutes especes)	Seahorses (all species)		2			
Chordata	Actinopterygii	Syngnathiformes	Syngnathidae	<i>Hippocampus histrix</i>		Hippocampe hérissé ²⁰	Spiny seahorse ¹⁴	VU	2	Cat. 1	Cl. 2	Cat 1 Cl 2 (MPEB)
Chordata	Actinopterygii	Tetraodontiformes	Molidae	<i>Mola mola</i>	Takabatra ¹⁴	Poisson-lune ¹⁴	Ocean sunfish ⁷	VU		Cat. 1	Cl. 2	
Chordata	Actinopterygii	Tetraodontiformes	Monacanthidae	<i>Oxymonacanthus longirostris</i>		Poisson lime à taches oranges ¹⁴	Harlequin filefish ¹⁴	VU		Cat. 1	Cl. 2	No protection
Chordata	Actinopterygii	Albuliformes	Albulidae	<i>Albula Glossodonta</i>	Fiamandry, Ndregekoko, Morobo ¹⁴	Banane lèvres ronde ¹⁴	Shortjaw bonefish ¹⁴	VU				No protection

Annex 2d – Invertebrate marine species for protection

List as circulated to participants after the workshop on 26 March 2025 at the request of MEDD but not validated.

Phylum - subphylum	Class - subclass	Order - suborder	Family	Genus - species	Malagasy name	French name (IUCN)	English name (IUCN)	List / Convention			Proposed categorisation		Reasons for protection	Protection measures
								IUCN	CITES	Nairobi	Cat. 1	Cl. 2		
Echinodermata	Holothuroidea	Aspidochirotida	Stichopodiidae	<i>Thelenota spp.</i>	Zanga, dingadinga	Concombres de mer	Sea cucumbers	-	2	-	Cat. 1	Cl. 2		
Echinodermata	Holothuroidea	Aspidochirotida	Stichopodiidae	<i>Thelenota ananas</i>	Zanga borosy ²⁸ ; dingadinga	Holothurie ananas ²⁹	Pineapple sea cucumber; Prickly redfish	EN	2	-	Cat. 1	Cl. 2		
Echinodermata	Holothuroidea	Aspidochirotida	Stichopodiidae	<i>Thelenota anax</i>	Zanga, dingadinga	Holothurie géante ²⁹	Amber fish; Giant sea cucumber	DD	2	-	Cat. 1	Cl. 2		
Echinodermata	Holothuroidea	Holothuriida	Holothuriidae	<i>Holothuria fuscogilva</i>	Benono mainty ²⁸ (*noms probablement renversés par erreur)	Holothurie blanche à marmelles ²⁹	White teatfish	VU	2	-	Cat. 1	Cl. 2		
Echinodermata	Holothuroidea	Holothuriida	Holothuriidae	<i>Holothuria nobilis</i>	Fotsytrake ³⁰ ; Benono Fotsy ²⁸ *	Holothurie noire à marmelles ²⁹	Black teatfish	EN	2	-	Cat. 1	Cl. 2		
Arthropoda	Malacostraca	Decapoda - Pleocyemata - Anomura	Coenobitidae	<i>Birgus latro</i>		Crabe des cocotiers	Coconut crab, robber crab	VU	2	2	Cat. 1	Cl. 2	Globally threatened (VU) – probably exists in Madagascar on islands or islets, including Ile Ste Marie	
Arthropoda	Malacostraca	Decapoda	Palinuridae	<i>Panulirus spp.</i>	Langosita, komajiva, orana, oramena,	Langoustes	Spiny lobsters		-	3	-	-		Fisheries management

²⁸ FAO 2013

²⁹ Di Simone et al 2022

³⁰ McVean et al 2025

Arthropoda	Malacos-traca	Decapoda	Palinuridae	<i>Panulirus ornatus</i>	orandretsy, orantsimba ²⁵	Grosse langouste porcelaine ⁴	Ornate Spiny Lobster	LC		3	-	-		Fisheries management
Arthropoda	Malacos-traca	Decapoda	Palinuridae	<i>Panulirus penicillatus</i>		Langouste fourchette ⁴	Pronghorn Spiny Lobster	LC		3	-	-		Fisheries management
Arthropoda	Malacos-traca	Decapoda	Palinuridae	<i>Panulirus homarus</i>		Langouste festonnée	Scalloped spiny lobster	LC		3	-	-		Fisheries management
Arthropoda	Malacos-traca	Decapoda	Palinuridae	<i>Panulirus versicolor</i>		Langouste barriolée ⁴	Painted Spiny Lobster	LC		3	-	-		Fisheries management
Arthropoda	Malacos-traca	Decapoda	Palinuridae	<i>Panulirus longipes</i>		Langouste diabolotin ³¹	Long-legged Spiny Lobster	LC		3	-	-		Fisheires management
Mollusca	Bivalvia	Veneroidea	Tridacnidae	<i>Tridacnidae spp.</i>		Bénitier	Giant clams	-	2		Cat. 1	Cl. 2		
Mollusca	Bivalvia	Veneroidea	Tridacnidae	<i>Tridacna squamosa</i>		Bénitier	Fluted giant clam	LC	-	2	Cat. 1	Cl. 2		
Mollusca	Bivalvia	Veneroidea	Tridacnidae	<i>Tridacna maxima</i>		Bénitier	Small giant clam	LC	-	2	Cat. 1	Cl. 2		
Mollusca	Bivalvia	Cardiida	Cardiidae	<i>Hippopus hippopus</i>		Bénitier	Horse's hoof clam	VU	-	2	Cat. 1	Cl. 2		
Mollusca	Bivalvia	Pteriida	Pteriidae	<i>Pinctada spp.</i>	Masaja, papakia, saja	Huitres perlières	Pearl oysters	-	-	2	Cat. 1	Cl. 2		
Mollusca	Cephalopoda	Nautilida	Nautilidae	<i>Nautilidae spp.</i>		Nautilus	Chambered nautilus	-	2	-	Cat. 1	Cl. 2		
Mollusca	Gastropoda	Megagastropoda	Strombida	<i>Strombus gigas</i>	Antsiva ²⁵	Lambi, Strombe géant ⁴	Queen conch	NA	2	-	Cat. 1	Cl. 2		
Mollusca	Gastropoda - Coenogastropoda	Littorinimorpha	Charoniidae	<i>Charonia tritonis</i>		Triton géant, Conque ⁴	Triton's trumpet	NA		2	Cat. 1	Cl. 2		
Mollusca	Gastropoda - Vestigastropoda	Trochida	Trochidae	<i>Trochus niloticus</i>		Troche commerciale	Trochus	NA		2	Cat. 1	Cl. 2		
Cnidaria - Anthozoa	Hexacorallia	Antipatharia	Antipathidae	<i>Antipatharia spp.</i>		Coraux noirs	Black corals	-	2		Cat. 1	Cl. 2		
Cnidaria - Anthozoa	Hexacorallia	Antipatharia	Antipathidae	<i>Antipathes dichotoma</i>		Corail noir	Black coral	NA	-	2	Cat. 1	Cl. 2		

³¹ sealifebase

Cnidaria - Anthazoa	Hexacorallia	Antipatharia	Antipathidae	<i>Cihrripathes spp.</i>		Fouet de Mer ²⁰	Whip corals	-		2	Cat. 1	Cl. 2		
Cnidaria - Anthazoa	Hexacorallia	Scleractinia	~35 families	Scleractinia spp.		Coraux durs	Stony corals	-	2	-	Cat. 1	Cl. 2		
Cnidaria - Anthazoa	Octocorallia	Scleralcyonacea	Helioporidae	<i>Heliopora coerulea</i>		Corail bleu	Blue coral	LC	2	-	Cat. 1	Cl. 2		
Cnidaria - Anthazoa	Octocorallia	Alcyonacea - Stolonifera	Tubiporidae	Tubiporidae spp.		Coraux orgues	Organ-pipe corals	-	2	-	Cat. 1	Cl. 2		
Cnidaria - Anthazoa	Octocorallia	Alcyonacea - Stolonifera	Tubiporidae	Tubipora musica		Coraux orgues	Organ-pipe coral	LC			Cat. 1	Cl. 2		
Cnidaria	Hydrozoa	Anthoathecata - Capitata	Milleporidae	Milleporidae spp.		Coraux feux	Fire corals	-	2	-	Cat. 1	Cl. 2		
Cnidaria	Hydrozoa	Anthoathecata - Filifera	Stylasteridae	Stylasteridae spp.			Lace corals	-	2	-	Cat. 1	Cl. 2		

ANNEX 3 – Documents for the national technical workshop

Invitation letter



SECRETARIAT GENERAL

**Direction Générale de la
Gouvernance Environnementale (DGGE)**

Antananarivo le 24 mars 2025

Le Directeur Général de la
Gouvernance Environnementale

A

DESTINATAIRES IN FINE

Objet : Invitation à l'Atelier technique sur la Révision du Décret 2006-400 relatif à la Protection des Espèces Marines à Madagascar

Mesdames, Messieurs,

Dans le cadre du **Programme de Partenariat pour les Pays Océaniques (OCP)**, financé par le gouvernement britannique, le JNCC et ses partenaires travaillent avec le gouvernement malgache pour renforcer la protection des espèces marines menacées. L'objectif est de mettre à jour à court terme le décret 2006-400 pour inclure des espèces marines prioritaires (dans une approche de précaution), s'appuyant sur les meilleures données scientifiques disponibles et les obligations internationales de Madagascar (CITES, CMS, etc.), suivi d'un travail à moyen terme de développement de réglementations sous l'article 18 du code de la pêche (loi 2015-053).

Ainsi, un atelier technique sera organisé réunissant les parties prenantes clés, les experts nationaux et internationaux, les représentants des ministères concernés et les personnes ressources.

J'ai l'honneur de vous inviter à honorer de votre présence cet atelier technique dans le but de concerter et valider une liste d'espèces marines prioritaires à protéger immédiatement sous mise à jour du décret 2006-400, et de discuter et recommander les prochaines étapes pour un développement d'une réglementation plus exhaustive sur les espèces marines protégées, qui sera tenu le **Mercredi 26 mars 2025 à la salle Rian'Ala, DGGE Nanisana Antananarivo de 09 heures à 16 heures.**

Dans l'attente de votre participation effective, Veuillez agréer, Mesdames, Messieurs l'expression de nos salutations distinguées.

Destinataires

- Ministère de l'Environnement et du Développement Durable : Direction Générale de la Gouvernance Environnementale (DGGE), Direction Générale du Développement Durable (DGDD), Direction des Aires Protégées, des Ressources Naturelles renouvelables et des Ecosystème (DAPNRE), Service de la Conservation de la Biodiversité et des Ecosystèmes (SCBE), Direction des affaires juridiques et contentieux, Points focaux des conventions pertinentes (CITES, CMS, Nairobi, etc.) ;
- Ministère de la Pêche et de l'Economie Bleue : Direction de la Pêche, Direction Générale de l'Economie Bleue, Direction des affaires juridiques et contentieux ;
- Ambassade Britannique ;
- Joint Nature Conservation Comity (JNCC) ;
- Wildlife Conservation Society (WCS) ;
- WWF Madagascar ;
- Blue Ventures ;
- Conservation International Madagascar (CI) ;
- Fauna&Flora International ;
- FAO ;
- IHSM ;
- CNRO ;
- CNRE ;
- CETAMADA ;
- MIHARI ;
- African Aquatic Conservation Fund (AACF) ;
- Experts techniques / personnes ressources en biodiversité marine.

Terms of Reference (ToR)



Foreign, Commonwealth
& Development Office



TERMES DE REFERENCE

Atelier Technique sur la Révision du Décret 2006-400 relatif à la Protection des Espèces Marines à Madagascar

Mercredi 26 mars 2025 à la salle Rian'Ala, DGGE Nanisana
Antananarivo
De 09 heures à 16 heures

Contexte et Justification

Madagascar possède une biodiversité marine exceptionnelle, mais de nombreuses espèces marines menacées ne bénéficient pas d'une protection légale adéquate. Le décret 2006-400, qui régit la protection des espèces de faune sauvages, ne couvre actuellement que cinq espèces de tortues marines, laissant de côté des espèces marines en danger critique comme le poisson-scie et le coelacanthe, les espèces marines menacées ou vulnérables telles que les dugongs, certains cétacés, les requins et les raies. Cette lacune a été exacerbée par l'abrogation de l'ordonnance sur les pêches de 1993 (loi 93-022), qui offrait une protection totale aux mammifères marins.

Dans le cadre du **Programme de Partenariat pour les Pays Océaniques (OCP)**, financé par le gouvernement britannique, le JNCC et ses partenaires travaillent avec le gouvernement malgache pour renforcer la protection des espèces marines menacées. L'objectif est de mettre à jour à court terme le décret 2006-400 pour inclure des espèces marines prioritaires (dans une approche de précaution), s'appuyant sur les meilleures données scientifiques disponibles et les obligations internationales de Madagascar (CITES, CMS, etc.), suivi d'un travail à moyen terme de développement de réglementations sous l'article 18 du code de la pêche (loi 2015-053).

Cet atelier technique vise à réunir les parties prenantes clés, les experts nationaux et internationaux, et les représentants des ministères concernés et des personnes ressources pour concerter et valider une liste d'espèces marines prioritaires à protéger immédiatement sous mise à jour du décret 2006-400, et de discuter et recommander les prochaines étapes pour un développement d'une réglementation plus exhaustive sur les espèces marines protégées.

Objectifs de l'Atelier

1. **Concier et justifier la liste des espèces marines prioritaires** proposées pour une protection immédiate en vertu d'une mise à jour du décret 2006-400, en tenant compte des critères scientifiques, des obligations internationales et des besoins socio-économiques locaux.
2. **Concier et justifier la catégorisation** des espèces marines protégées, y compris les catégories de protection (catégorie 1.1 : protection absolue ; catégorie 1.2 : protection sous conditions réglementées) ainsi que les types d'activités réglementées – chasse, pêche (directionnelle ou accessoire), capture, détention commercialisation, etc.).

3. **Élaborer des recommandations** pour les types de mesures de protection à considérer pour les espèces en catégories 1.1 et 1.2, telles que le contrôle des engins de pêche, les quotas de capture, les restrictions saisonnières, les fermetures spatiales, les contrôles du commerce national et international, et des chaînes de valeur, campagnes d'information, d'éducation et de communication.
4. **Définir les bases pour une révision plus consistante** d'une réglementation sur les espèces marines dans le cadre de l'article 18 de la Loi sur les Pêches et l'Aquaculture de 2015-053.

Résultats Attendus

1. Une **liste finalisée d'espèces marines prioritaires** à inclure dans une mise à jour du décret 2006-400, avec des justifications scientifiques et des recommandations pour leur catégorisation (catégorie 1.1 ou 1.2) et les activités à réglementer.
2. Un **rapport d'atelier** détaillant les discussions, les décisions prises et les recommandations pour les prochaines étapes.
3. Une **feuille de route** pour la mise en œuvre des mesures de protection et la préparation de développement complète d'une réglementation exhaustive sur les espèces marines protégées.

Participants

L'atelier réunira environ **30 à 40 participants**, comprenant :

1. **Représentants des Ministères :**
 - Ministère de l'Environnement et du Développement Durable (MEDD)
 - Ministère des Pêches et de l'Économie Bleue (MPEB)
 - Autorités et points focaux des conventions pertinentes (CITES, Nairobi, CMS, etc.)
2. **Experts Techniques / Personnes ressources :**
 - Experts nationaux et internationaux en biodiversité marine (cétacés, tortues marines, requins, raies, coelacanthe, etc.)
 - Représentants des institutions de recherche (Institut Halieutique et des Sciences Marines - IHSM, Centre National de Recherche Océanographique, CNRE, etc.)
 - Experts et consultants ayant contribué à la préparation de la liste des espèces prioritaires
3. **Organisations de Conservation :**
 - Wildlife Conservation Society (WCS)
 - WWF Madagascar
 - Blue Ventures
 - Conservation International
 - FFI
4. **Organisations représentants des Communautés Locales**
 - MIHARI

Ordre du Jour provisoire

09h00 - 09h30 : Accueil des participants et signature de fiche de présence

09h30 – 09h45 : Mots de bienvenu

- Discours d'ouverture par les représentants du MEDD, du MPEB et du JNCC

- Présentation des objectifs de l'atelier, du contexte et approche du projet (RESOLVE/WCS)

09h45 - 10h45 : Présentation de la liste des espèces marines prioritaires

- Présentation du cadre juridique et politique et des critères proposés de sélection (RESOLVE/WCS) □ Présentations courtes en série sur les espèces proposées pour les catégories 1.1 et 1.2 (RESOLVE/WCS/Experts thématiques)

10h45 - 11h00 : Pause-café

11h00 - 12h30 : Travaux en groupes thématiques

- Groupe 1 : Cétacés, Dugong et Tortues marines
- Groupe 2 : Requins, raies (dont poissons scies) et grands poissons menacés (dont cœlacanthe)

12h30 - 13h30 : Déjeuner

13h30 - 14h30 : Restitution des travaux en groupes

- Présentation des résultats par chaque groupe
- Discussion plénière et validation des listes d'espèces

14h30 - 15h15 : Discussion sur les mécanismes de protection

- Quotas de capture, restrictions saisonnières, fermetures spatiales
- Contrôles du commerce national, international et des chaînes de valeur

15h15 – 16h00 : Élaboration des recommandations

- Priorités pour la mise en œuvre des mesures de protection

16h00 : Discours de Clôture

- Discours de clôture par les représentants du MEDD, du MPEB et du JNCC

ANNEX 4 – Letter from MPEB on proposed protection of bony fishes



MINISTÈRE DE LA PÊCHE ET
DE L'ÉCONOMIE BLEUE

Antananarivo, le **14 AVR. 2025**

LE SECRÉTAIRE GÉNÉRAL

N° **059**/25-MPEB/SG

à

MADAME LE CHEF DU PROJET RESOLVE
ANTANANARIVO

OBJET : Réponse à la demande de confirmation de catégorisation de quelques espèces marines.

Références :

- Mail de Madame le Project Manager du 01 avril 2025,
- Atelier technique sur la révision du Décret 2006-400 relatif à la protection des Espèces Marines à Madagascar en date du 26 mars 2025.

Madame,

Faisant suite à votre demande de confirmation sur la catégorisation de plusieurs espèces de poissons marins, identifiées comme nécessitant une protection prioritaire, présentées lors de l'atelier sur la révision du Décret 2006-400 portant classement des espèces de faune sauvage tenu le 26 mars 2025, le Ministère de la Pêche et de l'Économie Bleue, après étude, analyse, et concertation, émet les observations suivantes :

- Aucune étude de stock n'a été faite à Madagascar jusqu'à maintenant pour confirmer la menace de disparition sur ces espèces ;
- Pour les thonidés et gros poissons migratoires listés (*Thunnus maccoyii*, *Makaira nigricans*, *Istiophorus platypterus*), la Commission des Thons de l'Océan Indien (CTOI) est l'organisme régional de gestion des pêcheries mandaté pour la gestion de ces espèces dans l'Océan Indien et les zones adjacentes aux zones statistiques 51 et 57 de la FAO. Madagascar en tant que pays contactant, assume ses obligations et met pleinement en œuvre les mesures de conservation et de gestion adoptés par cette instance pour ces espèces ;
- L'exploitation de ces espèces génère un revenu non négligeable pour les pêcheurs et les communautés des pêcheurs ;
- Les espèces sont exploitées de manière responsable et rationnelle par les petits pêcheurs et les pêcheurs artisanaux car les engins utilisés sont sélectifs (palangres), afin de prévenir leur surexploitation ou voire leur extinction ;
- L'exploitation de ces espèces contribue énormément à l'amélioration de la balance de paiement à travers la rentrée de devises issues de l'exportation ;
- La plupart de ces espèces en grande quantité, assurant ainsi la sécurité alimentaire et nutritionnelle de la population.

Ainsi et de ce qui précède, nous vous recommandons **d'inscrire uniquement** dans l'annexe du projet de décret **les deux espèces suivantes** selon leur catégorie respective :

1. *Latimera chalumnae* / Coelacanthé de l'Océan Indien / Indian Ocean Coelacanth, Cat. 1 Cl.2

2. *Hippocampus histrix* / Hippocampe hérissé / Spiny seahorse, Cat.1 Cl.2.

Comptant sur votre aimable compréhension, veuillez agréer, Madame, l'expression de nos salutations distinguées.



Secrétaire Général

**TILAHY Désiré
ANDRIANARANINTSOA**

Copie : Monsieur le SG du MEDD « *pour information* »

ANNEX 5 – Proposed text of decree modifying decree 2006-400



MINISTERE DE L'ENVIRONNEMENT ET DU DEVELOPPEMENT DURABLE, MINISTERE DE LA PECHE ET DE L'ECONOMIE BLEUE

----- DECRET N°2023-

**modifiant et complétant certaines dispositions du décret n°2006-400 du 13 juin 2006
portant classement des espèces de faune sauvage**

LE PREMIER MINISTRE, CHEF DU GOUVERNEMENT

Vu la Constitution ;

Vu la Loi n° 70-004 du 23 juin 1970 autorisant la ratification de la Convention Africaine sur la Conservation de la Nature et des Ressources Naturelles ;

Vu la loi n°97-017 du 08 août 1997 portant révision de la législation forestière et ses textes d'application ;

Vu la Loi n°98-004 du 19 février 1998 autorisant la ratification de la Convention de Nairobi pour la protection, la gestion et la mise en valeur du milieu marin et des zones côtières de l'Afrique de l'Est ;

Vu la Loi n°99-028 du 03 février 2000 portant refonte du Code maritime et ses textes d'application ;

Vu la loi n°2000-020 du 28 novembre 2000 autorisant la ratification de la Convention des nations Unies sur le droit de la mer ;

Vu la loi n°2005-018 du 17 octobre 2005 sur le commerce international des espèces de faune et de flore sauvages et ses textes d'application ;

Vu la Loi n°2015-003 du 19 février 2015 portant charte de l'Environnement Malagasy actualisée (CEM) ;

Vu la loi n°2015-005 du 22 janvier 2015 portant refonte du Code de gestion des aires protégées et ses textes d'application ;

Vu la Loi n° 2015-053 du 02 décembre 2015 portant code la Pêche et de l'Aquaculture et ses textes d'application ;

Vu la Loi n° 2015 – 051 du 03 février 2016 portant Orientation de l'Aménagement du Territoire et ses textes d'application ;

;
Vu la Loi n° 2023-007 du 27 juillet 2023 portant refonte du Code Minier et ses textes d'application ;

Vu l'Ordonnance n°60-126 du 03 octobre 1960 fixant le régime de la chasse, de la pêche et de la protection de la nature ;

Vu le Décret n°95-695 du 03 novembre 1995 portant ratification de la Convention sur la Diversité Biologique ;

Vu le Décret n° 98-261 du 24 mars 1998 portant ratification de la Convention de Ramsar, relative aux zones humides d'importance internationale particulièrement comme habitats des oiseaux d'eau ;

Vu le Décret n°2007-957 du 31 octobre 2007 portant définition des conditions d'exercice de la pêche des crevettes côtières ;

Vu le décret n°2015-1308 du 22 septembre 2015 fixant la Politique Nationale de l'Environnement pour le Développement Durable (PNEDD) ;

Vu le décret n°2017-376 du 16 mai 2017 portant adoption de la politique forestière nationale actualisée ;

Vu le Décret n°2021-856 du 25 août 2021, modifiée et complétée par le Décret n° 2022-101 du 20 janvier 2022 fixant les attributions du Ministre de la Pêche et de l'Economie Bleue ainsi que l'organisation générale de son Ministère ;

Vu le Décret n°2022-482 du 06 avril 2022 fixant les attributions du Ministre de l'Environnement et du Développement Durable, ainsi que l'organisation générale de son Ministère ;

Vu le Décret n°2024-1456 du 12 Juillet 2024 portant nomination du Premier Ministre, Chef du Gouvernement ;

Vu le Décret n°2024-1612 du 22 août 2024 portant nomination des membres du Gouvernement ;

Arrêté n°20510/2023 du 01 décembre 2023 du 01 décembre 2023 portant prohibition de capture d'une espèce de carcharhiniformes ;

Arrêté interministériel n°33626/2023- MINTOUR du 20 décembre 2023 fixant la réglementation pour une observation responsable de la mégafaune dans les zones maritimes sous juridiction de Madagascar ;

Sur proposition conjointe du Ministre de l'Environnement et du Développement Durable, et du Ministre de la Pêche et de l'Economie Bleue ;

En Conseil de Gouvernement ;

DECRETE

Article 1- Le présent Décret a pour objet de modifier et compléter certaines dispositions du Décret n°2006-400 du 13 juin 2006 portant classement des espèces de faunes sauvages notamment en ses articles 2, 5 et 6.

Article 2 nouveau - Les dispositions des articles 2, 5 et 6 du Décret n°2006-400 du 13 juin 2006 portant classement des espèces de faunes sauvages sont modifiées comme suit :

Les espèces de faune sauvage terrestre et marine relevant de la catégorie I « espèces protégées » sont réparties en deux classes.

Les espèces de la Catégorie I, Classe I, autochtones ou introduites, bénéficient d'une protection absolue sur tout le territoire terrestre et marin de la République de Madagascar. Elles ne peuvent être ni capturées, ni chassées, ni détenues, ni transportées, ni tuées, ni vendues vivantes ou mortes, ni transbordées, ni transformées, ni collectées, ni commercialisées, sauf dans les cas prévus par l'article 20 de l'Ordonnance n°60-126 du 3 octobre 1960.

Sont également interdits tout ramassage, toute détention des œufs dans la nature, toute destruction, toute détérioration de leurs habitats critiques, ainsi que toute perturbation pendant la période de reproduction.

Par ailleurs, aucune activité ne peut porter atteinte à l'intégrité physique des espèces de cette catégorie.

La violation de l'une des dispositions et prescriptions du présent décret est sanctionnée par des peines prévues par la législation en vigueur régissant les espèces concernées.

Les espèces de la Catégorie I, Classe II, autochtones ou introduites, peuvent donner lieu à délivrance d'autorisation de chasse, de capture, de détention, de commerce, de transport, de vente, de transbordement ou d'activité sportive dans les conditions fixées par voie réglementaire.

Les listes des espèces de faune sauvage marine sont ajoutées dans les annexes de classe 1 et 2 et en font partie intégrante du présent décret et en revêtent le caractère réglementaire tout en produisant les mêmes effets juridiques.

Le quota de collecte pour chaque espèce de cette classe est fixé annuellement par l'Organe de Gestion CITES sur proposition de l'Autorité Scientifique de la CITES.

Article 5 nouveau- Les Annexes au présent décret contiennent les listes des espèces de faunes sauvages concernées. L'énumération des espèces des Catégories I et II est limitative, celle de la Catégorie III est indicative.

Article 6 nouveau- La composition des catégories définies aux articles 2 et 3 ci-dessus sera périodiquement mise à jour par décision conjointe du Ministère en charge des Forêts et du Ministère en charge de la Pêche après avis de l'Autorité Scientifique.

Article 2- Toutes dispositions antérieures contraires à celles du présent décret sont et demeurent abrogées.

Article 3 – Le Ministre des Forces Armées, le Ministre des Affaires Étrangères, le Garde des Sceaux, Ministre de la Justice, le Ministre de la Décentralisation et de l'Aménagement du Territoire, le Ministre de l'Économie et des Finances, le Ministre de l'intérieur, le Ministre de la Sécurité Publique, le Ministre de la Santé Publique, le Ministre de l'Enseignement Supérieur et de la Recherche Scientifique, le Ministre de l'Éducation Nationale, le Ministre de l'Enseignement Technique et de la Formation Professionnelle, le Ministre de l'Agriculture et de l'Élevage, le Ministre de l'Industrialisation et du Commerce, le Ministre des Transports et de la Météorologie, le Ministre de l'Énergie et des Hydrocarbures, le Ministre des Travaux Publics, le Ministre du Travail, de l'Emploi et de la Fonction Publique, le Ministre des Mines, le Ministre de la Pêche et de l'Économie Bleue, le Ministre du Tourisme et de l'Artisanat, le Ministre de la Population et des Solidarités, le Ministre du Développement numérique, des Postes et des

télécommunications, le Ministre de l'Eau, de l'Assainissement et de l'Hygiène, le Ministre de l'Environnement et du Développement Durable, le Ministre de la Jeunesse et des Sports, le Ministre de la Communication et de la Culture, le Ministre délégué en charge de la Gendarmerie Nationale, le Secrétaire d'État en charge des nouvelles villes et de l'habitat auprès de la Présidence de la République, le Secrétaire d'État en charge de l'Autosuffisance Alimentaire auprès de la Présidence de la République, chacun en ce qui le concerne, sont chargés de l'exécution du présent Décret qui sera publié au Journal officiel, diffusé et communiqué partout ou besoin sera.

**ANNEXE AU DECRET XX
PORTANT REORGANISATION DU CLASSEMENT DES ESPECES DE FAUNE SAU-
VAGES**