"New Caledonians have their say"

Document distributed to the public

CORAL SEA NATURAL PARK

21 December 2016 Version

Ma nag eme

île Longue, Chesterfield plateau, Théa Jacob, WWF

GOUVERNEMENT DE LA NOUVELLE-CALÉDONIE

Parc naturel de la mer de Corail

nt

Plan

Management Plan

2017–2021

Parc naturel de la mer de Corail

Part 1

METHODOLOGY AND CONTEXT

GOUVERNEMENT DE LA NOUVELLE-CALÉDONIE

A. METHODOLOGY AND IMPLEMENTATION

I. PROJECT BACKGROUND

2008 saw the emergence of environmental awareness for protecting the marine environment with the designation of the lagoons of New Caledonia and their associated ecosystems as a world heritage site. The Entrecasteaux atolls, in the north of the Bélep Islands, are part of the serial property designated in July 2008.

In 2010, the Heads of State and Presidents of the countries and territories which are members of the Pacific Islands Forum, towhich New Caledonia belongs, all ratified the “Pacific Oceanscape” work programme to develop and implement sustainable and comprehensive management of the Pacific Ocean’s marine environment.

Since then, the government of New Caledonia has been fully engaged in providing New Caledonia with a comprehensive policy in order to manage marine spaces under its remit.

In 2010, New Caledonia and Australia signed an agreement to coordinate their management efforts regarding the Coral Sea. Since 2014, through the Oceania meeting, New Caledonia has been striving to work with the three other States involved: Vanuatu, the Solomon Islands and Papua New Guinea. New Caledonia also sent a letter to these three countries in October 2015 to outline its intentions.

In October 2010, a cooperation agreement with the Agency for protected marine areas was signed. This facilitated development of the strategic analysis of the maritime area of New Caledonia: a first report regarding the knowledge available on the maritime area of New Caledonia forming a basis for proposals for initial analysis and prioritisation of issues.

Between 2010 and 2012, partnerships were formalised with various scientific and technical partners (IFREMER [French Institute for Research into Sea Exploitation], IRD [Development Research Institute], Université de la Nouvelle-Calédonie, Conservation International, The Pew Charitable Trusts).

On 4 September 2012, at the Pacific Islands Forum meeting in the Cook Islands, New Caledonia announced its intention to develop a natural park covering its entire maritime area. Based on this political impetus, a steering committee was established for the comprehensive management of New Caledonia’s maritime area. It comprises management from the government and its partners and the first meeting of the comprehensive management process took place on 22 November 2012.
Between November 2012 and April 2014, two public meetings were held and the draft decree establishing the natural park was submitted to the Commission for marine resources, the Customary Senate and the Consultative Committee for the Environment.

In October 2013, in Marseille, New Caledonia signed a bilateral cooperation agreement with the Cook Islands at the International Protected marine areas Congress (IMPAC3). This agreement involves the twinning of the protected marine areas of the two collectives and sharing competences and experience with a view to better managing their protected marine areas.

On 23 April 2014, the government of New Caledonia adopted decree n° 2014-1063/GNC on the creation of a protected marine area of 1.3 million square kilometres, France’s largest and one of the biggest in the world: the Coral Sea Natural Park. This decree provided for the natural park to have a management committee composed of four balanced pillars (institutional, customary, socio-professional and representatives of civil society), who must develop the management plan for the park and submit it to the government for approval. This management plan must respect eight management guidelines:

- It must establish principles of good governance for comprehensive maritime area management in New Caledonia;
- It must protect the most vulnerable ecosystems, habitats and species, as well as cultural heritage, by seeking a better balance between conservation and the development of human activities, in particular by establishing a network of protected marine areas within the park;
- It must bolster the natural park’s monitoring strategy and develop a network to monitor the state of the marine area, resources developed and uses;
- It must enhance knowledge of management issues through garnering new information and by accumulating and utilising data;
- It must inform New Caledonians of maritime area management issues and benefits;
- It must contribute to the establishment of sustainable management of the Coral Sea, supporting its responsible exploitation in tandem with the four neighbouring countries;
- It must contribute to the development and regional integration of New Caledonia as well as the fulfilment of New Caledonia’s multilateral commitments in the sphere of marine area management;
- It must rely on the international visibility of the marine park and its ambitious management framework to develop resources allocated to its management.

One year later, in May 2015, a management committee comprising thirty-two members was formally established. As appropriate, it can create working groups in cooperation with government services and the various technical and scientific partners concerned.

Work to develop a management plan began on 28 May 2015 at the meeting of the natural park’s first management committee.

Since the park’s establishment, numerous Oceania meeting declarations have focused on the natural park.

Naturally, the park is a member of “Big Ocean”, the international network of large (more than 300,000km²) protected marine areas. The Coral Sea Natural Park gives New Caledonia regional and international visibility and a voice within international bodies. At the World Parks Congress in Sydney or the Climate Conference held in Paris in 2015 (COP21), it can be seen that the park provides the country with the means to be significantly involved in discussions concerning the major environmental issues of the 21st century.

New Caledonia participated in the third “Our Ocean” conference in Washington. In its statement, New Caledonia outlined its ambitions for the management plan for the Coral Sea Natural Park and reiterated its determination to play a decisive role in the development of a sustainable management policy for the Pacific Ocean with the support of the countries and territories of the Pacific and regional organisations.

The French committee of the International Union for Conservation of Nature (IUCN), has commended the creation of the Coral Sea Natural Park as it becomes the world’s largest protected marine area. This natural park significantly contributes to international protection of the oceans and to achieving Aichi target 11 to conserve 10% of the planet’s oceans.

The management plan for the Natural Park fully respects the Environment Charter of 2004.

II. DRAFTING THE MANAGEMENT PLAN

Article 3 of the decree dated 23 April 2014 creating the Coral Sea Natural Park statesthat a comprehensive management plan for the park must be submitted to the government of New Caledonia for approval within three years of the decree being adopted and, in article 4, states that there must be a management committee which will design and propose the management plan for the park.

This management plan is the fruit of concerted work by the members of the management committee (socio-professionals, representatives of civil society, customary stakeholders, institutions), scientists and the wider public.

Work to develop a management plan began on 28 May 2015 at the first meeting of the natural park's management committee.


First management committee of the Coral Sea Natural Park

Two training days for the management committee members took place on 23 July and 5 November 2015. This training gave the committee members an understanding of the issues involved in the Coral Sea Natural Park through field visits and exchanges with stakeholders.

All day on 15 August 2015 was dedicated to work on the park's objectives. This enabled participants to absorb the eight management guidelines from the decree establishing the natural park and to define four main objectives for the natural park. The objectives have become the chapters of the management plan:

- Protection of natural and cultural heritage;
- Recognised sustainable and responsible use;
- Functional good governance;
- A locally, regionally and internationally integrated park.

The second management committee on 20 November 2015 launched the ecosystems working groups. In total, twenty-three meetings were held between October 2015 and April 2016 by the four working groups:

- Coral reef and island ecosystems;
- Pelagic ecosystems;
- Deep-sea ecosystems;
- Connection and interlinks.

All members of the management committee, as well as qualified scientists and experts, were invited to participate in working groups of their choosing.
Based on regional strategic analysis and the knowledge and experience of the scientists and members of the management committee, these groups provided space for emphasising the objectives and illustrations of actions for each of the park's major types of ecosystem.
A period devoted to harmonising and compiling the results of the working groups then took place until June 2016.

The third management committee on 7 July 2016 approved the chapters and the park's objectives for the management plan and launched the next stage of work: establishing working groups for each chapter of the management plan. These four new working groups met from July to August 2016 and defined the objectives in greater detail by proposing more specific sub-objectives.


Third management committee of the Coral Sea Natural Park

The scientific workshop in July 2016 brought together local, national, regional and international scientists. This event facilitated obtaining concerted scientific expertise for the first draft management plan for the natural park and proposals for ways to establish a first scientific agenda for the park, in accordance with the needs identified by the office and the objectives identified by the working groups.

The fourth management committee meeting, on 20 December 2016, approved the overall structure of the management plan: chapters, objectives and sub-objectives.

February 2017: collecting views of the public and making all documents

available to the public. The fifth management committee meeting will take

place after gathering public opinion.

April 2017: submission for government approval.

Article 6 of the decree creating the natural park states that the secretariat of the management committee shall be provided by the Maritime Affairs Department of New Caledonia. Throughout the process, the government's maritime affairs management has ensured consistency in the results obtained by the different working groups and acted as a technical and methodological support for drafting the management plan. It has also ensured the participation of a large number of management committee members and has undertaken provisional scheduling.

I. STRUCTURE OF THE MANAGEMENT PLAN

To respond to the eight management guidelines contained in the decree establishing the park, the management plan is structured in four chapters:

- Protection of natural and cultural heritage;
- Recognised sustainable and responsible use;
- Good governance;
- A locally, regionally and internationally integrated park.

Each chapter is divided into three or four objectives, which are in turn divided into several sub-objectives. Achievement of the sub-objectives can be measured by the associated indicators.

The first part of the management plan presents a summary diagnosis of the situation regarding knowledge of geography, environment, cultural heritage and economic activities. This diagnosis has been drafted based on the Strategic Analysis of the Maritime Area of New Caledonia, undertaken in 2014 by the Agency for Protected Marine Areas and updated based on the results of the most recent scientific research.

The management plan comes with maps which show and organise the plan's objectives and sub-objectives.

The working groups helped to craft sub-objective forms in order to work on the sub-objectives. These forms include courses of action and possible indicators. They are not an integral part of the management plan but can be found in the Exhibits. The management plan will be provided in the form of an action plan, renewed annually, which will take up these courses and provide more detail, completing and prioritising them. To facilitate reading of the management plan, its outline is presented in the form of a diagram at the end of the document.

• Outline of the management plan

Chapter 1. A PROTECTION OF NATURAL AND CULTURAL HERITAGE

Objective 1. To protect the ecosystems and their connection
- Sub-Objective 1. To protect isolated coral reefs
- Sub-Objective 2. To limit direct human impact on a significant proportion of the ecosystems.
- Sub-Objective 3. To guarantee connection between the different ecosystems and areas of interest of the park
- Sub-Objective 4. To combat invasive species

Objective 2. To protect heritage, rare and migratory species
- Sub-Objective 5. To establish or strengthen protection status for these species
- Sub-Objective 6. To protect key habitats vital for the life cycle of these species
- Sub-Objective 7. To prioritise the park's emblematic species

Objective 3. To better define and recognise tangible and intangible cultural heritage
- Sub-Objective 8. To map, identify and organise intangible cultural heritage
- Sub-Objective 9. To map, identify and organise tangible cultural heritage

Objective 4. PRESERVE AND OPTIMISE tangible and intangible cultural heritage
- Sub-Objective 10. To preserve tangible and intangible cultural heritage
- Sub-Objective 11. To facilitate the appropriation of cultural heritage by the local population
- Sub-Objective 12. Encouragement of development projects relating to cultural heritage

Chapter 2. RECOGNISED SUSTAINABLE AND RESPONSIBLE USES

Objective 5. Guarantee and support the development of responsible tourism
- Sub-Objective 13. Supervision of individual visits
- Sub-Objective 14. To accredit visits by professionals

Objective 6. Guarantee and support local fisheries respectful of resources and habitats
- Sub-Objective 15. Support and promote our sustainable and responsible deep-sea fishing model
- Sub-Objective 16. Supervision of lagoon fishing activities
- Sub-Objective 17. Prohibition of reef and deep-water fishing activities

Objective 7. Reduction of pressure from maritime transport in order to limit its impact
- Sub-Objective 18. Adaptation of maritime traffic to the issues
- Sub-Objective 19. To prevent pollution risks
- Sub-Objective 20. To combat pollution

Objective 8. Preparation for future use
- Sub-Objective 21. Lead, support and optimise biological material research and sampling activities for the benefit of New Caledonia
- Sub-Objective 22. Anticipating and combatting climate change
- Sub-Objective 23. To better understand the issues and risks linked to exploiting deep-sea resources before planning new geological prospecting or explorations

Chapter 3. GOOD GOVERNANCE

Objective 9. To ensure proper functioning of park authorities
- Sub-Objective 24. To ensure the park's sustainability
- Sub-Objective 25. To support the involvement of management committee members
- Sub-Objective 26. Assessing the compatibility of decisions with the opinions of the management committee

Objective 10. Public involvement
- Sub-Objective 27. Raising awareness of the park in New Caledonia
- Sub-Objective 28. Fostering participatory management
- Sub-Objective 29. To make information accessible

Objective 11. Assessing, reporting, informing and disclosing on implementation of the management plan, its effectiveness and results
- Sub-Objective 30. Assessing the park's performance
- Sub-Objective 31. Ensuring transparency and readability of implementation of the management plan, its effectiveness and results

Objective 12. To strengthen , optimise and pool resources
- Sub-Objective 32. Organising efficient, operational monitoring and follow-up
- Sub-Objective 33. Applying a broad range of strategies to seek finance
- Sub-Objective 34. Improving knowledge within park management

Chapter 4. A LOCALLY, REGIONALLY AND INTERNATIONALLY INTEGRATED PARK

Objective 13. Working in harmony with local managers
- Sub-Objective 35. Seeking to harmonise park management measures and management initiatives throughout New Caledonia
- Sub-Objective 36. Seeking to harmonise monitoring and assessment measures in the park and throughout New Caledonia

Objective 14. Developing regional cooperation for the benefit of the Coral Sea region
- Sub-Objective 37. Seeking to harmonise park management measures and the management measures of neighbouring countries Sub-Objective 38. Seeking to harmonise the park's monitoring and assessment measures with those taken by neighbouring countries

Objective 15. Playing a full part in international relations
- Sub-Objective 39. Sharing and promoting good practice
- Sub-Objective 40. Raising awareness of the park and have it recognised in international bodies

B. BACKGROUND

I. ENVIRONMENTAL BACKGROUND

1 - Physical environment

• Geography

The Coral Sea Natural Park of New Caledonia comprises the New Caledonian Exclusive Economic Zone (EEZ) and the territorial and internal waters of the “remote islands”. It therefore excludes the territorial and internal waters placed under provincial jurisdiction.

At its maximum, it extends 1,900 kilometres to the west, 1,200 kilometres from north to south and covers an area of almost 1.3 million square kilometres. New Caledonia’s Coral Sea Natural Park is part of the “Coral Sea”, a vast maritime area defined, from the hydrographic viewpoint, as being bounded to the west by Australia, to the north by Papua New Guinea and the Solomon Islands and to the east by Vanuatu and New Caledonia.

• Geology

The floor of the Coral Sea Natural Park is composed of:

- Continental rises detached from the eastern edge of Gondwana:
  - The Lord Hawe Rise which extends from the south of the Landsdowne Bank to New Zealand,
  - The Fairway rise ending in the north at the Landsdowne Bank and the Nereus Reef,
  - The Norfolk Rise which includes the Entrecasteaux atolls, Grande Terre and its lagoon and extends as far as New Zealand;
- Volcanic rises formed by seamounts and guyots:
  - The chain of Lord Hawe guyots, a hotspot volcanic belt extending from the Chesterfield Plateau in the north to Capel Bank in the south,
  - The chain of Norfolk seamounts,
  - Loyalty Rise, the origin of which is still debated;
- Sedimentary basins whose crusts are continental: the basins of New Caledonia, Fairway, Lord Hawe, Loyalty and deeper basins whose crust is oceanic: Fijian north and south basins, the Entrecasteaux basin and the north and south basins of Loyalty;
- A subduction trench and associated active volcanic arc including the Matthew and Hunter islands;
- Seamounts, the most notable of which are the Fairway, Norfolk and Loyalty Rises, but also the north and south Fijian basins and the north Loyalty basin.

Coral reefs have developed on certain structures, resulting in “remote islands”: small islands located on the Chesterfield and Bellona platforms, on the Entrecasteaux atolls, on the Pétrie and Astrolabe reefs and Walpole, Matthew and Hunter islands.

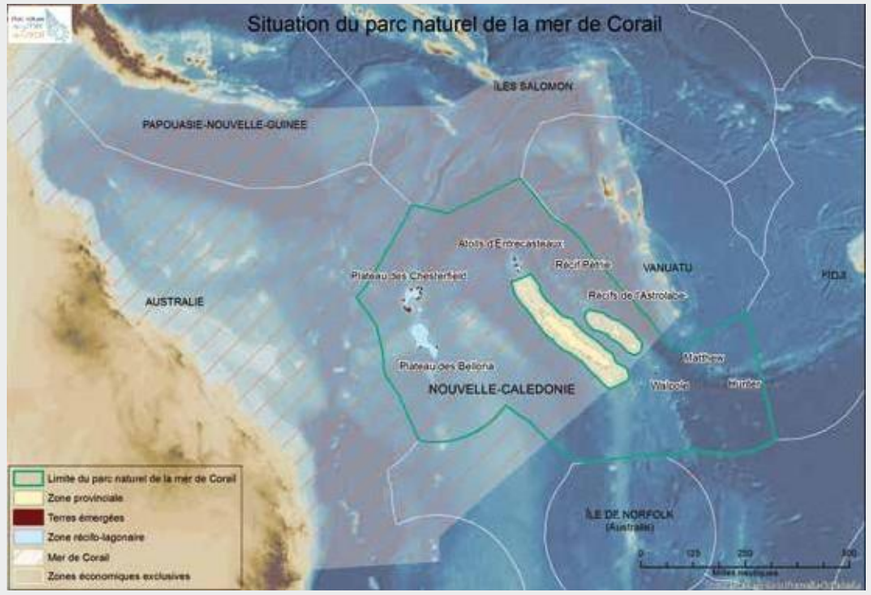
Bathymetric profile on the Natural Park Of the Coral Sea

• Climate

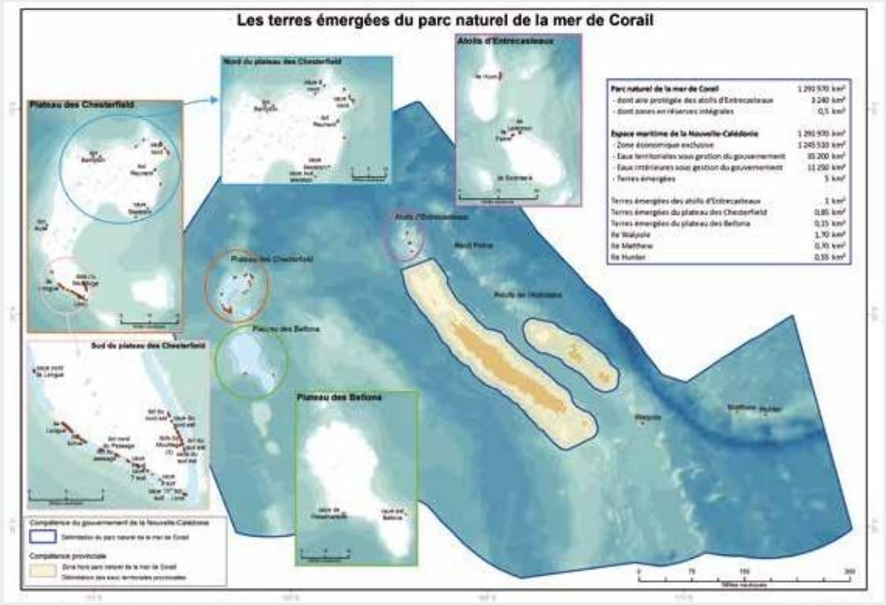
Located just to the north of the Tropic of Capricorn, New Caledonia experiences both tropical and temperate influences. However, their effects are limited by the maritime environment and the quasi-permanent presence of trade winds.
There are two main seasons:

- A hot season during which the tropical influence prevails: precipitation is plentiful and the average temperatures are high;
- A cool season (from June to September) during which disturbances (precipitation and sometimes “westerlies”) interrupt generally dry and cool weather with relatively low minimum temperatures in some regions.

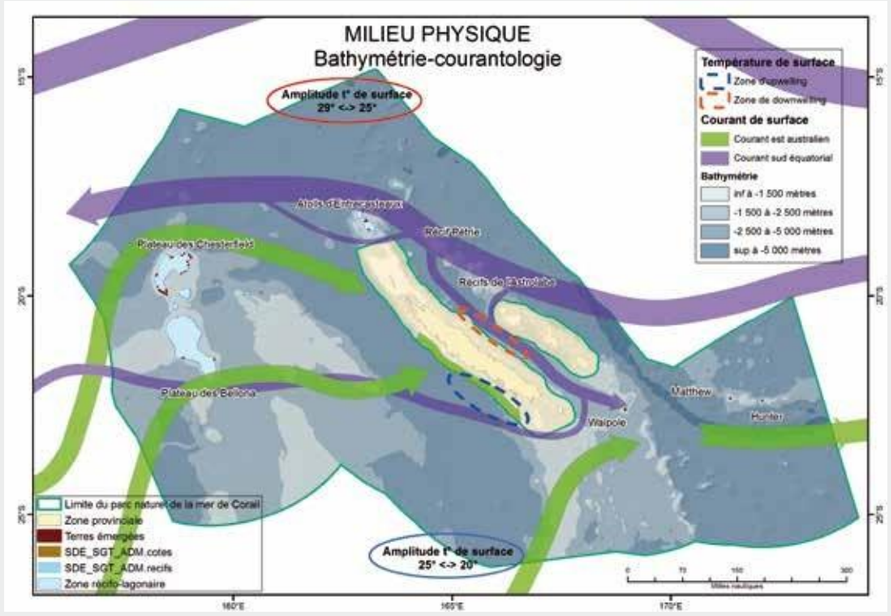
The influence of cyclical, seasonal, multi-year climate phenomena such as El Niño, or sporadic and violent events such as cyclones, has an impact on the region’s oceanographic and atmospheric context. Therefore, in the western Pacific, ocean surface temperatures are cooler than normal during El Niño events and warmer than normal during La Niña events. The frequency and intensity of cyclones also appear to be heightened during La Niña.



The Coral Sea and the Coral Sea Natural Park



Land surface located in the Coral Sea Natural Park



Overview of the physical environment: bathymetry and currentology in the Coral Sea Natural Park

• Oceanography

The main currents in the tropical Pacific ocean are driven by winds from the east, which are the cause of currents moving westwards. The South Equatorial Current brings warm water with low salinity to the north of the Coral Sea Natural Park. The East Australian Current causes a counter-current to the west and south of New Caledonia, moving to the east. This current, composed of cold and saline water, reaches its maximum intensity at a depth of 50 metres.

There is an upwelling all along the west coast of New Caledonia from November to April. This leads to a cooling of the surface water temperature and a significant injection of nutrients. In this way, the concentration of chlorophyll A and thus the productivity which influences biological activity, is increased. It is also worth highlighting that downwelling occurs on the east coast.

The average surface temperature is very pronounced on a north-south gradient basis. There is also an east coast/west coast contrast.

Salinity features are similar to those of temperature with a dominant north/south gradient but also a significant east/west gradient. Salinity is very pronounced in the west of New Caledonia.

2 - Deep-sea ecosystems

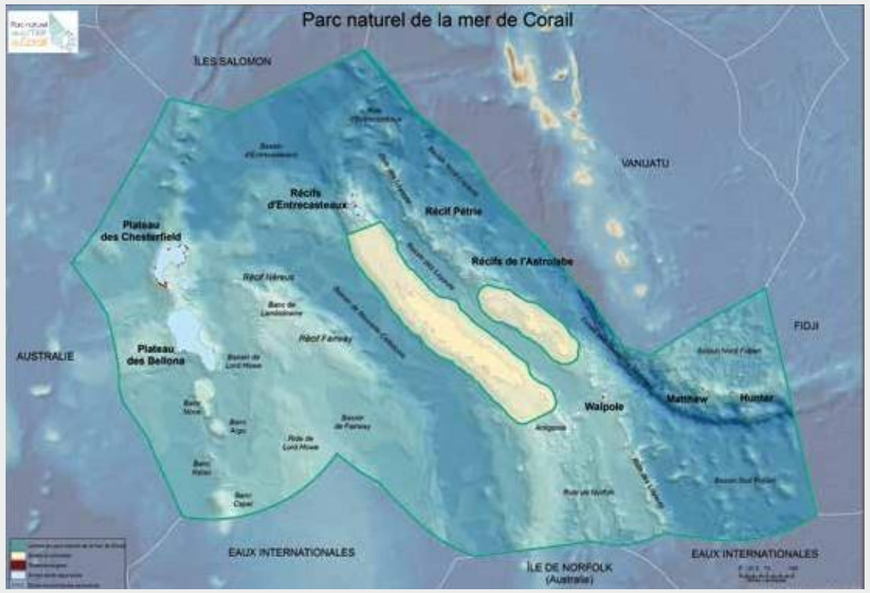
Current knowledge of New Caledonia's deep-sea environment comes mainly from research undertaken by the Muséum national d'histoire naturelle (MNHN) [National Natural History Museum] and the Institut de recherche pour le développement (IRD) [Research Institute for Development] from the 1980s onwards. Seamounts have been the most studied deep-sea systems. Other large habitats, such as sandy abyssal plains and insular slopes have received very little attention. In other regions of the world, these habitats have been shown to have original ecological features. To date, hydrothermal sources and cold seeps have not been found but it is suspected that they are present in the rear-arc of the New Hebrides trench.

The most diversified areas are:

- The chain of guyots of Lord Howe Rise;
- The north of Lord Howe Rise;
- Landsdowne Bank and the mountainous areas of Fairway Rise;
- Norfolk Rise, in the south and north of Grande Terre;
- Loyalty Rise from north to south;
- The edges of the New Hebrides trench, in particular the Matthew and Hunter area.

However, it is worth carefully considering the relatively low number of habitats in the basins. There is little knowledge available on these areas. However, the basins show a certain diversity and heterogeneity of habitats which are likely to be the source of a diversity of communities which have not been studied.

Deep-sea ecosystems are vulnerable because they comprise slow-growing species and species with delayed reproduction which we might think will survive thanks to longevity. Therefore, they have low capacity to recover from pressure.



The seabed of the Coral Sea Natural Park

• Seamounts

The lower depths of seamounts have led to deep-sea systems being the most studied. Connection between these habitats is important for the distribution of the biodiversity with which they are associated. This division of the habitat can isolate populations or, conversely, connect them by acting as a springboard. Seamounts constitute a remarkable element of the topography of seabeds by playing a role in the distribution of biodiversity and its temporal dynamic, by enabling the renewal of the species and their dispersion (availability of refuges), or by enabling speciation by means of the lasting isolation of populations. There are 149 seamounts in the Coral Sea Natural Park, representing an area of 170,460 km².

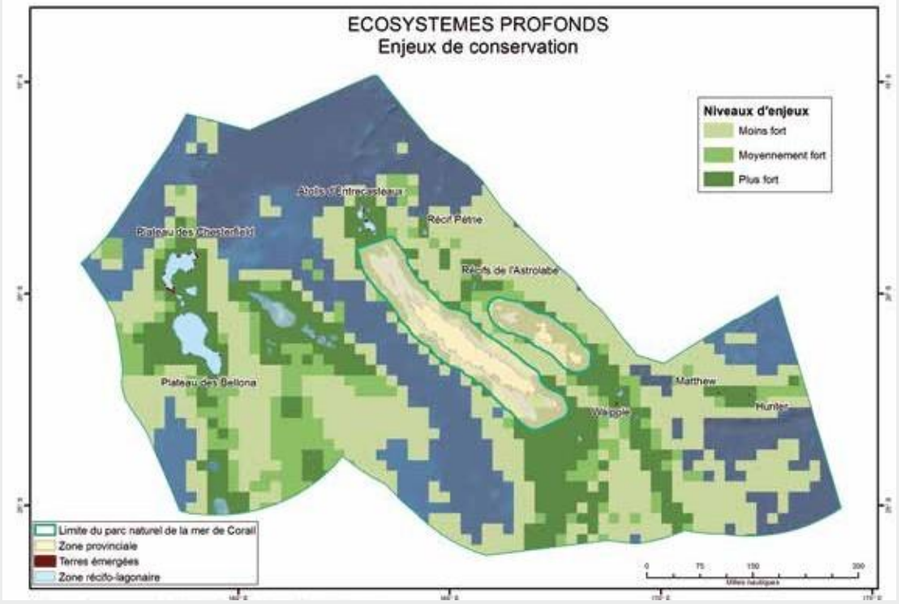
Seamounts can constitute “oases”: areas of high biological productivity where benthic and pelagic biomass reaches higher levels than elsewhere in the ocean. In New Caledonia, the megabenthos biomass, particularly that of filter feeders, is greater on seamounts than on insular slopes. Some seamounts also host significant numbers of demersal fish, in particular those in the southern part of the Norfolk Rise. This biomass is probably linked to the increased productivity due to the transfer of deep waters to the surface.

• Cold-water corals and gorgonian corals

Cold-water corals and gorgonian corals are fragile species as a result of their ecological features. Their biodiversity in New Caledonia is exceptional (for example, more than 300 species of cold-water corals have been described). Up to forty cold-water species have been observed on the same site.

Some cold-water corals, such as Enallopsammia rostrata and Solenosmilia variabilis, so-called “architects”, change their physical environment and can form reefs. This helps establish extremely diversified ecosystems and, thus, grants these corals a particular ecological importance. The estimated area of favourable habitat for E. rostrata is 83,400 km² while for S. variabilis it is 49,000 km². The simultaneous presence of the two species has an area of 39,500 km². These areas are mainly in the rises and seamounts at a depth of 200 to 2,000 metres.

These species are particularly vulnerable to climate change, water acidification, trawling and the exploitation of mineral resources.



Deep-sea ecosystem conservation issues within the Coral Sea Natural Park

• Rarity and uniqueness

The major unique factor of the deep-sea fauna of New Caledonia is the importance of old taxons, current representatives of families which flourished between 25 and 65 million years ago. The most spectacular examples are to be found in molluscs (nautilus, pleurotomaria), sponges, pedunculated crinoids and brachiopods. The majority of these “living fossils” remain on beds lower than 2,000 metres. Their survival could be linked to a favourable ecological context, practically unchanged locally over time.

3 - Pelagic ecosystems

The majority of the Coral Sea Natural Park is located in the “archipelagic deep basins” ecological province, including Papua New Guinea, the west of the Solomon Islands, New Caledonia and a large part of Vanuatu and which ends south of the latitude of the Lord Howe and Norfolk islands. It is characterised by a high degree of variability in oceanographic conditions caused by the presence of islands and seamounts.

• *Biological productivity*

The relationship between oceanographic conditions and biological production, beyond primary production, is complex and still not well understood owing to insufficient observational data.

On average, the observed surface primary production is:

- Maximal in the south of the Natural Park and minimal in the north where the waters are warmer;
- Maximal in August and minimal in January;
- Maximal at a depth of around 100 metres;
- More significant during El Niño.

Some studies have shown the effect of islands on biological production. The geography of islands and some seamounts create a dynamic effect which facilitates nutrients rising to the surface.

The micronekton includes the majority of the prey of large apex predators. Its biomass is at a maximum to the south of EEZ, where the waters are colder.

White tuna (Thunnus alalunga) lays in the tropical and sub-tropical waters between 10°S and 25°S, during the southern summer. The young are observed in New Zealand’s eastern coastal waters and close to the central Pacific sub-tropical convergence zone about one year later. They gradually move to the north. Albacore tuna is a predator which feeds mainly in the surface layer (0-200 m, 30% of food), but also in deeper layers - up to 500 metres.

The yellowfin tuna (Thunnus albacares) is found throughout the tropical and subtropical Pacific. It prefers to operate between 50 and 250 metres, in the mixed layer located above the thermocline, where temperatures are favourable, between 18 and 26 °C.

The bigeye tuna (Thunnus obesus) is found throughout the tropical and subtropical Pacific Ocean. It is found in depths between 50 and 600 metres, but often moves in the thermocline, preferably where water temperatures are between 10 and 17°C.

• *Biological diversity*

By disturbing the water masses created by the dominant currents, seamounts can cause turbulence and vertical flows of nutrients which favour primary production. This in turn fosters production of higher trophic levels. This results in environmental conditions which are favourable to the presence of pelagic species. Biodiversity diminishes continuously the further away seamounts are.

Data from New Caledonia’s observation programme shows that the diversity of fish catches is greater around mountainous areas, in particular around the Chesterfield and Bellona Platforms, the Argo and Kelso Banks and the north of Landsdowne Bank. It is less above large floors, in particular at the New Caledonia and Lord Howe basins. The north-west sector of the Coral Sea Natural Park seems to present the greatest diversity in catches.

Ten species of sharks which roam the Coral Sea Natural Park are classified as “endangered” or “vulnerable” by the IUCN.

• *Vulnerable species*

Species of sharks classified by the IUCN as “at risk of extinction” globally include:

- The great hammerhead shark (endangered);
- The scalloped hammerhead shark (endangered);
- The smooth hammerhead shark (vulnerable);
- The porbeagle shark (vulnerable);
- The oceanic white tip shark (vulnerable);
- The tall dorsal shark (vulnerable);
- The mako shark (vulnerable);
- The thresher shark (vulnerable);
- The great white shark (vulnerable);
- The whale shark (vulnerable).

The manta ray and the bigeye tuna are also among the species at risk of extinction globally.

4 - Coral reef and island ecosystems

44% of New Caledonia’s reef-lagoon areas are in the area of competence of the government of New Caledonia.

New Caledonia, which has the greatest geomorphological diversity of France’s overseas territories, has 163 reef classes. The Coral Sea Natural Park, under government responsibility, has 29 of them, illustrating their relatively low morphological diversity.

The coral reefs of the Natural Park are spread out in four large sets corresponding to where the Lord Howe, Fairway, Norfolk and Loyalty Rises surface.

The islands and islets in the Natural Park are:

- Sandy, when they have developed within the reef-lagoon sets (Entrecasteaux, Chesterfield, Astrolabe);
- Rocky, when they have volcanic origins (Matthew, Hunter);
- Coral in the case of Walpole which is a raised coral block.

Walpole cliffs, DAM/SPE

• *Rarity and uniqueness*

Populations of healthy, vulnerable species are present in the Entrecasteaux, Pétrie and Astrolabe reefs.

Matthew and Hunter islands are unusual in that they are in their first stage of coral colonisation in particular conditions (ongoing or recent volcanic activity, sulphur-rich environment). On the Hunter islands, the low seismic activity and the transparency of the water facilitate coral colonisation, while on the Matthew islands the waters are turbid as a result of gaseous emissions and the presence of sulphur.

Southern key on Long Island, Chesterfield Plateau, Pierre Bachy/SCO

• *Biological diversity*

Marine fauna

In the Coral sea, there is considerable connection within and among the archipelagos: New Caledonia, Vanuatu, Solomon Islands, Papua New Guinea, Australia.

To date, 401 species of scleractinia (hard corals) and 2,320 species of fish have been found in New Caledonia. In the Natural Park, there are 261 species of coral, 2 species of urchins, 5 species of clams, 4 species of trochus and 13 species of holothurians.

The isolated reefs of the Natural Park are much richer than all the other reefs in New Caledonia and indeed the entire Pacific island region. They are even richer than those safeguarded by a protected marine area. New Caledonia's isolated reefs are a unique heritage. They are among the closest examples of what a "virgin" coral reef, untouched by human activity, would look like.

The Entrecasteaux and Astrolabe reefs exhibit great richness of fish.

In the Matthew islands, observations have shown that apex predators dominate. Conversely, in the Hunter islands, fish colonies seem more diversified with apex predators and sedentary species, the majority of which are close to coral reef formations. Grazing herbivores and carnivores have a significant present while piscivores are also present. In spite of their remoteness and low diversity of habitats (predominance of coral habitat), Chesterfield and Bellona reefs contain a remarkable, specific richness in corals and in reef fish. In 2013, 229 species of fish were observed, of which 25 were new species. Nonetheless, specific richness remains higher on Chesterfield than Bellona. The extensive diversity (23 species found in the area) and abundance of butterflyfish confirm the exceptional health of this area. Loaches and sharks (grey reef, white tip) are also regularly observed in these locations.

Large piscivore predators (sharks) are observed on 96% of dives in Chesterfield.

Initial studies on the functional aspects of reefs show that New Caledonia's remote reefs boast a complete biomass, in herbivores and predators, taxonomic diversity and a functional diversity which is maximal given the habitat, the macro-environmental situation and the climate in these isolated areas. These maximal values are the result of minimal human impact.

Knowledge of the functional areas of reef complexes is still incomplete. It would seem that the Chesterfield reefs are used as an area of reproduction by reef sharks, as well as an area for mating and feeding by a sub-population of tiger sharks. Large predators (white sharks, tiger sharks) may use the Chesterfield-Bellona complex as a relay point for their sub-regional movements.

Flora

Despite the fact that knowledge of the marine flora of the islands and reefs which are remote from the Coral Sea Natural Park is still incomplete, in terms of diversity, in 2006 there were 438 species of algae (cyanobacteria excluded) representing 62 families and 184 genres, as well as 11 species of marine angiosperms emanating from reefs, lagoons and coastal areas.

There is more knowledge available on the terrestrial flora of remote islands. It mainly comprises indigenous species. Among them are rare to very rare species in New Caledonia, such as Einadia nutans and Peperomia sp grasses and the Senna gaudichaudii shrub. However, this flora is vulnerable to invasive species. Leucaena leucocephala, then, is the most problematic invasive plant on Surprise Island (Entrecasteaux islets) but it also causes problems on Walpole island. The same can be said for Fucraea foetida, a particularly invasive recent introduction to Walpole island.

Terrestrial fauna

Studies undertaken on the diversity of the fauna of remote islands have shown the existence of numerous species of insects and reptiles. However, the fauna of these terrestrial island ecosystems is particularly vulnerable to invasive species. Walpole Island, the Entrecasteaux reefs and Chesterfield Plateau's Long Island face pressure from significant invasive rodents (the Pacific rat and house mouse), potential predators of the chicks and eggs of small bird species (gygus, noddies). Long Island and Walpole Island have experienced the introduction of the electric ant, Wasmannia auropunctata, thought likely to interact negatively with sea birds.

• *Vulnerability, Sensitivity*

The risk of cyclones, taking all years into account, is greatest in the area of Entrecasteaux, the Pétrie Banks et Astrolabe. The cyclone risk is greater in La Niña years.

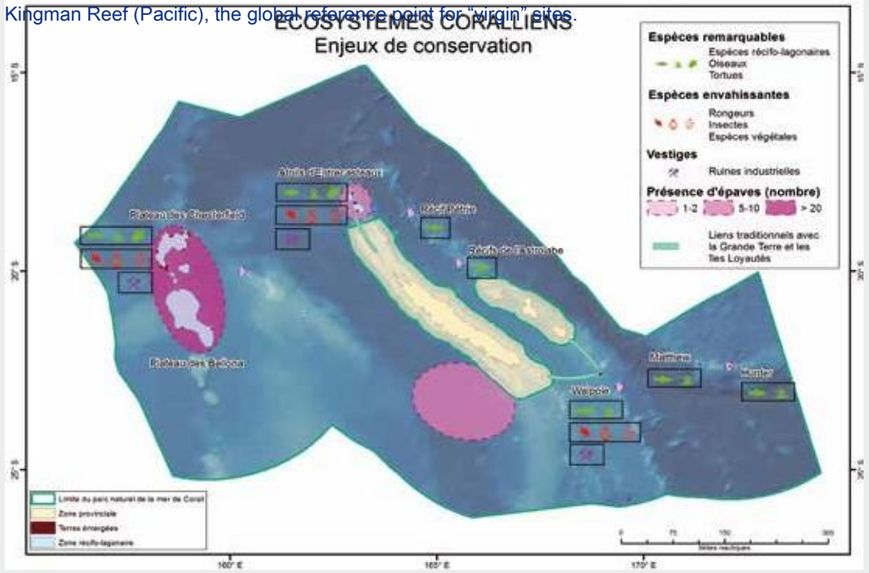
Numerous examples of the introduction of animal and plant species have been observed on these islets. Their introduction has had an impact on indigenous and nesting species. As large foreign vessels likely to transport exotic organisms do not frequent these reef areas, the likelihood of marine invasion is currently weak.

Among the reef-lagoon species present in the park, some are considered by IUCN to be endangered. These include the Napoleon wrasse
(Cheilinus undulatus), the giant grouper (Epinephelus lanceolatus) and the hump head parrotfish (Bolbometopon muricatum).

Studies of Entrecasteaux highlight a significant presence of remarkable species. These factors show that this site is an area of interest for the conservation of these species.

• *Biological productivity*

The isolated reefs of the Natural Park hold the world record for reef fish biomass with 8.8 and 7.9 tonnes per hectare in Pétri and Astrolabe as opposed to 7.6 and 7.5 t/ha in the Cocos Island National Park (Costa Rica) and in the largest sea reserve in the world in the Chagos Islands (Indian Ocean). Also, Chesterfield and Entrecasteaux boast 6.9 and 6.7 t/ha as against 5.3 t/ha in the Kingman Reef (Pacific), the global reference point for "virgin" sites.



Island coral ecosystem conservation issues of the Coral Sea Natural Park

5 - Relations between ecosystems

• *Biological diversity*

Sea birds

There are 27 species of sea nesting birds in the Coral Sea Natural Park:
- Five species of Procellariidae: the Tahiti petrel, the Herald petrel, the Gould's petrel, the black-winged petrel, the Wedgetailed shearwater;
- One species of Hydrobatidae: the Polynesian storm petrel;
- Three species of Sulidae: the red-footed booby, the Masked booby, the brown booby;
- Two species of Fregatidae: the Great frigatebird and the Lesser frigatebird;
- Two species of Phaetontidae: the Red-tailed tropicbird and the yellow-billed tropicbird;
- Ten species of Laridae: the Greater crested tern, the Roseate tern, the Black-naped tern, the fairy tern, the Bridled tern, the Sooty tern, the Brown noddy, the Black noddy, the Grey noddy and the White tern;
- Three species of Phalacrocoracidae: the Great cormorant, the Little black cormorant and the Little pied cormorant;
- One species of Laridae: the Silver gull.

The remote islands are home to a unique community of species representing more than 80% of New Caledonia's species diversity of sea birds, including more than 40% of all nesting species.

Four endemic sea birds (sub-species) have been described:
- The Tahiti petrel;
- The Gould's petrel;
- The Silver gull;
- The Fairy tern.

Petrels (Hydrobatidae) are New Caledonia's rarest and least well-known sea birds.

Sea mammals

New Caledonia's most prominent sea mammals are Cetacea.

According to current knowledge, only the Cachalot (Physeter macrocephalus), the Humpback whale (Megaptera novaeangliae), the Pilot whale (Globicephala macrorhynchus), the False killer whale (Pseudorca crassidens) and the Southern minke whale (Balaenoptera bonaerensis) seem to be familiar with the Coral Sea Natural Park. The Common minke whale (Balaenoptera acutorostrata), the Short-finned pilot whale (Globicephala macrorhynchus), the Common bottlenose dolphin (Tursiops truncatus), the Spinner dolphin (Stenella longirostris), the pygmy blue whale (Balaenoptera musculus brevicauda), Blainville's beaked whale (Mesoplodon densirostris) and Bryde's whale (Balaenoptera edeni) have also been occasionally observed and/or caught off shore.

Sharks

Various monitoring exercises and studies undertaken in New Caledonia to date have enabled the identification of 48 species of sharks. These include pelagic sharks capable of using coastal ecosystems during their life cycle and coastal sharks thought to move in pelagic zones.

Marine turtles

Green turtles and big-headed turtles regularly frequent New Caledonia's waters where they feed and breed. The Hawksbill turtle is also regularly observed. It is thought that they nest here but this has not yet been observed. The Olive Ridley sea turtle and Leatherback turtle just travel through the Natural Park. The Entrecasteaux atolls are a major reproductive site for Green turtles in the tropical Pacific.

Green turtle, Huon island, Entrecasteaux atoll, Jean-François Butaud

• *Connection*

Different marine megafauna species play a linking role, through different stages of their life cycle, between large ecosystems.

Sea mammals

For example, the Humpback whale frequents different ecosystems over the course of its life cycle. This species uses the reef-lagoon environment to reproduce but also as a nursery and, in some cases, as a transit point. They are concentrated on or along the edges of shallow banks, along reefs, around islands located south of the Loyalty islands and in the Bellona atoll, as well as around Matthew and Hunter Islands. It migrates through pelagic zones to feeding areas in the Antarctic or other living areas. Finally, recent studies have highlighted the important role played by certain structures, like sea mounts or shallow coral formations, during this species' migration (Norfolk Rise and Capel Bank).
Four other species identified in New Caledonia are known to migrate seasonally from reproduction areas in the intertropical zone to feeding areas in the high latitudes:

- The common minke whale;
- The antarctic minke whale;
- The sei whale;
- The sperm whale.

Given the number of broad latitudinal-distribution species sporadically observed, it is likely that this list is not complete.

Sea birds

Flying gives birds a greater ability to disperse, a trait which is particularly developed among sea birds.

The birds' feeding areas seem to coincide with vortex upwelling structures. Boobies and frigate birds can travel to feed more than one hundred kilometres from their nesting points.

The Coral Sea Natural Park is also a migration route for sea birds on both sides of the Coral Sea.

Sharks

The Great white shark is known for its ability to migrate over long distances. In the south-west Pacific, white sharks go through significant behavioural and seasonal changes. This creates an ecological niche comprising three stages: a stage of living in temperate coastal waters, a stage of quick migration through the ocean and a stage of living in the subtropical and tropical waters between Australia and Tonga. In tropical regions, white sharks prefer depths of less than 75 metres but they continue to dive to depths of 300 to 400 metres. This behaviour can be explained by the fact that white sharks temporarily establish themselves close to coral reefs in coastal areas or on sea mounts and off shore ridges. These associations and this behaviour may be the result of different strategies for seeking food.

Marine turtles

The life cycle of sea turtles is long and complex. The distribution area of sea turtles is particularly broad as their reproduction areas are generally hundreds, even thousands, of kilometres from their feeding areas. There is still insufficient knowledge to accurately describe the life cycle of the different species.

The Coral sea is an area of migration and dispersal for sea turtles. New Caledonia hosts several reproduction sites of green turtles. The main one is located in the Entrecasteaux atolls.

The most recent studies of the make-up of green turtles show that the Chesterfield populations and the populations of the Entrecasteaux atolls. Are two distinct populations with few interchanges. On the other hand, there is intense interchange between the Chesterfield colonies and those in the Coral sea, especially in Australia.

There are also links between the Entrecasteaux atolls and the Great South Lagoon: Of the green turtles that feed in the Great South Lagoon, 60% are born in Entrecasteaux, 5% in Chesterfield, 20% come from south of the Great Barrier Reef and 5% from elsewhere (French Polynesia, Vanuatu, Marshall Islands etc.).

Ringing/re-catching data on big-headed turtles have also shown a link between the sites in New Caledonia and those in Queensland. It is estimated that 200 big-headed turtles come to lay eggs in New Caledonia each year.

As for the leatherback turtle, it crosses the Coral Sea in a north-south direction, between laying sites in the equatorial zone (in particular Papua New Guinea and the Solomon Islands) and feeding areas located in the south (New Zealand and south-east Australia).

• *Vulnerability*

Among the sea mammal species identified in New Caledonia, several are considered to be in danger of extinction according to the IUCN's red list:

- The humpback whale (its ocean population) (endangered);
- The sei whale (endangered);
- The sperm whale (vulnerable).

Four species of nesting sea birds feature on the red list:

- The Polynesian storm petrel (endangered);
- Gould's petrel (vulnerable);
- The fairy tern (vulnerable);
- The Tahiti petrel (near threatened).

The Chesterfield reefs host at least 30 nesting fairy tern couples, about one quarter of the known population of the New Caledonian fairy tern sub-species.
The high islands (Matthew, Hunter, Walpole) are potentially attractive for the Polynesian storm petrel which is the territory's most threatened sea bird.

All the species of sea turtles identified in New Caledonia are included in the species whose conservation status requires international attention.

All species of sharks identified in New Caledonia have been evaluated and taken into consideration for the IUCN's red list.

Two species are classified as being at risk of extinction:

- The Great hammerhead shark;
- The Scalloped hammerhead shark.

• *Particular importance for species and/or habitats under threat, at risk or declining*

Seamounts

Seamounts are of particular interest to pelagic microfauna, linked to the high productivity that is sometimes associated with them, their relative shade and the fact that they are a landmark in the vast ocean space.

Whales take breaks during their migration close to submarine elevations. The duration of the breaks gives rise to the idea that the whales are using the elevated areas not only as landmarks but also as areas for rest and/or feeding.

Sharks use seamounts as social refuges and feeding areas or as “cleaning stations”. Seamounts and rises may be used as topographical rises by large sharks to get their bearings during ocean migrations.

Seamounts are important features of the ocean habitat (feeding sites) for sea birds (nesting, migratory and erratic), in particular those with a summit at a depth of less than 400 metres.

Remote islands: laying sites for birds and turtles

Sea turtles use different habitats for laying eggs, feeding and for migrating. Turtles return to lay eggs on the beach where they were born. These habitats are particularly important sites for the survival of populations. Any natural or anthropogenic disruption to these areas during the mating season can have a strong impact on mating success rates, the laying of eggs and the survival of young turtles.

Sea birds also live in the interface between different land environments (emerged land for nesting) and sea environments (feeding areas). As such, remote islands are important sites for the conservation of sea birds, in particular atolls (Chesterfield, Bellona, Entrecasteaux) and high oceanic islands (Walpole, Matthew, Hunter).

• *Biological productivity*

By disrupting the general circulation of ocean water masses driven by sea currents, seamounts create vortexes. Sometimes, vertical movement of water masses lead to a local increase in primary productivity and in its associated trophic chain, right up to apex predators.

Large-scale interactions between the coastal and pelagic ecosystems occur because reef organisms are often the prey of ocean predators, especially albacore tuna and yellowfin tuna.

II. SOCIO-ECONOMIC CONTEXT

1 - Cultural and historical heritage

The link with the ocean is an essential element of the culture and identity of people in the Pacific. In Kanak culture, the sea is represented and appropriated in the same way as other natural systems (mountains, forests, rivers etc.). The maritime areas are seen as being extensions of the territorial limits.

In spite of difficulties in precisely defining the maritime property and its limits, it is now recognised that some reefs and remote islands of the Coral Sea Natural Park have been used by the local Melanesian communities.

There is also a traditional link between the islands and Entrecasteaux reefs and the Kanak population of Bélep. In addition, the people of the Pacific were present for an extended period in the past on Walpole.

In New Caledonian society, the sea is seen as being a source of economic wealth, a place of different uses, but also a great source of environmental wealth.

Of all the overseas territories, the Pacific collectives show the greatest interest in the sea and fishing and leisure uses. Of all the overseas populations, the New Caledonians appear to be the most concerned by their environment and its conservation.

2 - Mineral and hydrocarbon resources

The viability of the New Caledonian economy depends on global nickel rates. In its energy balance sheet, New Caledonia sets its rate of dependence on fossil fuels at 96%. This energy dependence results in a dual vulnerability: physical vulnerability regarding security of supply and an economic vulnerability linked to the highly volatile imported goods rates.

In the deep sea, potential resources are hydrocarbons and phosphates. There are also deep sea mineral resources which include crusts (manganese crusts), polymetallic nodules and massive sulphide deposits (hydrothermal sulphides). Globally, more than ever before, the ocean is considered a source of potential wealth offering new development opportunities.

There has not been much exploration or evaluation of the potential of non-biological resources (hydrocarbons and mineral resources) in New Caledonia. However, given the region’s geological context, New Caledonia’s vast EEZ presents some potential. Identifying and accessing these riches will require exploration.

• *Polymetallic nodules and ferromagnesian crusts*

The nodules are highly enriched in manganese, copper, nickel and cobalt, as well as a certain number of trace metals which are currently the source of growing interest. They are present in significant quantities at depths greater than 4,000 metres.

The crusts are enriched in cobalt and also show enrichment in platinum, titanium, rare earths (yttrium, lanthanum, cerium), nickel, phosphorous, thallium, zirconium and molybdenum. The crusts can be present at depths of between 400 and 4,000 metres.

• *Massive sulphur deposits*

These are found on all underwater structures of volcanic origin. Generally, they are enriched in copper and zinc in particular, but also in silver and in gold, sometimes in cobalt and some rare metals. Their potential is hard to estimate, but all isolated former volcanic centres which punctuate the EZZ, the distribution of which is little-known, present some potential.

• *Rare earths in the deep sediment layers*

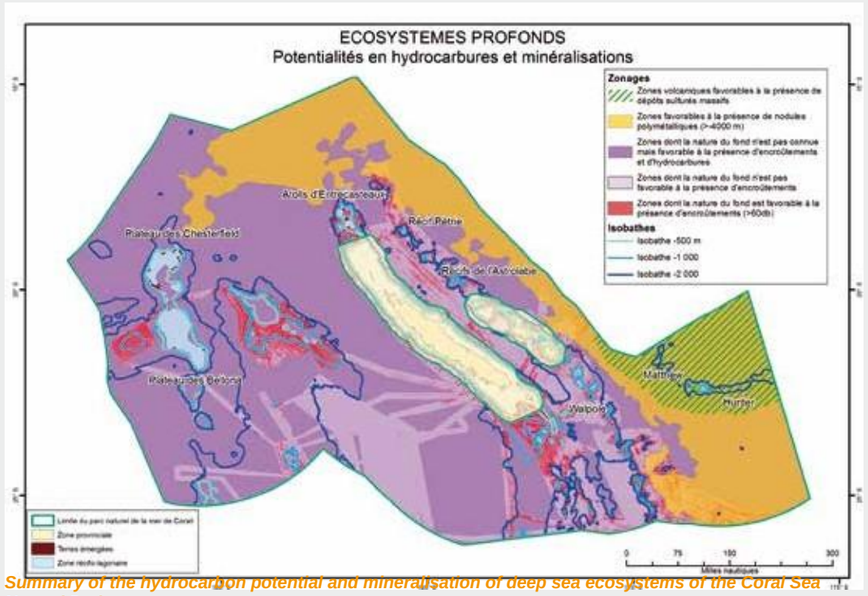
To date, there has been no analysis undertaken of the rare earths in the surface sediments of New Caledonia’s EEZ. In the absence of this information, all the sediment areas located under the carbonate compensation depth may contain rare earth enrichments.

• *Phosphates*

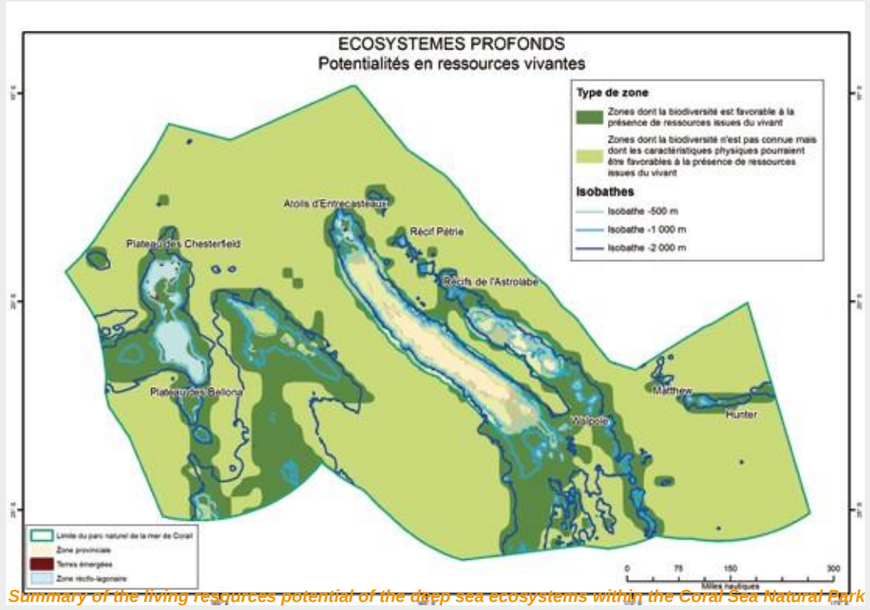
Phosphates are the only mineral resources of the Coral Sea Natural Park to have been exploited in the past. They are a strategic ore. Phosphate ore was exploited in the second half of the 19th Century on Huon and Surprise Islands, in Chesterfield (Long Island) and Walpole.

• *Potential pressures created by this type of extractive activity*

- Depending on each case, removal of land or sea substrata would lead to the destruction of habitats.
- A suspension and dissemination of sediments in sea environments could choke fauna.
- Anthropisation of island land environments could, in the majority of cases, result in changes to flora by introducing new species, including some which could potentially be invasive and fauna, in particular by disturbance.
- Hydrocarbon leaks.
- Pollution caused by chemical dispersants in the event of major pollution by hydrocarbons.
- An increase in underwater noise caused by reflective seismic activities undertaken in the context of prospecting.



Summary of the hydrocarbon potential and mineralisation of deep sea ecosystems of the Coral Sea Natural Park



Summary of the living resources potential of the deep sea ecosystems within the Coral Sea Natural Park

3 Exploitation of fishing resources

• *Deep sea fishing resources*

There are two groups of deep sea fish which can be exploited in the Coral Sea Natural Park:

- Snappers (Australasian snapper, family of Pristipomoïdes and red snapper, family of Etelinae) and their associated species, present on bathymetric tranches between 200 and 500 metres;
- Beryx (Beryx decadactylus and Beryx splendens) and their associated species, present on bathymetric tranches between 500 and 800 metres deep;

The exploitation of snappers gave rise to great hopes in the Pacific Island region in the 1980s, with attempts to introduce fish farms. Although done with a reel, this type of fishing was not sustainable because of a rapid decline in catches.

In New Caledonia, several exploratory beryx fishing campaigns have been undertaken, using both bottom longlines on the seamounts of the south and using trawling nets. Fishing with trawling nets could not be continued due to the obvious impact on the floor and haphazard inconsistent yields. Fishing with bottom longlines, while more selective with less of an impact on the environment, did not lead to the ongoing development of this activity. This failure was mainly a result of the fact that the product was frozen on board and destined for the Japanese market which was not particularly lucrative.

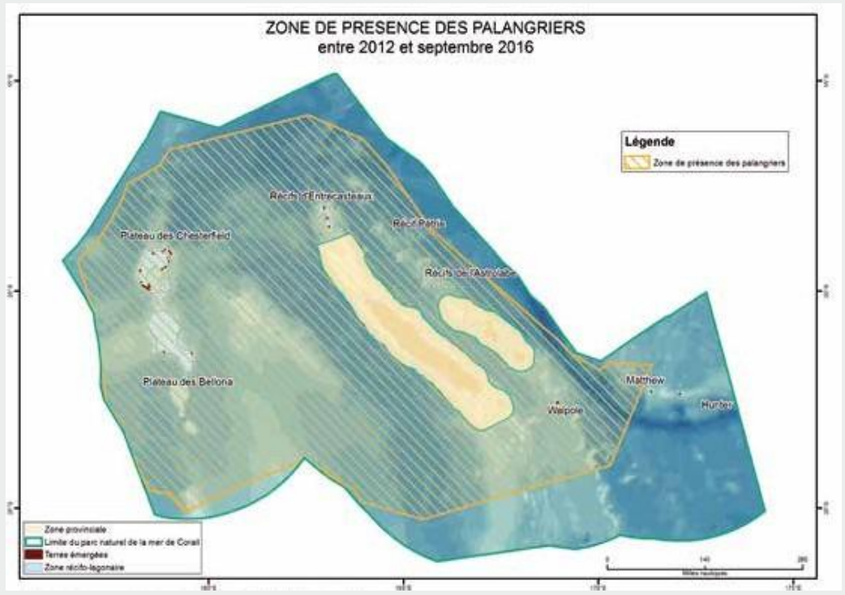
Currently, there is no specific framework for exploiting snapper. This relies on the allocation of a fishing licence. A dedicated study was made in 2014 but did not result in identification of elements for sustainable management of deep sea snapper stocks. This management would be a vital framework for exploiting this type of resource. However, thanks to the features of the biological cycle of these deep sea fish (slow growth, late reproduction), it can be stated that these populations are particularly sensitive to fishing pressures. Only rigorous monitoring of the evolution of size classes in catches and sexual maturity of the fish could provide information to managers about the evolution of the resource.

To date, the exploitation of beryx with a special fishing licence is subject to a total admissible catch of 600 tonnes (equivalent live weight). This quota has never been reached. Just one vessel has received a snapper fishing licence for the Coral Sea Natural Park. Any declared catches by this vessel are anecdotal and date back to 2012. Today, exploitation of deep sea snapper is undertaken by the artisanal coastal fleet, using small (5 to 8 metres) vessels, by day, on the outer slopes of the reefs of the Grande Terre and islands. The electric reel technique is used. This does not have a significant impact on the environment.

In addition to the resource's vulnerability, developing its exploitation is made difficult by a problem of market positioning. The product is considered high-end, expensive and does not have a clear commercial identification recognised by consumers. While the exploitation of these resources seems possible, the remote nature of the fishing sites is a major obstacle to artisanal and cautious exploitation of deep sea resources in the Coral Sea Natural Park.

• *Pelagic fish resources*

The Coral Sea Natural Park is located in the Western and Central Pacific Ocean (WCPO), where large global tropical tuna fisheries are active. Total tuna catches (bonite Katsuwonus pelamis, albacore tuna Thunnus alalunga, bigeye tuna Thunnus obesus and yellowfin tuna Thunnus alabcares) in this region represent about 56% of total tuna catches. At less than 300 tonnes, the volume of tuna caught by New Caledonian shipyards represents 0.1% of catches of this species in the WCPO.



Longline fishing area in the Coral Sea Natural Park

Management of the exploitation of tuna and associated species is done regionally by the Western and Central Pacific Fisheries Commission (WCPFC). New Caledonia sits on this body as a Participating Territory.

The development of New Caledonian tuna fishing dates back to the establishment of the EEZ and the first fishing agreements at the start of the 1980s in favour of Japanese tuna fisheries. While initial attempts targeted surface tuna like skipjack as well as deeper species (yellowfin tuna, albacore tuna, bigeye tuna), it quickly became apparent that the waters of the New Caledonian EEZ were not suitable for surface fishing targeting skipjack.

Initially, development of deep sea fishing was based on the longline technique on board freezer vessels catering for the sashimi market in Japan for tuna and the canning market for other species of lesser value. The sector then turned towards fresh fish vessels. This enabled the local market, as well as the export market, to be targeted.

Fishing activity in New Caledonia's EEZ is framed by a ruling which defines fishing policy in New Caledonia. The recent amendment of this text means there is now real control of entering and exiting the EEZ. As a result, it is possible to combat illegal fishing more effectively. This text is complemented by a series of decrees. Monitoring and control of fishing activities is undertaken by the aircraft and vessels of the French armed forces.

Currently, there are about twenty vessels in the longline fleet. These vessels are of medium size (between 20 and 30 metres). With less than 3,000 tonnes caught annually in a fishing area of 1.3 million square kilometres, the impact of this fishing on resources can be deemed to be minimal. New Caledonia's deep sea fishing provides 230 direct jobs. Its average annual production, in terms of protein supply landed, is comparable in volume to the local cattle and pig industries.

Almost 70% of catches are sold on the local market, while the remaining 30% is sent to Japan, canning factories in the Pacific and the European market.

The main species caught is the albacore tuna (1,500 t/year; 56% of catches), followed by yellowfin tuna (800 t/year; 30% of catches). Other species are caught and sold on the local market. This additional commercial species are bigeye tuna (56 t/year; 2% of catches), mahi-mahi in the warm season (110 t/year; 4% of catches), salmon of the gods and wahoo in the cold season (76 and 37 t/year respectively), as well as fish with rostra including striped marlin (55 t/year), blue marlin (24 t/year), black marlin (39 t/year), Shortbill spearfish (12 t/year) and swordfish (10 t/year).

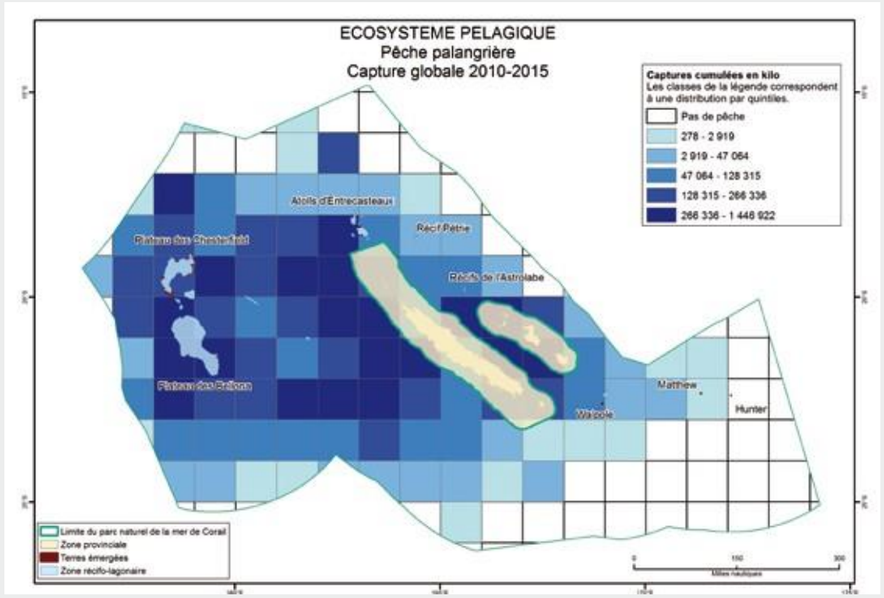
Offshore fishing, DAM/SPE

Catches of species of particular interest

Some species are caught accidentally and have no commercial value and/or enjoy protected status. Such cases include catches of turtles, sharks, birds and, more rarely, sea mammals. All longliner crews are aware of the need to be particularly careful when releasing these animals and, to this end, have the required equipment (disgorger for turtles, wire cutter etc.).

While the exploitation of sharks has been prohibited since 2013 in New Caledonia's maritime area (decree 2013-1007/GNC), the shipyards stopped keeping them in 2008. Sharks generally release themselves by cutting the nylon lines used. Otherwise, they are systematically released by the crew. The main species of shark caught by longline fishing are mako shark, blue shark and silky shark. Then come ocean sharks of particular interest including Thresher sharks (3 different species), the Oceanic whitetip shark, the Sandbar shark and different species of hammerhead shark.

New Caledonia has a fish observation programme which, in addition to its objective of meeting a coverage rate set by the WCPFC at 5% of the number of lines released, helps maintain priority dialogue with fishing vessels and their shipyards. It also helps to more accurately identify any impact the activity could potentially have on species of particular interest and contributes to scientific research activities through sampling catches. In this way, it is possible to accurately identify species caught accidentally each year. As a result, it is also possible, subject to have sufficient data, to estimate the number of these catches by the fleet.



Fishing catches, performance and effort 2010-2015 within the Coral Sea Natural Park

Impact of fishing activities

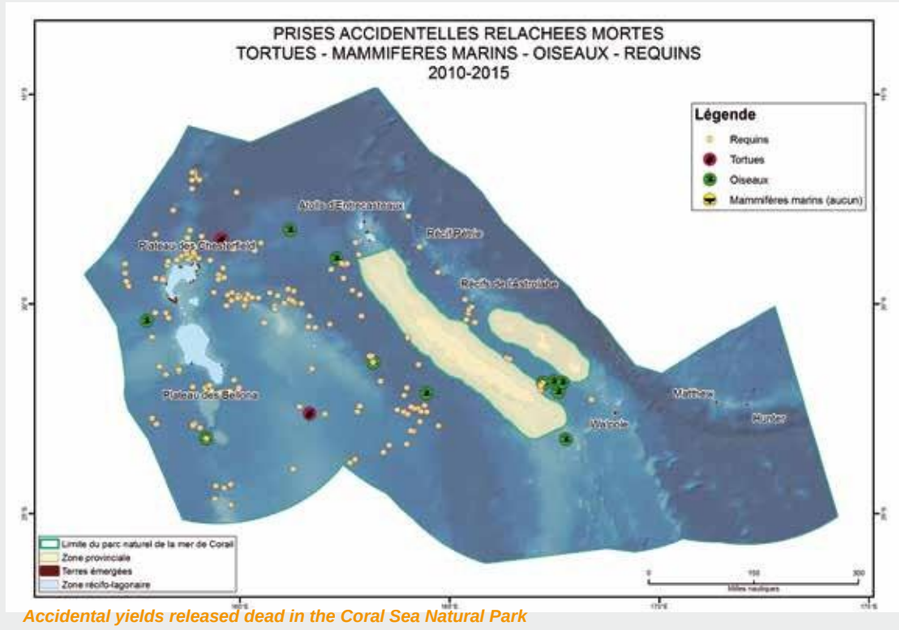
The catch level in the Coral Sea Natural Park is considered to be low (2.3kg/km^2/year) This is the result of well-diffused fishing effort (0.2 sea days/year/100 km^2).

Regarding the main species targeted, albacore tuna, 2016 stocks were considered to have been exploited below the level of maximum sustainable yield.

For yellowfin tuna and albacore tuna alike, targeting of adult individuals and abandoning fishing for young fish are some of the measures taken voluntarily by shipyards in the interests of sustainable fishing.

There is insufficient information to establish a robust diagnosis on the majority of species constituting commercial accidental catches. At regional level, only bigeye tuna and striped marlin are a cause for concern as they are close to overexploitation. However, these species are not targeted by New Caledonia's shipyards and their catch level remains low.

Great attention is given to the accidental catching of birds, turtles and sea mammals. These catches are at low levels in comparison to other areas of the Pacific and a decrease in mortality levels of these species is an objective shared by fishermen and fishing authorities.



Accidental yields released dead in the Coral Sea Natural Park

The creation of the "responsible fishing" label in 2015, issued by the independent management body, resulted in a guarantee that 16 of the 17 vessels in operation in 2016were undertaking their activities responsibly in relation to managing the resource, respecting the environment and improving security at work.

• *Reef fishing resources*

The remote islands and reefs of the Coral Sea Natural Park are important reef systems which are home to fish resources.

To date, just one vessel exploits certain resources on the Chesterfield Plateau: mainly sea cucumbers, occasionally lobsters and more rarely snappers. Since 2004, the annual average catch of sea cucumbers made by this shipyard is 10 tonnes. The total over 10 years of exploitation stands at a production of 96 tonnes.

While it is accepted that these reef spaces, which are not frequented to a high degree, host exploitable fish resources, the remoteness of these fishing sites and the nature of their resources mean the sustainable and profitable exploitation of these reefs is not envisaged. The conservation status of these reefs is deemed exceptional. However, their capacity for resilience is thought to be low.

4 Tourism in the remote islands

Cruise activities

The Chesterfield and Bellona Plateaus are potentially sites of interest. While they are undoubtedly remote from Grand Terre, they are easily accessible for medium-sized pleasure vessels (more than 24 metres long) or larger vessels (small ocean liners). They could then be of interest to operators wishing to develop original tourist products. The high islands (Walpole, Matthew, Hunter) are difficult to access.

Pressure and impact

- The anchoring of vessels and visiting islets can lead to the destruction or physical modification of species and habitats, both on land and at sea (by anchors, trampling, fire etc.). There is a risk of being stranded in areas where navigation is made difficult by the presence of scattered barriers and coral reefs.
- Chemical pollution (nutrients and risks of eutrophication in areas visited regularly, chemical pollutants) due to discharges of grey water, black water, hydocarbons, ballast water and visual pollution (plastic macro-waste).
- Noise pollution (land and sea) and associated disturbances, especially during the reproduction periods of the turtles or avifauna which are so abundant in these areas.
- The reduction in stocks of certain living resources in connection with inappropriate samples.
- The voluntary or involuntary introduction of species, including invasive species on the land (rodents, ants, plants) and at sea (from bacteria and viruses to vertebrates and invertebrates).

5 - Maritime transport

Just like at global level, maritime traffic is increasing in the Pacific Ocean in line with the increase in ocean freight. The trend towards increased traffic can be seen in New Caledonia as well, where the increase in container ship traffic is sustained and dramatic.

Today's arrivals are dominated by two types of vessels: container ships and ocean liners.

New Caledonia is not located on the most used maritime routes in the world. However, it is located on routes which are important due to their proximity to Australia, a wealthy, mining country. It is worth noting that there is significant ore carrier traffic within the Natural Park.

Pollution risks

- Acoustic disturbances caused by maritime traffic. An increase in traffic worsens noise disturbance because sea mammals use acoustic waves in a very complex way. These waves are of the utmost importance to them in how they communicate, assess their environment, feed and reproduce. In New Caledonia, the impact of environmental noise created by maritime transport has not been documented.
- Degassing: there is currently no information available on this pressure. To date, observations have not led to such activity being identified.
- Stranded on the coral reefs: the maritime history of New Caledonia is interspersed with numerous accidents. Fortunately, few disasters have occurred in recent times. The increase in traffic means this risk must be taken into account.
- Organic or chemical pollution linked with discharges of grey water and black water from vessels. This risk essentially relates to the lagoon areas: Entrecasteaux, Chesterfield and Bellona.
- Discharges of ballast water: these waters can contain a range of exotic organisms from bacteria and viruses up to higher organisms such invertebrates and even vertebrates. And yet, ore carriers are required to de-ballast in order to change their cargo.
- Discharge of waste from vessels: this practice occurs in the absence of an obligation to store waste and dispose of it at ports.

6 - Climate change and global human development

Global warming is now unequivocally a reality. Observations have demonstrated an increase in global average temperatures of the atmosphere and oceans, generalised melting of snow and glaciers and a rise in the global average sea level.

Regionally, the average sea level is expected to rise in the same order of magnitude as global averages. Estimates for 2100 range from 23 to 58 centimetres to more than 1 metre.

In New Caledonia, minimum and maximum temperatures would rise by between 1.5 °C and 4 °C by 2100 and the so-called "warm" season would extend from 2 to 6 months. Regarding precipitation, no significant increase is foreseen, but an expansion of the seasonal cycle is predicted.

The average temperature of the surface layer of the oceans around New Caledonia could increase by 2 °C between 2050 and 2100.

One-third of the Carbon dioxide released into the atmosphere is found in seawater. The increase in atmospheric CO_2 concentration

Will lead to a drop in pH (acidification) of surface waters by 2100, reducing aragonite saturation. This decrease in saturation reduces the capacity of corals to build their skeletons in areas which are currently favourable for them.

The decrease in production of coral debris, linked to a drop in calcifying organisms, the increase in sea level and more frequent increased intensity cyclones are likely to imperil some very low altitude coral islets. The consequences will be:

- Loss of sovereignty, with the disappearance of structures upon which baselines are established for defining the territorial waters of the EEZ.
- Loss of ecological functions (nesting sites for birds, turtles etc.) and services offered by these islets (tourism, shelter etc.).

At the same time as coral coverage is diminishing, the capacity of corals to fight illness or algae is reduced. This could result in an increase in algae cover by 2035. As a result, populations of small fish in live food and shelter corals may reduce markedly. On the other hand, large, reef-dependent fish, the most caught species in reef areas, should not suffer direct effects from the expected contraction in living coral coverage.

The decreased productivity of the pelagic environment may influence the successful nesting of sea birds.

The rise in sea level and erosion will lead to a probable loss of significant feeding areas for sea turtles.

Climate change is also a global threat to sea mammals because it could lead to changes to the distribution of krill, general oceanographic regimes and migration routes.

7 - Environmental monitoring and follow-up

Since the end of October 2011, the government of New Caledonia has had use of Amborella, a multi-purpose vessel allocated Maritime Affairs and which is suitable for operating throughout the Coral Sea Natural Park as well as for intervening to assist outsider or provincial organisms.

Supervision and monitoring of fishing in the Natural Park is undertaken by the New Caledonia armed forces (Fanc), using several tools: two patrollers and a surveillance frigate, as well as a new multi-function building in service since mid-2016, D'Entrecasteaux. The Fanc also have two Guardian aircraft.

The areas of particular operational importance are:

- The north (borders with the Solomon Islands and Vanuatu) and the east (border with Fiji): ongoing risk of incursion, in particular by Chinese and Taiwanese longliners based in Vanuatu or Fiji;
- All of the Natural Park's reef-lagoon areas.

III. INSTITUTIONAL CONTEXT

1- Country-level organisation

• History

A French colony since 1853, New Caledonia became a French Overseas Territory in 1946. The Matignon agreements were completed on 26 June 1988 by Jean-Marie Tjibaou and Jacques Lafleur, under the aegis of the French Government. The agreements provide for the establishment of three provinces: South, North and Islands.

The Nouméa Accord, signed ten years later on 5 May 1988, provided for the transfer of certain competences from France to New Caledonia in several domains, but not sovereign powers (defence, security, justice and currency), which would remain the competences of the French Republic.

It was only in 1999 that New Caledonia became a special collective of the French Republic with its own government. Since then, it has enjoyed a unique status with broad autonomy.

The Statutory Law of 19 March 1999 sets out the division of responsibilities between the French government, New Caledonia, the three provinces and the municipalities. Its first Article states that the Chesterfield Islands and Bellona Reefs, Walpole Island, the Astrolabe Islands and Matthew and Hunter Islands, fall under the responsibility of New Caledonia. Article 22 states that New Caledonia is responsible for regulation and exercising of rights pertaining to exploration, exploitation, management and conservation of natural, biological and non-biological resources in the Exclusive Economic Zone.

•

• New Caledonia Government

"The collegial government is one of the most innovative elements of the current status of New Caledonia. This institution is unprecedented and original in its composition. In the spirit of the Nouméa Accord and so that its local signatories can build together the New Caledonia of tomorrow, its members, from five to eleven, are elected by the administrative assembly using the proportional representation list system.

In this way, the government represents the same political trends as the Congress and, thus, majority and minority sit side-by-side in the executive. The government of New Caledonia is presided over by one of its members, elected from within. The status also envisages the existence of a vice-president's office, charged with taking over if the president is absent or detained from undertaking functions and to chair government meetings in the absence of the president.

The government's collegial functioning can be seen in the arrangement with which the government is charged "Collegially and in a spirit of solidarity with the affairs within its responsibility", meaning its individual members do not have individual powers. Each member is charged with "organising and supervising a sector of the administration" corresponding to the area of activity assigned to the member.

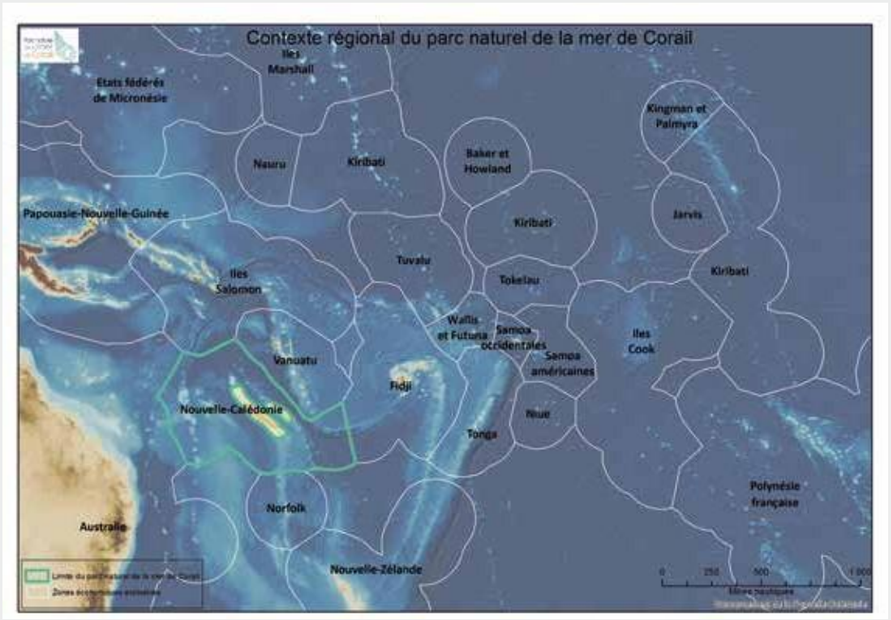
Usually, the government is in place for five years, until the mandate of Congress expires. However, it automatically resigns in the event of the resignation or death of the president. The mandate can also end early if the majority of members decide to resign or due to a vote of no-confidence by an absolute majority of Congress. "

Extract from "101 mots pour comprendre les institutions de la Nouvelle-Calédonie" by Sémir Al Wardi under the direction of Faberon J.-Y. and Garde F.

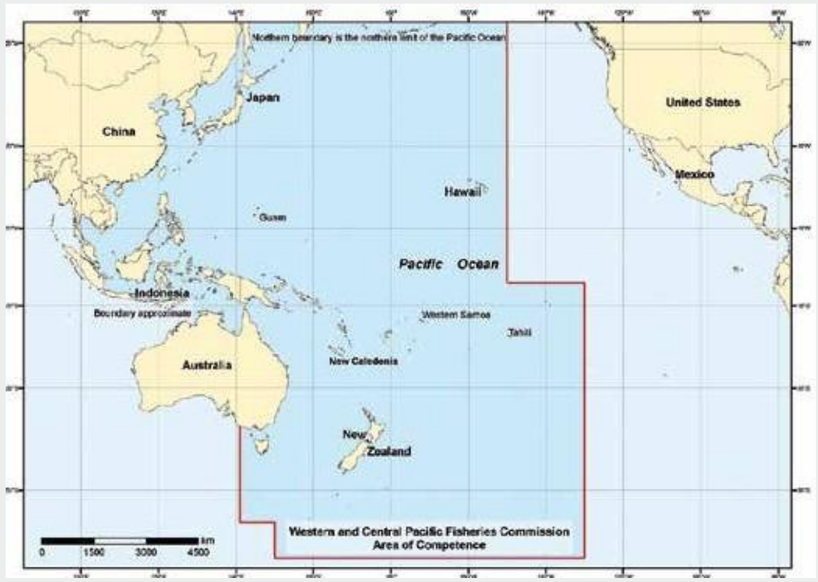
2- Relations with the region

Since 1988, the Nouméa Accord has provided for the transfer of certain competences from the State to New Caledonia in order to allow the latter have greater autonomy. Therefore, competence for foreign affairs is shared between the French government and New Caledonia. As a result, regional cooperation and foreign affairs are an area of competence governed by the principle of shared sovereignty. This implies that New Caledonia, through the president of the government, is today able to:

- Negotiate directly, while respecting the international commitments of the Republic, agreements with one or several States, territories or Pacific regional bodies and with regional bodies dependent on the specialised agencies of the United Nations;
- Be a member, associate member or observer of international organisations, with the agreement of the Republic's authorities;
- Have representations to the European Union and Pacific States and territories.



Regional context of the Coral Sea Natural Park



Area of activity of the Western and Central Pacific Fisheries Commission (WCPFC)

New Caledonia was an associate member of the Pacific Islands Forum (PIF) from 2006 and became a full member in 2013. Founded in 1971, the PIF is a political grouping of sixteen States and territories. It is the Pacific area's international political organisation. As such, each year it defines the roadmap for all member organisations of the Council of Regional Organizations in the Pacific (CORP). At the same time each year, the Forum brings together the heads of state and government of the Pacific in order to approve the strategic guidelines which will steer the work of the technical organisations (SPC [Pacific Community] and PROE [Pacific Regional Environment Programme] in particular) for the year following the summit.

New Caledonia is also a member of the Pacific Community (SPC) which helps develop technical, professional and scientific competences and research, planning and management capacity in twenty-two Pacific island states and territories.

The Pacific Regional Environment Programme (PREP) is an intergovernmental organisation with responsibility for promoting cooperation, supporting efforts to protect and improve the Pacific island environment and facilitate its sustainable development. New Caledonia is a full member of the PREP and was its president in 2012.

The Western and Central Pacific Fisheries Commission (WCPFC) was created by the Convention for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean, (especially tuna). It entered into force on 19 June 2004. Its area of competence covers the Exclusive Economic Zones of Oceanic countries, within which management measures compatible with those of the WCPFC must be implemented by coastal states. As a Participating Territory, New Caledonia takes part in negotiations. However, as it does not have voting rights, it can only block consensus.

By responding to global issues in this way, there is clearly an opening up to the region. New Caledonia has therefore allowed in its governance the possibility that our closest neighbours (Australia, Vanuatu and the Solomon Islands) be associated with the management plan.

New Caledonia has signed cooperation agreements with certain Pacific countries. These include:

- Twinning protected marine areas with the Cook Islands during impact 3;
- A statement of intent between France, through New Caledonia and Australia for the sustainable management of the Coral Sea;
- a memorandum of attention with Vanuatu and the Solomon Islands at the Oceania meeting for concerted management of our marine areas.

The creation of the Coral Sea Natural Park has enabled New Caledonia to become a member of BigOcean, a network created by managers for managers. This network supports the creation of large protected marine areas and facilitates exchange of experiences between managers in this sphere.

New Caledonia also participates in Pacific Oceanscape. Twenty-three countries and territories from the Pacific island region came together to create the Pacific Oceanscape, a framework to sustainably manage, protect and maintain the cultural and natural integrity of this vast region for the generations to come.

Parc naturel de la mer de Corail

Part 2

Management of the Natural Park of the Coral Sea

GOUVERNEMENT DE LA NOUVELLE-CALÉDONIE

A. A PROTECTION OF NATURAL AND CULTURAL HERITAGE

The protection of natural heritage seeks to ensure that environmental processes are resilient and ensure the fulfilment of wildlife species and people. The structural and functional components of ecosystems are maintained in order to ensure the services they provide, particularly in the context of climate imbalance. The modern and ancient tangible and intangible cultural heritage must be known, recognised, protected and valued so that the history and identity of the park is affirmed in its ~~human~~ dimension.

OBJECTIVE

I. PROTECTING ECOSYSTEMS AND THEIR CONNECTION

SUB-OBJECTIVE

1 - To protect isolated reefs

Coral reefs and associated land area are vital for numerous species as they are home to about 25% of known marine species. Virgin coral reefs are reefs which have not experienced any impact from human activities. The park's isolated reefs represent 30% of the planet's virgin reefs. They are among the richest in the world. They hold the world record for reef fish biomass with 8.8 and 7.9 tonnes per hectare in Pétri and Astrolabe compared to 7.6 and 7.5 t/ha in the Cocos Island National Park (Costa Rica) and in the largest sea reserve in the world in the Chagos Islands (Indian Ocean). Also, Chesterfield and Entrecasteaux boast 6.9 and 6.7 t/ha compared to 5.3 t/ha in the Kingman Reef (Pacific), the global reference point for "virgin" sites. New Caledonia's isolated reefs are a unique heritage. They are among the closest examples of what a "virgin" coral reef, untouched by human activity, would look like.

It is worth carefully considering the exceptional richness that these coral reefs represent. They must receive the highest levels of protection (strict reserve or nature reserve), in their entirety.

Coral reef, Jean-Michel Boré, IRD, Pristine mission

SUB-OBJECTIVE

2 - To limit direct human impact on a significant proportion of ecosystems

Protected marine areas have, to a great degree, proven their effectiveness as a tool for protecting biodiversity and ecosystems. The park contributes to achieving Aichi targets and fulfils IUCN congress recommendations to lay the foundations for sustainable management of marine resources. Identification of priority areas encompassing several ecosystems (ecoregions) can now be undertaken based on existing knowledge (regional strategic analyses, important conservation areas, ecoregional analysis, Important Bird Areas (IBA), ecosystem profiles etc.) while including zones with little use conflict. It is worth developing a network of nature reserves or strict nature reserves which would allow the park's ecosystems to be protected in a representative and effective way.

The park's land surface should benefit from the same levels of protection. Seamounts, deep sea reefs and hydrothermal vents with hydrogen and sulphur should enjoy a special status with appropriate protective measures commensurate with their biological importance.

Mouillage islet, Chesterfield plateau, DAM/SPE

SUB-OBJECTIVE

3 - To guarantee connection between the different ecosystems and areas of interest of the park

Many species use several ecosystems during their life cycle. Therefore, maintaining connection between these different ecosystems is vital.

Seamounts, in particular, play a key role in this connection. They act as areas for feeding, rest, cleaning, guidance points etc., for many pelagic species (whales, sharks, tuna, birds etc.).

Moreover, for certain populations of cetacea, birds, turtles and sharks, there is a proven connection between New Caledonia and neighbouring countries such as New Zealand, Australia, Papua New Guinea, Vanuatu, the Solomon Islands and Fiji.

The establishment of highly-protected environmental corridors linking ecosystems will guarantee connection between ecosystems and thereby strengthen their resilience. In addition, the creation of protected areas within the park will contribute towards better response to the IUCN's recommendations.

Humpback whale, Walpole, Claire Garrigue, IRD, Maracas mission

SUB-OBJECTIVE

4 - To combat invasive species

Exotic Invasive Species (EIS), plants and animals, are now recognised by the IUCN as one of the biggest threats to biodiversity. Biological invasions are considered to be the second biggest cause of erosion of biodiversity globally after the destruction and degradation of natural habitats. To monitor and combat these species by establishing effective measures of prevention, control and, if needed, eradication enable the park's natural heritage to be protected. Raising awareness among park users of the presence of EIS is also a way to combat their spread.

Rat, Walpole, Pierre Bachy, SCO

OBJECTIVE

II. TO PROTECT HERITAGE, RARE AND MIGRATORY SPECIES

SUB-OBJECTIVE

5 - To establish or strengthen protection status for these species

Human activities cause disturbances and impacts which can affect populations of heritage, rare and migratory species in particular. Risk-reduction involves strengthening regulations and increasing means for their implementation.
First and foremost, the park has several regulatory measures seeking to protect whales, sharks and sea turtles. However, these measures need to strengthened and extended to other species, especially those classified as rare, threatened or endangered. Any such strengthening must be consistent with provincial and international statutes and must provide robust protection for these remarkable species. This strengthening will enable the populations concerned to be maintained and ensure their resilience by reducing the risk of negative interactions and disturbances on individuals and habitats.
One of the priorities of this sub-objective will be to list the heritage, rare and migratory species present in the park.

Coral shark, Entrecasteaux atolls, Nicolas Petit

SUB-OBJECTIVE

6 To protect key habitats vital for the life cycle of these species

Breeding grounds, sites for laying eggs or giving birth, feeding and migration, are considered key areas for maintaining the life cycles of species. In order to preserve populations of heritage, rare and migratory species in the park, concrete measures to protect and conserve their habitats must be adopted. Strict nature reserves and natures reserves must be created to protect these key areas, paying particular attention to the seasonal aspects linked to different targeted species. Users frequenting the park's remote islands and reefs must be informed of and attentive to these issues in order to limit as much as possible the disturbances caused by their presence.

Green turtle, Entrecasteaux atolls, Pierre Bachy, SCO

SUB-OBJECTIVE

7 - To prioritise the park's emblematic species

Many unique species are present in the park, whether endemic or real living fossils or whether the park is one of the last refuges for the good health of these populations. The park has a big responsibility towards all these species and must grant them unique protection. They are a true source of identity for the park.

Fairy tern, Pierre Bachy, SCO

OBJECTIVE

III. TO BETTER DEFINE AND RECOGNISE TANGIBLE AND INTANGIBLE CULTURAL HERITAGE

SUB-OBJECTIVE

8 - To map, identify and organise intangible cultural heritage

The intangible cultural heritage connected to the ocean in New Caledonia is rich and diverse. It brings together a set of practices, knowledge and representations which illustrate the close link between humanity and nature. Knowledge of this heritage is a first step towards recognising the important place the marine environment occupies in the organisation of Kanak society. The identification of places and sites of cultural importance, as well as their associated knowledge, will better pinpoint the exceptional character of the park's intangible cultural heritage. Typology and mapping must be undertaken to better understand and recognise this heritage.

SUB-OBJECTIVE

9 - To map, identify and organise tangible cultural heritage

There is only partial knowledge of the park's tangible cultural heritage. We must identify and map the island and maritime and tangible cultural heritage within the park, which speaks of a time sometimes centuries ago: shipwrecks, ruins, archaeological and industrial remains. This involves strategies to improve knowledge based on New Caledonia's existing tools and structures.

Locomotive, remains of guano exploitation at the beginning of the 20th Century, Entrecasteaux atoll, Surprise Island, Jean-François Butaud, CI

OBJECTIVE

IV. PRESERVE AND OPTIMISE TANGIBLE AND INTANGIBLE CULTURAL HERITAGE

SUB-OBJECTIVE

10 To preserve tangible and intangible cultural heritage

Tangible and intangible cultural heritage are one of the park's riches to be protected. Intrinsically linked, natural and cultural sites can benefit from several protection statuses. To achieve this, we must determine or define the protection and management tools allocated to the cultural places and sites identified.

Remains of the guano exploitation at the beginning of the 20th Century, Walpole Island, DAM/SPE

SUB-OBJECTIVE

11 - To facilitate appropriation of cultural heritage by the local population

With notable cultural and historical richness, the park's mission is to ensure the knowledge, protection but also optimisation of its tangible and intangible cultural heritage. For the public to take ownership (re-appropriation of marine spaces by the population, reactivation of customary paths, optimisation and transmission of ancestral techniques and knowledge, youth mobilisation, regional exchanges, development of ecological and tourism activity), this cultural heritage must be shared, especially by making information available and accessible.

SUB-OBJECTIVE

12 - Encouragement of development projects relating to cultural heritage

With a notable cultural and historical richness, the park's mission is to bring together local, territorial, regional and international stakeholders around common objectives. This rich and unique cultural heritage is a major asset for establishing projects for the development and economic, environmental, social and cultural integration of the country.

B. RECOGNISED SUSTAINABLE AND RESPONSIBLE USES

Used to conserve ecosystems, heritage species and resources: tourism, fishing, maritime transport and future uses, should be undertaken using a recognised eco-responsible approach.
In order for the management plan to recognise compatibility of uses with the protection of ecosystems, some objectives must be met.

OBJECTIVE

V. GUARANTEE AND SUPPORT THE DEVELOPMENT OF RESPONSIBLE TOURISM

SUB-OBJECTIVE

13 - Supervision of individual visits

Due to their remoteness, these reefs are spaces almost untouched by human impact. While some remote islands experienced significant human impact between the 18th century and the 1970s due to whale hunting, or between the 19th century and the start of the 20th century due to guano exploitation, they have once again become natural spaces. These spaces of exceptional biodiversity are shelters for numerous vulnerable species. We must therefore supervise tourist visits to these areas, especially for recreational activities. However, any such measures should be taken in advance and be flexible. Pleasure boats, including luxury yachts, must be taken into account because this is a growing industry.

Catamaran in Entrecasteaux atolls, Grégory Trastoux, SCO

SUB-OBJECTIVE

14 - To accredit visits by professionals

The durability and quality of professional tourism activities in the park affected by the conservation of exceptional natural heritage. Professional tourism in these zones must be accredited so that the recreation activities proposed are adapted to the park's management objectives. Recognised good practice from the aquatic tourist sector in the lagoon and Entrecasteaux nature reserve, within the park, should be rolled out with a view to involving operators in the conservation of sites.
Prior knowledge of the different types of tourist flows and usages is required so that their impact can be determined. The development of some activities towards larger and larger vessels requires progressive measures including accreditation and limitation.

OBJECTIVE

VI. GUARANTEE ANDSUPPORT LOCAL FISHERIES RESPECTFUL OF RESOURCES AND HABITATS

15 - Support and promote our sustainable and responsible deep-sea fishing model

Fishing is an economically and socially important sector in New Caledonia. It is essential that this sector remain limited to New Caledonian shipyards using certified longliners and that the maximum number of local licences be kept at its current level (21). Local fishing vessels under 12 metres are not included in this limitation. No fishing licences are not awarded to foreign vessels in the park unless an exemption is granted.
New Caledonian longline fishing practices, targeting tuna, are certified as responsible. The establishment of a sustainable fishing certification, standardised through specifications, is supported by the sector. This certification must be continually updated and must be implemented by the entire fleet.
The fleet's effort in the EEZ and regarding catches in the south Pacific is considered to be minimal. However, the durability of shipyards is dependent on their ability to operate throughout the EEZ except for natural reserves and strict natural reserves.
The use of towed gear, already suspended, should be prohibited throughout the natural park, as should that of seine fishing, bottom trawling and drift net fishing.
Close collaboration with fishermen is desirable, especially in relation to monitoring marine space frequented by longliners.

Landing tuna, Nouméa, fishing port, DAM/SPE

SUB-OBJECTIVE

16 - Supervision of lagoon fishing activities

Lagoon fishing activities must be in accordance with the protected areas status under chapter 1. As practised today, this professional fishing activity must be subject to rigorous monitoring and cannot be maintained in the long term. Due to historical rights, one sole shipyard may fish in the lagoons but no new vessel will be authorised to undertake this activity.
Recreational fishing activities undertaken by pleasure boats must also be strictly supervised, excluding all trade, all disposals of products of such fishing and all landings outside of the park.

SUB-OBJECTIVE

17 - Prohibition of reef and deep-water fishing activities

Species which can be exploited by reef and deep-water fishing are particularly vulnerable because of their low growth rates and low reproduction rates. Uncontrolled fishing pressure could have a significant impact on stocks. Moreover, based on the fishing methods used, impact on the habitat could be considerable. Keeping the park's deep sea fish stocks intact also allows them to expand in provincial waters.

OBJECTIVE

VII. REDUCTION OF PRESSURE FROM MARITIME TRANSPORT IN ORDER TO LIMIT ITS IMPACT

SUB-OBJECTIVE

18 - Adaptation of maritime traffic to the issues

As a specialized agency of the United Nations, the International Maritime Organization (IMO) is the authority with responsibility for establishing the security, safety and environmental performance standards for international maritime transport. The regulatory framework created according to the principles of equity and universality applies to the Coral Sea Natural Park.
To make progress, these regulations must be accompanied by a policy which allows maritime traffic rules to be adapted to environmental issued.

SUB-OBJECTIVE

19 - To prevent pollution risks

Given the remoteness and vulnerability of the park's islands and reefs, a maritime accident would have serious consequences on ecosystems and intervention capacities would be very low. Therefore, it is essential that a pollution risk prevention strategy be established for the park.

SUB-OBJECTIVE

20 - To combat pollution

Given the remoteness and vulnerability of the park's islands and reefs, a maritime accident would have serious consequences on ecosystems and intervention capacities would be very low. Therefore, it is essential that a strategy to combat pollution be established for the park.

OBJECTIVE

VIII. PREPARATION FOR FUTURE USE

SUB-OBJECTIVE

21 - Lead, support and optimise biological material research and sampling activities for the benefit of New Caledonia

Recent research developments have shown that certain little-explored spaces such as deep sea oceans or isolated ecosystems are home to numerous little-known species. Some of them may contain active biomolecules. The development of new products from research based on biological material taken from the natural environment is one of the economic and technological challenges of the future.
It is important that the park has a regulatory framework which allows all sampling, exploration and optimisation operations to be supervised as well means to control their application.
Local populations must be able to benefit from the consequences of exploitation of this material.

SUB-OBJECTIVE

22 - Anticipating and combatting climate change

In its latest report, the Intergovernmental Panel on Climate Change (IPCC) stated that climate change is now unequivocal and is caused by human activity. In New Caledonia, minimum and maximum temperatures will increase between 1.5 °C and 4 °C by 2100 and the so-called "warm" season will extend from 2 to 6 months. Regarding precipitation, no significant increase is foreseen but it is thought that seasonal cycles will be amplified.
The global increase in concentration of carbon dioxide is essentially due to the use of fossil fuels and land cover changes. As for the park, it can also be involved in mitigating the impact of climate change.
The current state of renewable energy technologies means their industrial development in the park cannot be envisaged in the short-term, the park must commit to using renewable energy whenever possible for its monitoring equipment (land bases, listening or recording stations).
The park supports the transition to new, less polluting technologies or those that consume less fuel for boats.
It is impossible to predict that the technology of the future will be; it is necessary to carefully monitor developments.

SUB-OBJECTIVE

23 - To better understand the issues and risks linked to exploiting deep-sea resources before planning new geological prospecting or exploration

There must be knowledge of the issues and risks (ecosystems and political) linked to the exploration of mineral resources and hydrocarbons. The first step is to establish an inventory of existing data on these resources and the risks associated with their exploration. The evaluation of environmental risks must be undertaken on the basis of geological and biological data and samples, which already exist. This approach must be multi-disciplinary in nature and call on diverse skills: Geological, biological, oceanographic, economic and ecological.
This knowledge will enable a methodology for all future impact studies to be established. This methodology and the impact study methods will be submitted to the Scientific Committee.
Technological and economic observations and analyses should also be envisaged. They should be focused on opportunities to responsibly optimise the park, commensurate with the universal services provided and taking into account the international responsibility to support New Caledonia in its significant contribution to the resilience of the Pacific Ocean.

C. GOOD GOVERNANCE

Governance refers to how the park is controlled, in particular the composition and functioning of its governing bodies and the methods they use to make decisions relating to the park. Good governance can be seen concretely in terms of effectiveness. It means decisions that satisfy criteria like participation, transparency, responsibility and even respect for practices and customs.

OBJECTIVE

IX. TO ENSURE PROPER FUNCTIONING OF PARK AUTHORITIES

SUB-OBJECTIVE

24 - To ensure the park's sustainability

In order to ensure the park's sustainability, there must be a permanent management structure dedicated to the functioning of the park authorities and its management organisation. The structure must be capable of receiving and using different sources of financing. However, financing central to the functioning of the structure should be provided by the public authorities within a specified regulatory framework.
This structure must be provided with adequate materials, human resources and status. Its administrative body is a collegial body, the management committee.

SUB-OBJECTIVE

25 - To support the involvement of management committee members

Park management should be participative and united. The management committee is the park's consultative body. It comprises four groups of stakeholders: institutional, customary, socio-professional and representatives of civil society.
The goal of any collegial structure is to ensure each stakeholder can contribute and express views. However, each participant has a duty to guarantee their participation and optimal commitment.
Management committee members must also act as links to the wider public. The opinions and recommendations of all users and the public must be respected. The objective here is to ensure that the decisions taken by the management committee meet with approval.

The members of the management committee visiting a longliner, DAM/SPE

SUB-OBJECTIVE

26 - Assessing the compatibility of decisions with the opinions of the management committee

The management committee will be requested to give its opinion on the application of management measures and on the management plan. The decisions taken by the government of New Caledonia should be checked against the opinions of the management committee in order to ensure these opinions are being effectively followed up on.

Second committee meeting of the Coral Sea Natural Park, DAM/SPE

OBJECTIVE

X. PUBLIC INVOLVEMENT

SUB-OBJECTIVE

27 - Raising awareness of the park in New Caledonia

For the population and users to show any interest, engage in any involvement or undertake any activity for the benefit of park management, a pre-requisite is that they have educational access to knowledge of the natural, cultural and historical wealth, as well as the issues at stake, of the park. Management activities undertaken by the park's governing bodies must also be disclosed to the public. This will facilitate the public appropriating the natural park and its management plan.

SUB-OBJECTIVE

28 - Fostering participatory management

The sheer size of the park and the fact that it is inhabited gives rise to problems relating to the effective monitoring of this space.
The public and professionals could undertake periodic observations and more regular follow-up on behalf of the park, in this way playing a role in improving knowledge and monitoring.
The public needs to be aware of its responsibility and understand the benefit of park management measures and prohibitions in order to implement them in an autonomous way.

SUB-OBJECTIVE

29 - To make information accessible

Information is the first step in involving the public. It therefore must be accessible and understandable for all those interested in the park.

OBJECTIVE

XI. ASSESSING, REPORTING, INFORMING AND DISCLOSING INFORMATION REGARDING IMPLEMENTATION OF THE MANAGEMENT PLAN, ITS EFFECTIVENESS AND RESULTS

SUB-OBJECTIVE

30 - Assessing the park's performance management

Assessing the management plan's effectiveness and enable follow-up and evaluation of its performance, evaluation tools must be developed which call on a series of indicators and associated score charts.

SUB-OBJECTIVE

31 - To ensure transparency and readability of implementation of the management plan, its effectiveness and results

Implementation of the management plan, results achieved and problems encountered must be explicitly reported to all stakeholders involved in park management without undue delay, so that the public can form an informed opinion.

OBJECTIVE

XII. STRENGTHENING, OPTIMISING AND POOLING RESOURCES

SUB-OBJECTIVE

32 - Organising efficient, operational monitoring and follow-up

The park needs to follow and monitor what happens within its boundaries: visits, activities and exceptional events. The size of the park gives rise to problems regarding the resources necessary for its operational monitoring and for following-up on management measures. The high cost of traditional resources means new monitoring methods must be explored. Collaborative activities and pooling of resources must also be prioritised, including regionally given the conservation issues in this area.

SUB-OBJECTIVE

33 - Applying a broad range of strategies to seek finance

The ambitious park objectives require the establishment of numerous activities. New sources of financing are vital so that the park can achieve its objectives. Any acceptance of financing must be done in accordance with the park's ethics and objectives and in such proportions so as to retain the independence of the park in relation to those providing funding.
New Caledonia's commitment to manage its maritime area is beneficial to all countries in the region and, more broadly, the planet. The financial burden of this commitment can legitimately be shared.

SUB-OBJECTIVE

34 - Improving knowledge for park management

The strategic analysis of New Caledonia's maritime area undertaken before the creation of the park revealed a lack of data in several domains. Supporting knowledge-acquisition projects which will enable the management plan's objectives to be achieved will contribute to improving park management.
For the natural park, this is about going beyond its current role which consists simply of making statements about the potential dangers of such and such a scientific mission in the park. The natural park wants to be the catalyst that drives knowledge-acquisition for the benefit of the park's management.
Based on the needs expressed by the management committee, a shared research agenda should be developed. This should bring together all the matters of interest to the park: biology, geology, cultural etc., which will enable finance to be sought.
The data compiled during scientific campaigns in the park should be retained, shared and optimised.

D. A LOCALLY, REGIONALLY AND INTERNATIONALLY INTEGRATED PARK

The park covers the entire maritime area of New Caledonia. Its exterior border corresponds to the EEZ boundaries adjacent to Vanuatu, the Solomon Islands, Australia and Fiji. For this reason, it must take into account regional environmental management methods.
The park must also tailor its management to provincial regulations and customary rules in order to facilitate consistency in measures taken and the pooling of resources.
Moreover, the park is home to one of the six sites classified as a World Heritage Site by UNESCO. This must be followed up in coordination with the other site managers via the Conservatory of Natural Spaces. Finally, the park is part of global momentum for sustainable management of oceans and is involved in various international platforms for exchange and capitalising on experiences.

OBJECTIVE

XIII. WORKING IN HARMONY WITH LOCAL MANAGERS

SUB-OBJECTIVE

35 - Seeking to harmonise park management measures and management initiatives throughout New Caledonia

For the park management measures to be effective, they must be consistent with management measures taken for provincial waters.
The park should encourage application of shared approaches with the provinces, municipalities, world heritage management committees, customary bodies and any body involved in protected areas.

SUB-OBJECTIVE

36 - To seek to harmonise monitoring and assessment measures in the park and throughout New Caledonia

In the context of comprehensive management of the sea environment and in order to best pool resources and share information

easily, there is a need for consistency in the evaluation and follow-up measures of all sea environment management areas. This is all the more important for heritage species, migratory species and interconnected habitats and ecosystems.

OBJECTIVE

XIV. DEVELOPING REGIONAL COOPERATION FOR THE BENEFIT OF THE CORAL SEA REGION

SUB-OBJECTIVE

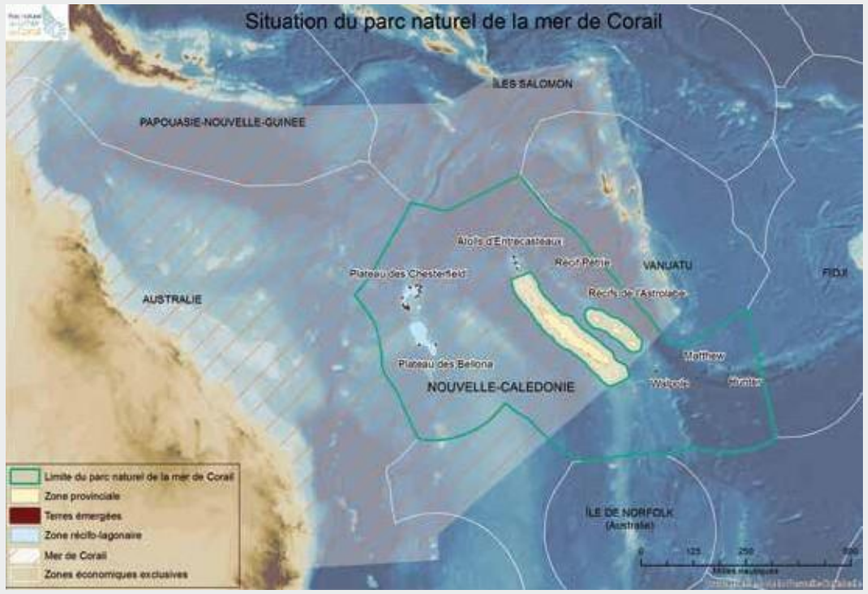
37 - To seek to harmonise park management measures and the management measures of neighbouring countries

For the park's management measures to be effective, they must be consistent with the management measures taken in the Coral Sea region.
Apart from New Caledonia, the Coral Sea borders the coasts of several countries: Fiji, Vanuatu, the Solomon Islands, Australia and Papua New Guinea. Priority bilateral partnerships must be established with our neighbours.

SUB-OBJECTIVE

38 - Seeking to harmonise the park's monitoring and assessment measures with those taken by neighbouring countries

in order to ensure regional consistency in evaluation and follow-up measures, the park can rely on regional strategies and frameworks such as the emblematic marine species conservation strategy or the Pacific strategy for the conservation of nature and protected areas.



Location of the Coral Sea Natural Park

OBJECTIVE

XV. PLAYING A FULL PART IN INTERNATIONAL RELATIONS

SUB-OBJECTIVE

39 - To share and promote good practice

New Caledonia should take advantage of the experience acquired by other countries to swiftly achieve the park's objectives. New Caledonia could also share its positive or negative experiences with other countries and enable them to more swiftly achieve their sustainable development goals.
In order to do this, bilateral partnerships must be established.

The marine areas which are members of the Big Ocean network

SUB-OBJECTIVE

40 - Raising awareness of the park and have it recognised in international bodies

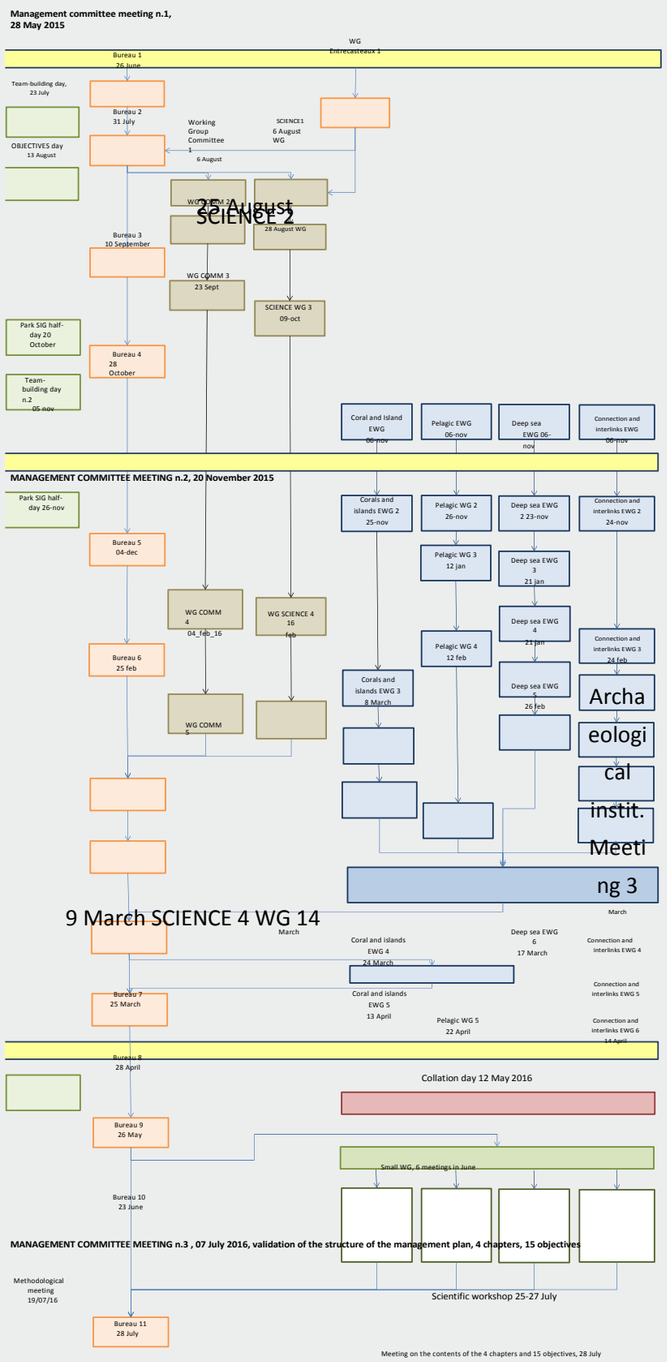
New Caledonia should share work undertaken by the park in order to make it better known and to seek new sources of finance. This sharing of information can be undertaken in particular through participation in international conferences and fora on the marine environment.
New Caledonia could optimise the park's activities in order to fulfil the recommendations of international instruments and achieve the Aichi targets.

E. Maps

Being developed

Annexes

I. MEETING PLANNER



II. FORMS BY SUB-OBJECTIVES

The sub-objective forms are the tools used by working groups. They read as follows:

Chapter 1: APPROVED BY THE MANAGEMENT COMMITTEE ON 7 JULY 2016

~~Obj. : APPROVED BY THE MANAGEMENT COMMITTEE ON 7 JULY 2016~~

Sub-Objective: **~~SUBMITTED FOR VALIDATION BY MANAGEMENT COMMITTEE MEETING N° 4 OF 24 NOVEMBER 2016~~**

+ Description :

Submitted for validation by management committee meeting n. 4 dated 24 November 2016.

+ Indicators:	**+ Targets:**
Working group issues, not discussed, not validated.	Working group issues, not discussed, not validated.

Illustrations of actions (not exhaustive):

Working group issues, not discussed, not validated.

+ Means :

To be developed

Chapter 1: A PROTECTION OF NATURAL AND CULTURAL HERITAGE

Obj. ~~1: TO~~ PROTECT ECOSYSTEMS AND THEIR CONNECTIONS

Sub-objective 1: **TO PROTECT ISOLATED REEFS**

+ Description :

Coral reefs and associated land area are vital for numerous species as they are home to about 25% of known marine species. Virgin coral reefs are reefs which have not experienced any impact from human activities. The park's isolated reefs represent 30% of the planet's virgin reefs. They are among the richest in the world. They hold the world record for reef fish biomass with 8.8 and 7.9 tonnes per hectare in Pétri and Astrolabe compared to 7.6 and 7.5 t/ha in the Cocos Island National Park (Costa Rica) and in the largest sea reserve in the world in the Chagos Islands (Indian Ocean). Also, Chesterfield and Entrecasteaux boast 6.9 and 6.7 t/ha compared to 5.3 t/ha in the Kingman Reef (Pacific), the global reference point for "virgin" sites. New Caledonia's isolated reefs are a unique heritage. They are among the closest examples of what a "virgin" coral reef, untouched by human activity, would look like.
It is worth carefully considering the exceptional richness that these coral reefs represent. They must, in their entirety, receive the highest levels of protection (strict reserve or nature reserve).

+ Indicators:	**+ Targets:**
– Percentage of protected pristine reefs	- 100%
Illustrations of actions (not exhaustive): – Establish strict reserves on the pristine reefs	

+ Means :

Chapter 1: A PROTECTION OF NATURAL AND CULTURAL HERITAGE

~~Obj. 1~~: TO PROTECT ECOSYSTEMS AND THEIR CONNECTIONS

Sub-objective 2: **TO LIMIT DIRECT HUMAN IMPACT ON A SIGNIFICANT PROPORTION OF ECOSYSTEMS**

+ Description :

Protected marine areas have, to a great degree, proven their effectiveness as a tool for protecting biodiversity and ecosystems. The park contributes to achieving the Aichi targets and fulfils IUCN congress recommendations to lay the foundations for the sustainable management of marine resources. Identifying priority areas encompassing several ecosystems (ecoregions) can now be done based on existing knowledge (regional strategic analyses, important conservation areas, eco-regional analysis, Important Bird Areas (IBA), profiles of ecosystems etc.) while including zones with little use conflict. It is worth developing a network of nature reserves or strict nature reserves which would allow the park's ecosystems to be protected in a representative and effective way.
The park's land surface should benefit from the same levels of protection. Seamounts, deep sea reefs and hydrothermal vents with hydrogen and sulphur should enjoy a special status with appropriate protective measures commensurate with their biological importance.

+ Indicators:	**+ Targets:**
Coral ecosystem – Wealth of species – Density and fish and coral reef macro-benthos biomass – Proportion of reef that is living (coral cover) Land Ecosystem – Island ecosystem indicator: number of breeding pairs of birds (masked booby, a sentinel indicator of disturbance for Ent and Chest) – Number of turtle nests in Entrecasteaux Deep sea ecosystem – Deep sea ecosystem indicators: Wealth of species, density, biomass of benthos etc. ~~Pelagic ecosystem~~ – Number of breeding pairs of birds (sentinel species, follow effects of two species of frigatebirds + 3 species of booby) – Number of turtle nests in Entrecasteaux – Number of blue sharks observed/number of hooks observed	- Maintain number of species/m² in relation to point zero - Maintain number of individuals/m² and kg/m² - Maintain 2016 proportion - Maintain or increase in wealth of species, density and biomass
Illustrations of actions (not exhaustive): – Research the optimal size for a coral reserve – Identify point zeros for indicators	

- Fully conserve areas with little or no usage conflict: create strict reserves around Pétrie, Astrolabe, North Chesterfield and Bellona
- Create natural reserves around strict reserves to act as buffer zones
- Define areas of conservation interest
- Legally protect these areas which are key for biodiversity and the production of services linked to ecosystems (protection of all remote islands, islets and reefs, seamounts, hydrothermal vents and other remarkable deep sea ecosystems)
- Create natural reserves on and around the high islands (Walpole, Matthew et Hunter)
- Develop and implement management measures for protected spaces (action plans, monitoring plans, evaluation plans etc.)
- Take lessons from the Entrecasteaux management plan (prior declaration of visitors etc.)
- Classify Long Island and its southern key in Chesterfield as a strict reserve in order to conserve their unique avifauna and vegetal wealth.
- Find out more about the remote islands (fresh water lens, development of the coastline, geomorphology and sedimentology of the islets, status of Walpole's phosphate resources, monitoring the coastline), find out more about reef biodiversity, find out more about deep sea ecosystems (cold coral, biomolecules, geodiversity, biodiversity, abiotic factors, ecological functioning etc.)
- Protect seamounts and deep sea environments of interest (hydrothermal vents etc.)
- Develop regulations to create types of protected marine areas in accordance with the IUCN definition.
- Prohibit extraction of sand from the Natural Park

+ Actions already initiated

- Natural and strict reserves on the Entrecasteaux atolls

+ Means :

Chapter 1: **A PROTECTION OF NATURAL AND CULTURAL HERITAGE**

Obj. 1: TO PROTECT ECOSYSTEMS AND THEIR CONNECTIONS

Sub-objective 3: TO GUARANTEE CONNECTION BETWEEN THE DIFFERENT ECOSYSTEMS AND REMARKABLE AREAS

+ Description :

Many species use several ecosystems during their life cycle. Therefore, maintaining connection between these different ecosystems is vital.
Seamounts, in particular, play a key role in this connection. They act as areas for feeding, rest, cleaning, guidance points etc., for many pelagic species (whales, sharks, tuna, birds etc.).
Moreover, for certain populations of cetacea, birds, turtles and sharks, there is a proven connection between New Caledonia and its neighbouring countries such as New Zealand, Australia, Papua New Guinea, Vanuatu, the Solomon Islands and Fiji.
The establishment of highly-protected environmental corridors linking ecosystems will guarantee connection between ecosystems and thereby strengthen their resilience. In addition, the creation of protected areas within the park will contribute towards better responding to the IUCN's recommendations.

+ Indicators:	**+ Targets:**
– Indices for maintaining/improving connection for each type of ecosystem	
– Number of turtle nests in Entrecasteaux	- Stable average
– Number of pairs of breeding birds (22 species from the maritime environment)	- Stable average
– Number of whales observed in the south lagoon	- Stable average

Illustrations of actions (not exhaustive):

- Creation of a protected area around Lord Howe/Norfolk/Loyalty rises, Lansdowne Bank
- Creation of protected areas bringing together shallow coral reefs and seamounts
- Creation of protected areas for birds, dispersed throughout the park, to support the resilience of these species
- Ensuring management measures are consistent with the Entrecasteaux atolls protected area.
- Support projects to enhance knowledge:
  - Study the connection between different ecosystems
  - Understand the development of systems

+ Means :

Chapter 1: A PROTECTION OF NATURAL AND CULTURAL HERITAGE

~~Obj. 1: TO PROTECT ECOSYSTEMS AND THEIR CONNECTIONS~~

Sub-objective 4: **~~TO COMBAT INVASIVE SPECIES~~**

+ Description :

Exotic Invasive Species (EIS), plants and animals, are now recognised by the IUCN as one of the biggest threats to biodiversity. Biological invasions are considered to be the second biggest cause of erosion of biodiversity globally after the destruction and degradation of natural habitats. To monitor and combat these species by establishing effective measures of prevention, control and, if needed, eradication enable the park's natural heritage to be protected. Raising awareness among park users of the presence of EIS is also a way to combat their spread.

+ Indicators:	**+ Targets:**
– Number of EIS per site – Density of EIS per species and per site – Number of people questioned and frequent the park Who understand the problem	- Maintain 2016 level - Maintain or reduce level of invasion by specie s

Illustrations of actions (not exhaustive):

- Develop a biosecurity plan
- Limit the inter-island spread of EIS by putting forward visit routes
- Create a monitoring and rapid reaction unit
- Take stock of EIS in the park and asses the cost/benefit of their possible eradication
- Support knowledge-acquisition activities contributing to the sub-objective
- Establish preventative actions and actions raising awareness among users and professionals about EIS
- Monitor EIS on remote islands
- Establish questionnaires on invasive species for users
- Classify Long Island and its southern key in Chesterfield as reserve in order to prevent the spread of the house mouse and the electric ant, not present on other islands on the plateau (objective 1, sub-objective 1)
- Regulate de-ballasting

+ Means :

Chapter 1: A PROTECTION OF NATURAL AND CULTURAL HERITAGE

~~Obj. 2: TO PROTECT HERITAGE, RARE AND MIGRATORY SPECIES~~

Sub-objective 5: **~~TO ESTABLISH OR STRENGTHEN PROTECTION STATUS FOR THESE SPECIES~~**

+ Description :

Human activities cause disturbances and impacts which can affect populations of heritage, rare and migratory species in particular. Risk-reduction involves strengthen regulations and increasing means for their implementation.
First and foremost, the park has several regulatory measures seeking to protect whales, sharks and sea turtles. However, these measures need to strengthened and extended to other species, especially those classified as rare, threatened or endangered. Any such strengthening must be consistent with provincial and international statutes and must provide robust protection for these remarkable species. It will enable
the populations concerned to be maintained and ensure their resilience by reducing the risk of negative interactions and disturbances on individuals and habitats.
One of the priorities of this sub-objective will be to list the heritage, rare and migratory species present in the park.

+ Indicators:	**+ Targets:**
– Number of infractions linked to targeted species – Number of accidental catches of remarkable species by fishing engines (by species) – Number of vessels observed in priority areas (by the navy, fishers, amateur yachtsmen etc.) – Number of species affected by new regulatory texts	- 0 - Rolling average reduction over 10 years - Reduction in relation to point zero - > 0

Illustrations of actions (not exhaustive):

- List heritage species
- Establish regulatory measures for the protection of sea birds throughout the park
- Establish regulatory measures for the protection of rare and endangered species in the park: the Napoleon wrasse, giant triton sea snail, horned helmet sea snail, nautilus, hump head parrotfish etc.
- Make it mandatory to report to the authorities any accidental catches of remarkable species
- Impose regulations on the use of fishing techniques currently available in order to reduce accidental catches of remarkable species (e.g. hook pod for birds)
- Extend the "whale sanctuary" regulation to all sea mammal species, including all toothed cetacea (odontocetes)
- Strengthen protection for sea mammals with measures limiting and framing use of sonars and seismic prospecting tools

– Support knowledge-acquisition projects: know more about feeding and breeding areas, identify migration pathways and areas of interest, undertake large-scale observation campaigns, optimise existing data, improve knowledge of tuna

+ Actions already initiated

– Sanctuary for mysticetes (baleen whales) and cachalots, sub-orders of cetacea
– Prohibition on: Fishing, catching, detaining, trading, exporting and mutilating sharks and rays (Elasmobranchii taxon)
– Prohibition on: Fishing, capturing, taking, disturbing, mutilating, trading, importing and exporting all species of sea turtles and their eggs
– Prohibition on the use of towed gear
– Natural and strict reserves on the Entrecasteaux atolls

+ Means :

Chapter 1: **A PROTECTION OF NATURAL AND CULTURAL HERITAGE**

Obj. 2: TO PROTECT HERITAGE, RARE AND MIGRATORY SPECIES

Sub-objective 6: TO PROTECT KEY HABITATS VITAL FOR THE LIFE CYCLE OF THESE SPECIES

+ Description :

Breeding grounds, sites for laying eggs or giving birth, feeding and migration, are considered key areas for maintaining the life cycles of species. In order to preserve populations of heritage, rare and migratory species in the park, concrete measures to protect and conserve their habitats must be adopted. Strict nature reserves and natures reserves must be created to protect these key areas, paying particular attention to the seasonal aspects linked to different targeted species. Users frequenting the park's remote islands and reefs must be informed and attentive to these issues in order to limit as much as possible the disturbances caused by their presence.

+ Indicators:	**+ Targets:**
Land – Number of kg of waste	- 0 - Stable
– Area of Coral islets	> 50 %
– Proportion of living reef on pelagic reefs	
– Number of sharks observed/number of hooks observed	- Stable
Deep sea – Proportion of living coral on seamounts	

Illustrations of actions (not exhaustive):

– Create strict reserves (possibly seasonal) on islands and islets of interest for sea bird breeding (significant biomass 0.5 to 1% of the total breeding pairs in the region, according to UICN criteria for IBA, significant biodiversity, at least 11 species/22 present in the park, vegetal biodiversity of interest, durability/vulnerability of the islet): Chesterfield, Walpole, Matthew, Hunter
– Create natural reserves (possibly seasonal) on other islands and islets for bird breeding
– Create strict reserves (potentially seasonal) on islands and islets of interest for the breeding of sea turtles
– Create seasonal strict reserves in areas with high frequency of humpback whales in the breeding season: Antigonia seamount, Capel bank, Landsdowne bank, Fairway reef, Orne bank
– Define regulatory measures adapted to the migration corridors of hump back whales and sea turtles
– Define regulatory measures adapted to the feeding areas of sea birds
– Support knowledge-acquisition projects

- Identify and describe key habitats (breeding, feeding, frequenting)
- Clarify the status of populations of targeted species
- Find out more about the remote islands (fresh water lens, development of the coastline, geomorphology and sedimentology of the islets, status of Walpole's phosphate resources, monitoring coastline)
- Find out more about reef biodiversity
- Find out more about deep sea ecosystems (cold coral, biomolecules, geodiversity, biodiversity, abiotic factors, ecological functioning etc.)
- Better understand the area of the first 100 metres

– Strengthen follow-up of habitats: establish monitoring of the development of vegetation (Hunter's flower), develop an inventory of nature on the islands, establish UNESCO-type monitoring on all reefs

+ Actions already initiated

– Natural and strict reserves on the Entrecasteaux atolls

+ Means :

Sub-objective 7: **TO PRIORITISE THE PARK'S EMBLEMATIC SPECIES**

+ Description :

Many unique species are present in the park, whether endemic or real living fossils or whether the park is one of the last refuges for the good health of these populations. The park has a big responsibility towards all these species and must grant them unique protection. They are a true source of identity for the park.

+ Indicators:	**+ Targets:**
– Number of fairy tern nests / year	- Increase in relation to point zero

Illustrations of actions (not exhaustive):

– Make an inventory of species concerned
  - Fairy terns, classified as vulnerable by the IUCN. About thirty pairs of the exsul sub-species breed in the atoll of Chesterfield, that is about one-quarter of the total population(ref ASR)
  - Mysterious petrel, white-bellied storm petrel,
  - grey noddis and gygis alba, could be endemic sub-species (research ongoing), in limited numbers on just six islands in the region: New Caledonia + New Zealand + Australia
  - Napoleon wrasse (endangered according to the IUCN) and humphead parrotfish (vulnerable according to the IUCN): Latest spaces where there is significant density and large animals
  - Giant grouper: present only on the Great Barrier Reef and in the natural park (vulnerable according to the IUCN)
  - Clams?
  - Fossil species: nautilus, Richer crinoid
  - Sea snakes
– Identify a point zero
– Support knowledge-acquisition activities
– Establish specific regulations
– Establish necessary control measures

+ Means :

Chapter 1: A PROTECTION OF NATURAL AND CULTURAL HERITAGE

Obj. 3: TO BETTER DEFINE AND RECOGNISE TANGIBLE AND INTANGIBLE CULTURAL HERITAGE

Sub-objective 8: **TO MAP, IDENTIFY AND ORGANISE INTANGIBLE CULTURAL HERITAGE**

+ Description :

The intangible cultural heritage connected to the ocean in New Caledonia is rich and diverse. It brings together a set of practices, knowledge and representations which illustrate the close link between humanity and nature. Having knowledge of this heritage is a first step towards recognising the important place the marine environment occupies in the organisation of Kanak society. The identification of places and sites of cultural importance as well as their associated knowledge will better pinpoint the exceptional character of the
park's intangible cultural heritage. A typology and mapping must be undertaken to better understand and recognise this heritage.

+ Indicators:	**+ Targets:**
– Number of places and sites identified – Number of features and qualifications of the cultural sites/marine spaces	

Illustrations of actions (not exhaustive):

- Develop an inventory of intangible heritage: Identification of communities, groups or their representatives, ensure that the communities have given their free and informed consent regarding inventory, respect customary practices regarding access to information on the heritage featuring in the inventory
- Collect intangible heritage: Tradition and oral expression: Dances, songs, tales etc.
- Diagnosis/taking stock: Typology of the heritage places and sites (based on their features and associated values), cartography of sites identified, data processing and analysis, territories and customary links
- Create a documentary collection
- Forge a link with the local and oceanic platform for traditional knowledge
- Complete study on the cultural dimension of the Natural Park
- Pursue collaboration with customary institutions and other local structures (associations and management committees, cultural centres, provincial services)
- Broaden the perimeter of ocean region (neighbouring countries and Pacific nations)
- Define a scientific agenda on the matter of tangible and intangible cultural heritage

+ Means :

Chapter 1: A PROTECTION OF NATURAL AND CULTURAL HERITAGE

Obj. 3: TO BETTER DEFINE AND RECOGNISE TANGIBLE AND INTANGIBLE CULTURAL HERITAGE

Sub-objective 9: **TO MAP, IDENTIFY AND ORGANISE TANGIBLE CULTURAL HERITAGE**

+ Description :

There is only partial knowledge of the park's tangible cultural heritage. We must identify and map the maritime and island tangible cultural heritage within the park, which speaks of a time sometimes centuries ago: shipwrecks, ruins, archaeological and industrial remains. This involves strategies to improve knowledge based on New Caledonia's existing tools and structures.

+ Indicators:	**+ Targets:**
– Number of islands assessed – Number of sites mapped and described	- 100% - x %

Illustrations of actions (not exhaustive):

- Complete the work of archaeological digs on sites already prospected and sites which have not Been studied
- Historical and archaeological data collection and analysis
- Cartography and description of heritage sites
- Work with the Institut d'archéologie de la Nouvelle-Calédonie (Archaeology Institute of New Caledonia) and the association Fortunes de mer (submarine archaeology association)
- Identify a tool to enable collected data to be pooled (interactive platform of cultural knowledge about the park)

+ Means :

Chapter 1: A PROTECTION OF NATURAL AND CULTURAL HERITAGE

Obj. 4: PRESERVE AND OPTIMISE TANGIBLE AND INTANGIBLE CULTURAL HERITAGE

Sub-objective 10: TO PRESERVE TANGIBLE AND INTANGIBLE CULTURAL HERITAGE

+ Description :

Tangible and intangible cultural heritage are one of the park's riches to be protected. Intrinsically linked, natural and cultural sites can benefit from several protection statuses. To achieve this, we must determine or define the protection and management tools allocated to the cultural places and sites identified.

+ Indicators:

- Number of significant protected archaeological sites
- Number of tools for protecting and managing implemented
- Number of meetings and participatory management mechanisms developed
- Ratio of management measures used against sites identified
- Effort and degree of participation in defining protection and management tools

+ Targets:

Illustrations of actions (not exhaustive):

- In accordance with spaces of customary influence and links to the park's islands, islets and reefs, consult and involve the legitimate customary authorities in all management decisions
- Craft and design management objectives and tools in tandem with the customary authorities and local management entities (management committees and associations of the UNESCO world heritage sites, customary institutions)
- Identify legal solutions to protect cultural heritage
- Propose a regulatory framework for digs
- Establish reserves/limit access (barrier, panel, markings) for significant archaeological heritage
- Create and develop a space for inter-institutional exchange and discussion about the present and future uses of the park (climate change, bio-piracy, tourist activities, illegal fishing, exploitation of resources) and forge links with existing structures (platform for traditional and regional knowledge)
- Restore and renovate: sites and buildings of historical and heritage interest, objects, knowledge and expertise, practices, techniques)

+ Means :

Chapter 1: A PROTECTION OF NATURAL AND CULTURAL HERITAGE

Obj. 4: PRESERVE AND OPTIMISE TANGIBLE AND INTANGIBLE CULTURAL HERITAGE

Sub-objective 11: TO FACILITATE THE APPROPRIATION OF CULTURAL HERITAGE BY THE LOCAL POPULATION

+ Description :

With a notable cultural and historical richness, the park's mission is to ensure the knowledge, protection but also optimisation of its tangible and intangible cultural heritage. For the public to take ownership (re-appropriation of marine spaces by the population, reactivation of customary paths, optimisation and transmission of ancestral techniques
and knowledge, youth mobilisation, regional exchanges, development of ecological and tourism activity), this cultural heritage must be shared, especially by making information available and accessible.

+ Indicators:

- Number of people receiving information
- Proportion of New Caledonians with knowledge of the park's cultural heritage

+ Targets:

Illustrations of actions (not exhaustive):

- Raise awareness, communicate and disseminate information geared towards the people of New Caledonia appropriating cultural heritage: Organise heritage demonstrations, establish cultural mediations with interested partners/town halls/association, signage and promotional bodies, make information available to all New Caledonians.
- Establish a strategy to disseminate information: develop communication supports, edit brochures, posters, collections and organise exhibitions, school visits, conferences to ensure awareness-raising and the promotion of the park's cultural heritage
- Disseminate and return as often as possible the information on traditional knowledge to the local population
- Support inter-generational exchanges to transmit knowledge and expertise

+ Means :

Chapter 1: A PROTECTION OF NATURAL AND CULTURAL HERITAGE

Obj. 4: PRESERVE AND OPTIMISE TANGIBLE AND INTANGIBLE CULTURAL HERITAGE

Sub-objective 12: **ENCOURAGEMENT OF DEVELOPMENT PROJECTS RELATING TO CULTURAL HERITAGE**

+ Description :

With a notable cultural and historical richness, the park's mission is to bring together local, territorial, regional and international stakeholders around common objectives. This rich and unique cultural heritage is a major asset for establishing projects for the development and economic, environmental, social and cultural integration of the country.

+ Indicators:	**+ Targets:**

Illustrations of actions (not exhaustive):

- Develop projects around ocean culture
- Regional and sub-regional influence (links with Vanuatu, links with other Pacific countries)
- Restore traditional navigation tools and techniques: sailing canoes
- Organise events focused on the canoe: regatta, excursions
- Use existing momentum and links for the heritage designation of the ocean (Cook Islands, Vanuatu, Polynesia etc.) and join existing initiatives via local (ADCK [Jean-Marie Tjibaou Cultural Centre], Tavaka association) and regional (Pacific Voyagers, Mālama Honua) structures
- Participation in regional and international meetings and networks focusing on this issue (Big Ocean, twinning, exchanging experiences about Protected Marine Areas in the Pacific)
- Industrial heritage activities
- Archaeological heritage activities

+ Means :

Chapter 2: RECOGNISED SUSTAINABLE AND RESPONSIBLE USES

Obj. 5 : GUARANTEE AND SUPPORT THE DEVELOPMENT OF RESPONSIBLE TOURISM

Sub-objective 13: **SUPERVISION OF INDIVIDUAL VISITS**

+ Description :

Due to their remoteness, remote reefs are spaces which are almost untouched by human impact. While some remote islands experienced significant human impact between the 18th century and the 1970s due to whale hunting, or between the 19th century and the start of the 20th century due to guano exploitation, they have once again become natural spaces. These spaces of exceptional biodiversity are shelters for numerous vulnerable species. We must therefore supervise tourist visits to these areas, especially for recreational activities. However, any such measures should be taken in advance and be flexible. Pleasure boats, including luxury yachts, must be taken into account because this is a growing industry.

+ Indicators:	**+ Targets:**
– Number of authorised boats per year/site out of the number of boats seen	- 90 %
– Number of authorised persons per day and per site out of the number of persons seen	- 90 %

Illustrations of actions (not exhaustive):

- Defining load capacity concepts for each site
- Proposing exclusion zones
- Listing practices to be excluded for each site
- Defining arrangements required according to visits to the sites
- Subject all types of visits to specific authorisation
- Evaluate samples of recreational fishing
- Inform pleasure boats about issues relating to these spaces: Regulation, invasive species, protection areas, disturbing animals etc.
- Establish monitoring

+ Means :

Chapter 2: RECOGNISED SUSTAINABLE AND RESPONSIBLE USES

Obj. 5: GUARANTEE AND SUPPORT THE DEVELOPMENT OF RESPONSIBLE TOURISM

Sub-objective 14: **TO ACCREDIT VISITS BY PROFESSIONALS**

+ Description :

The durability and quality of professional tourism activities in the park affected by the conservation of exceptional natural heritage. Professional tourism in these zones must be accredited so that the recreation activities proposed are adapted to the park's management objectives. Recognised good practices from the aquatic tourist sector in the lagoon and Entrecasteaux nature reserve, within the park, should be rolled out with a view to involving operators in the conservation of sites.
Prior knowledge of the different types of tourist flows and usages is required so that their impact can be determined.
The development of some activities towards larger and larger vessels requires progressive measures including accreditation and limitation.

+ Indicators:	**+ Targets:**
– Number of authorised boats per year on the site in relation to the number of boats seen – Number of authorised persons per day and per site out of the number of persons seen	- 90 % - 90 %

Illustrations of actions (not exhaustive):

- Collect information on what is being done in the area, in particular in Australia.
- Assess interest in promoting scientific tourism or exploration in terms of economic consequences and knowledge acquisition.
- Examine the possibility of drawing on international regulations (IMO)
- Defining load capacity concepts for each site
- Proposing exclusion zones
- Listing practices to be excluded for each site
- Defining measures to involve operators in the respect and conservation of the Site (good practices, access permits, finance mechanisms etc.)
- Prohibit anchoring and disembarking of cruise ships
- Define supervision measures for thematic cruise boats
- Define measures to involve operators (good practices, finance mechanisms etc.)
- Inform all new promoters about conservation issues: regulations, protection areas, invasive species etc.

+ Means :

Chapter 2: RECOGNISED SUSTAINABLE AND RESPONSIBLE USES

Obj. 6 : GUARANTEE ANDSUPPORT LOCAL FISHERIES RESPECTFUL OF RESOURCES AND HABITATS

Sub-objective 15: SUPPORT AND PROMOTE OUR SUSTAINABLE AND RESPONSIBLE DEEP-SEA FISHING MODEL

+ Description :

Fishing is an economically and socially important sector in New Caledonia. It is essential that this sector remain limited to New Caledonian shipyards using certified longliners and that the maximum number of local licences be kept at its current level (21). Local fishing vessels under 12 metres are not included in this limitation. No fishing licences are awarded to foreign vessels in the park unless an exemption is granted.
New Caledonian longline fishing practices, targeting tuna, are certified as responsible. The establishment of a sustainable fishing certification, standardised through specifications, is supported by the sector. This certification must be continually updated and must be implemented by the entire fleet.
The fleet's effort in the EEZ and regarding catches in the south Pacific is considered to be minimal. However, the durability of shipyards is dependent on their ability to operate throughout the EEZ except for natural reserves and strict natural reserves.
The use of towed gear, already suspended, should be prohibited throughout the natural park, as should that of seine fishing, bottom trawling and drift net fishing.
Close collaboration with fishermen is desirable, especially in relation to monitoring marine space frequented by longliners.

+ Indicators:	**+ Targets:**
– Number of hooks observed/total number of hooks – Development of Catch Per Unit Effort (CPUE) – Number of responsible-fishing certified boats/number of total boats – Yield	- 10% coverage - 100 % - Stable average

Illustrations of actions (not exhaustive):

- Make granting of a fishing licence contingent on having "responsible fishing" certification
- Develop active collaboration between the shipyards and the management committee, especially in terms of information-gathering and reporting
- Inform the shipyards/captains of good practices regarding large migratory species (sea mammals)
- Train captains/fishing observers in procedures for observing megafauna and in reporting
- Support non-certified shipowners in the certification process
- Limit catches of non-targeted species by favouring the least destructive methods and tools
- Prohibit fishing techniques which destroy habitats (trawling, seine, drift net, bottom-set net, dynamite etc.)
- Better optimise existing activities
- Keep shipyards involved in monitoring illegal fishing
- Specific activities to promote a responsible fishing model

+ Activities already initiated:

- Monitoring vessels using VMS
- Fishing licences granted only to local fishermen
- Establishment of an on-board observer programme
- Mandatory completion of fishing forms
- Prohibition on towed gear in the box
- Suspended in the rest of the maritime area

+ Means :

Chapter 2: RECOGNISED SUSTAINABLE AND RESPONSIBLE USES

Obj. 6 : GUARANTEE ANDSUPPORT LOCAL FISHERIES RESPECTFUL OF RESOURCES AND HABITATS

Sub-objective 16: **SUPERVISION OF LAGOON FISHING ACTIVITIES**

+ Description :

Lagoon fishing activities must be in accordance with the protected areas status under chapter 1. As practised today, this professional fishing activity must be subject to rigorous monitoring and cannot be maintained in the long-term. Due to historical rights, one sole shipyard may fish in the lagoons but no new vessel will be authorised to undertake this activity.
Recreational fishing activities undertaken by pleasure boats must also be strictly supervised, excluding all trade, all disposals of the products of this fishing and all landings outside of the park.

+ Indicators:	**+ Targets:**
– Number of fishing forms sent	- 100% coverage
– ~~Number of recreational fishing~~ authorisations – Development of catches – Number of licences	- No increase - 1

Illustrations of actions (not exhaustive):

- To develop active collaboration between the shipowner and the management committee
- Assess target stocks in order to define quotas
- Support the shipyard in finding alternative activities
- Evaluate quantity of catches under plesure boat fishing and, if necessary, limit catches

+ Actions already initiated

- Monitoring of boats through VMS
- Make granting of a fishing licence contingent on systematic declarations of catches
- Mandatory completion of fishing forms
- Inform the shipyard about observation and reporting procedures

+ Means :

Chapter 2: RECOGNISED SUSTAINABLE AND RESPONSIBLE USES	
Obj. 6 : GUARANTEE ANDSUPPORT LOCAL FISHERIES RESPECTFUL OF RESOURCES AND HABITATS	
Sub-objective 17: **PROHIBITION OF REEF AND DEEP SEA FISHING ACTIVITIES**	
+ Description : Species which can be exploited by reef and deep-water fishing are particularly vulnerable because of their low growth rates and low reproduction rates. Uncontrolled fishing pressure could have a significant impact on stocks. Moreover, based on the fishing methods used, the impact on the habitat could be considerable. Keeping the park's deep sea fish stocks intact also allows them to expand in provincial waters.	
+ Indicators:	**+ Targets:**
– Quantity fished	- 0
Illustrations of actions (not exhaustive): – Establishment of a regulation prohibiting reef fishing and deep sea fishing – Prohibition on the use of towed gear	
+ Means :	

Chapter 2: RECOGNISED SUSTAINABLE AND RESPONSIBLE USES	
Obj. 7 : REDUCTION OF PRESSURE FROM MARITIME TRANSPORT IN ORDER TO LIMIT ITS IMPACT	
Sub-objective 18: **ADAPTATION OF MARITIME TRAFFIC TO THE ISSUES**	
+ Description : As a specialized agency of the United Nations, the International Maritime Organization (IMO) is the authority with responsibility for establishing the security, safety and environmental performance standards for international maritime transport. The regulatory framework created according to the principles of equity and universality applies to the Coral Sea Natural Park. To make progress in usage, these regulations must be accompanied by a policy which allows maritime traffic rules to be adapted to environmental issued.	
+ Indicators:	**+ Targets:**
– Number of IMO regulatory texts transposed Locally/transposable texts – Number of companies signed up to the charter/number companies	- 100 % - 100 %
+ Illustrations of actions (not exhaustive): – Identify maritime routes in the park – Envisage temporary exclusion zones for maritime traffic in zones frequented by sea mammals (preferential corridors) – Establish slow zones – Define exclusion zones near remote islands and reefs – Apply IMO regulations in the park – Analyse statements of ballasting/de-ballasting (decree n° 3/AEM of 16 July 2006 on de-ballasting conditions of vessels in territorial waters of NC) – Identify maritime routes in the park – Draft a charter of good conduct in order raising awareness among maritime companies about the impacts of their activities on fauna and ways to limit this impact	
+ Means :	

Chapter 2: RECOGNISED SUSTAINABLE AND RESPONSIBLE USES	
Obj. 7 : REDUCTION OF PRESSURE FROM MARITIME TRANSPORT IN ORDER TO LIMIT ITS IMPACT	
Sub-objective 19: **PREVENT POLLUTION RISKS**	
+ Description :	
Given the remoteness and vulnerability of the park's islands and reefs, a maritime accident would have serious consequences on ecosystems and intervention capacities would be very low. Therefore, it is essential that a pollution risk prevention strategy be established for the park.	
+ Indicators:	**+ Targets:**
~~Number of anti-pollution exercises undertaken in the park~~	~~1/year~~
Illustrations of actions (not exhaustive):	
– Identify maritime routes in the park – Develop a prevention plan – Develop strategies seeking to monitor, prevent and punish any de-ballasting, waste elimination etc, – Involve maritime companies in the monitoring and observation of the sea – Analyse statements of ballasting/de-ballasting (decree n. 3/AEM dated 16 July 2006 on de-ballasting conditions of vessels in territorial waters of New Caledonia) – Establish areas in which de-ballasting is prohibited – Consider how to ensure vessels in transit through the park respect regulations (port State control) – Monitor the status of vessels transiting the park – Monitor the behaviour of vessels (illegal degassing, accidental spills) – Draft procedures for international solidarity – Maintain means to fight oil spillages – Prohibit all harmful emissions in the environment (dredging emissions, radioactive waste etc.)	
+ Means :	

Chapter 2: RECOGNISED SUSTAINABLE AND RESPONSIBLE USES	
Obj. 7 : REDUCTION OF PRESSURE FROM MARITIME TRANSPORT IN ORDER TO LIMIT ITS IMPACT	
Sub-objective 20: **TO COMBAT POLLUTION**	
+ Description :	
Given the remoteness and vulnerability of the park's islands and reefs, a maritime accident would have serious consequences on ecosystems and intervention capacities would be very low. Therefore, it is essential that a strategy to combat pollution be established for the park.	
+ Indicators:	**+ Targets:**
Illustrations of actions (not exhaustive):	
– Explore available means of intervention, including in the region – Develop an intervention plan – Include existing anti-pollution structures	
+ Means :	

Chapter 2: RECOGNISED SUSTAINABLE AND RESPONSIBLE USES	
Obj. 8 : PREPARATION FOR FUTURE USE	
Sub-objective 21: LEAD, SUPPORT AND OPTIMISE BIOLOGICAL MATERIAL RESEARCH AND SAMPLING ACTIVITIES FOR THE BENEFIT OF NEW CALEDONIA	
+ Description : Recent research developments have shown that certain little-explored spaces such as deep sea oceans or isolated ecosystems are home to numerous little-known species. Some of them may contain active biomolecules. The development of new products from research based on biological material taken from the natural environment is one of the economic and technological challenges of the future. It is important that the park has a regulatory framework which allows all sampling, exploration and optimisation operations to be supervised as well means to control their application. Local populations must be able to benefit from the consequences of the exploitation of this material.	
+ Indicators: – Royalties paid to NC – Number of jobs created in NC – Area dredged – Number of individuals collected/size of the population – Number of missions monitored	**+ Targets:** - > 0 - > 0 - < 1 % of the park - < 1 % - 100 %
Illustrations of actions (not exhaustive): – Ensure regulatory consistency in the provinces and in the park – Develop a monitoring and surveillance network – Monitor authorised missions (on-board observers and/or control at disembarkation) – Monitoring and combating illegal testing – Long-term monitoring of the future of tests and potential filing of patents – Apply APA regulation	
+ Means :	

Chapter 2: RECOGNISED SUSTAINABLE AND RESPONSIBLE USES	
Obj. 8 : PREPARATION FOR FUTURE USE	
Sub-objective 22: **ANTICIPATING AND COMBATTING CLIMATE CHANGE**	
+ Description : In its latest report, the Intergovernmental Panel on Climate Change (IPCC) stated that climate change is now unequivocal and is caused by human activity. In New Caledonia, minimum and maximum temperatures will increase between 1.5 °C and 4 °C by 2100 and the so-called “warm” season will extend from 2 to 6 months. Regarding precipitation, no significant increase is foreseen but it is thought that seasonal cycles will be amplified. The global increase in concentration of carbon dioxide is essentially due to the use of fossil fuels and land cover changes. As for the park, it can also be involved in mitigating the impact of climate change. The current state of renewable energy technologies means their industrial development in the park cannot be envisaged in the short-term. The park must commit to using renewable energy whenever possible for its monitoring equipment (land bases, listening or recording stations). The park supports the transition to new, less polluting technologies or those that consume less fuel for boats. It is impossible to predict that the technology of the future will be; it is necessary to carefully monitor developments.	
+ Indicators: – Percentage of equipment used in the park involving renewable energy	**+ Targets:** - %
Illustrations of actions (not exhaustive): – Prioritise use of renewable energies for all facilities used In the park in full respect of environmental issues – Monitor environmentally-friendly new technologies – Support the production of renewable energies in the park if techniques are available – Support the transition to innovative technologies for boats – Acquire knowledge on coral bleaching	
+ Means :	

Chapter 2: RECOGNISED SUSTAINABLE AND RESPONSIBLE USES

Obj. 8: PREPARATION FOR FUTURE USE

Sub-objective 23: TO BETTER UNDERSTAND THE ISSUES AND RISKS LINKED TO EXPLOITING DEEP-SEA RESOURCES BEFORE PLANNING NEW GEOLOGICAL PROSPECTING OR EXPLORATIONS

+ Description :

There must be knowledge of the issues and risks (ecosystems and political) linked to the exploration of mineral resources and hydrocarbons. The first step is to establish an inventory of existing data on these resources and on the risks associated with their exploration. The evaluation of environmental risks must be done on the basis of data and samples, geological and biological, which already exist. This approach must be multi-disciplinary in nature and call on diverse competences: Geological, biological, oceanographic, economic and ecological.
This knowledge will enable a methodology for all future impact studies to be established. This methodology and the impact study methods will be submitted to the Scientific Committee.
Technological and economic observations and analyses should also be envisaged. They should be focused on opportunities to responsibly optimise the park, commensurate with the universal services provided and taking into account the international responsibility to support New Caledonia in its significant contribution to the resilience of the Pacific Ocean.

+ Indicators:

- International finance received as financial counterparts in park management dedicated to maintaining its integrity for the benefit of humanity (ocean resilience in the context of climate change)

+ Targets:

Illustrations of actions (not exhaustive):

- Produce a an explanatory note to explore financing of a potential relinquishing of a potential resource and the feasibility of international compensation
- Optimise existing data
- Enhance knowledge about the environmental and economic impact of exploitation
- Respect best practice to minimise the impact of biological and oceanographic data acquisition campaigns
- Undertake “soft” biological and oceanographic exploration campaigns (ROV, scans, submarines, measuring temperature, current, water masses) targeting remarkable habitat and productivity sites
- Undertake a study on the value of the park’s natural capital: allow a check on the ground of the biodiversity and ecosystem-related services associated with the park’s geomorphological units and mineralisation (assessing the value of the ecosystem-related services)
- Undertake a feasibility study on international financing for avoided degradation of deep sea ecosystems
- Undertake an independent benchmark study on the environmental risks linked to exploiting hydrocarbons in the underwater environment (oil/gas)
- Monitor potential environmental risks linked to mineral exploration
- Part of a laudable approach to avoid degradation and compensate the conservation efforts of universal ecosystem services (international support services: life cycle, carbon cycle, ocean acidity regulator, dynamic productivity etc.)
- Estimate the ecosystem-related services provided by the Natural Park

+ Means :

Chapter 3: GOOD GOVERNANCE	
Obj. 9 : TO ENSURE PROPER FUNCTIONING OF PARK AUTHORITIES	
Sub-objective 24: **TO ENSURE THE PARK'S SUSTAINABILITY**	
+ Description : In order to ensure the park's sustainability, there must be a permanent management structure dedicated to the functioning of the park authorities and its management organisation. The structure must be capable of receiving and using different sources of financing. However, the financing central to the functioning of the structure should be provided by the public authorities within a specified regulatory framework. This structure must adequate material and human resources and status. Its administrative body is a collegial body, the management committee.	
+ Indicators: – Number of dedicated FTEs – Amount of the provisional operations budget excluding Salary expenses	**+ Targets:** - > 1 - x millions/year
Illustrations of actions (not exhaustive): – Undertake a feasibility study to find the best type of management structure to be established – Create an entity which can collect and use public and private funds – Recruit a sufficient number of FTEs to enable the management committee be organised and administered – Draw up the by-laws – Draw up internal regulations – Concrete activities on the long-term viability of financial and human resources	
+ Means :	

Chapter 3: GOOD GOVERNANCE	
Obj. 9 : TO ENSURE PROPER FUNCTIONING OF PARK AUTHORITIES	
Sub-objective 25: **TO SUPPORT THE INVOLVEMENT OF MANAGEMENT COMMITTEE MEMBERS**	
+ Description : Park management should be participative and united. The management committee is the park's consultative body. It comprises four groups of stakeholders: institutional, customary, socio-professional and representatives of civil society. The goal of any collegial structure is to ensure each stakeholder can contribute and express views. However, each participant has a duty, under their responsibilities, to guarantee their participation and optimal commitment. Management committee members must also act as links to the wider public. The The opinions and recommendations of all users and of the public must be respected. The objective here is to ensure that the decisions taken by the management committee meet with approval.	
+ Indicators: – Participation rates in management committees – Participation rates in the bureau	**+ Targets:**
Illustrations of actions (not exhaustive): – Issue invitations to meetings and working documents in the time-frames envisaged in the Internal regulations – Ensure meetings take place regularly – Allow everyone to have their say at the meetings – Regularly update the collaborative platform for management committee members (minutes of the meeting, timetable etc.) – Endeavour to help management committee members know one another (team-bonding day etc.) – Optimise the activities of the management committee by drafting a press release after each meeting – Support the exchange of data and information among partners – Hold public consultations whenever the management plan is renewed – Hold regular public information meetings – Explore the possibility of issuing assenting opinions in by the management committee	
+ Means :	

Chapter 3: GOOD GOVERNANCE	
Obj. 9 : TO ENSURE PROPER FUNCTIONING OF PARK AUTHORITIES	
Sub-objective 26: **ASSESSING THE COMPATIBILITY OF DECISIONS WITH THE OPINIONS OF THE MANAGEMENT COMMITTEE**	
+ Description : The management committee will be requested to give its opinion on the application of management measures and on the management plan. The decisions taken by the government of New Caledonia should be checked against the opinions of the management committee in order to ensure these opinions are being effectively followed up on.	
+ Indicators: – Number of opinions followed-up on/total number of opinions	**+ Targets:** - - -
Illustrations of actions (not exhaustive): – Regularly obtain the number of opinions by the management committee	
+ Means :	

Chapter 3: GOOD GOVERNANCE	
Obj. 10 : PUBLIC INVOLVEMENT	
Sub-objective 27: **RAISING AWARENESS OF THE PARK IN NEW CALEDONIA**	
+ Description : For the population and users to show any interest, engage in any involvement or undertake any activity for the benefit of park management, a pre-requisite is that they have educational access to knowledge of the natural, cultural and historical wealth, as well as the issues at stake, of the park. Management activities undertaken by the park's governing bodies must also be communicated to the public. This will facilitate the public appropriating the natural park and its management plan.	
+ Indicators: – Number of large public meetings organised – Number of participants at large public meetings – Number of releases via the media (press articles, video or audio reports) – Number of people who know the park/number of people asked at random – Rate of users, students, professionals ...informed	**+ Targets:** - At least 1/year - Increasing - Increasing - 20 % - 20 %
Illustrations of actions (not exhaustive): – Establish a strategy to communicate to the public – Offer adapted communication support – Disseminate communication support – Involve the media, in particular by developing partnerships – Draft a simplified management plan to communicate with the public – As frequently as possible, provide the results of studies to the public – Visit public places to make the park known and explain the management plan (villages, schools etc.) – Undertake questionnaires/surveys with the public	
+ Means :	

Chapter 3: GOOD GOVERNANCE

Obj. 10: PUBLIC INVOLVEMENT

Sub-objective 28: **FOSTERING PARTICIPATORY MANAGEMENT**

+ Description:

The sheer size of the park and the fact that it is inhabited gives rise to problems relating to the effective monitoring of this space.
The public and professionals could undertake periodic observations and more regular follow-up on behalf of the park and in this way play a role in improving knowledge and monitoring.
The public needs to be aware of its responsibility and understand the benefit of park management measures and prohibitions in order to implement them in an autonomous way.

+ Indicators:	**+ Targets:**
– Public participation rates in surveys – Number of returns from guards	

Illustrations of actions (not exhaustive):

- Create and train park guards: training fishermen, recreational sailors etc
- Provide feedback on activities in which the public participated
- Raise awareness of new regulations and their application
- Involve the public in activities linked to knowledge of the environment, participative science

+ Means :

Chapter 3: GOOD GOVERNANCE

Obj. 10 : PUBLIC INVOLVEMENT

Sub-objective 29: **TO MAKE INFORMATION ACCESSIBLE**

+ Description :

Information is the first step in involving the public. It therefore must be accessible and understandable for all those interested in the park.

+ Indicators:	**+ Targets:**
– Number of visits to website and Facebook page – Number of downloads – Number of statements in the media – Percentage of the population with access to the information (survey)	

Illustrations of actions (not exhaustive):

- Develop a score chart for monitoring the management plan, with the aim of providing information to the public
- Develop a communication too, like a web portal, with the objective of communicating with the public, but also fostering communication between park managers and management committee members (level of access - intranet workspace)
- Develop a communications strategy
- Manage sites to inform recreational sailors, users and professionals of good practices
- Undertake outreach meetings with the public
- Produce outreach documents

+ Means :

Chapter 3: GOOD GOVERNANCE	
Obj. 11 : ASSESSING, REPORTING, INFORMING AND DISCLOSING INFORMATION REGARDING IMPLEMENTATION OF THE MANAGEMENT PLAN, ITS EFFECTIVENESS AND	
Sub-objective 30: **ASSESSING THE PARK'S PERFORMANCE MANAGEMENT**	
+ Description : Assessing the management plan's effectiveness and enabling follow-up and evaluation of its performance, evaluation tools must be developed which call on a series of indicators and associated score charts.	
+ Indicators: – Number of sub-objectives with at least one indicator – Number of indicators effectively completed	**+ Targets:** - 100 % - 100 %
Illustrations of actions (not exhaustive): – Develop summarised indicators per objective and per chapter – Study indicators already developed and monitored at regional level which could be adapted and developed by the park – Undertake an audit of the management plan three years after its establishment – Develop a method for the routine collection of data which enables the data to be processed, used and stored in a homogeneous and standardised way – Create a score chart with indicators	
+ Means :	

Chapter 3: GOOD GOVERNANCE	
Obj.11: ASSESSING, REPORTING, INFORMING AND DISCLOSING INFORMATION REGARDING IMPLEMENTATION OF THE MANAGEMENT PLAN, ITS EFFECTIVENESS AND	
Sub-objective 31: **ENSURING TRANSPARENCY AND READABILITY OF IMPLEMENTATION OF THE MANAGEMENT PLAN, ITS EFFECTIVENESS AND RESULTS**	
+ Description : Implementation of the management plan, the results achieved and problems encountered must be explicitly reported to all stakeholders involved in park management without undue delay so that the public can form an informed opinion.	
+ Indicators: –Delay in updating –Number of information meetings on the score chart –Number of sub-objectives with at least one indicator	**+ Targets:**
Illustrations of actions (not exhaustive): – Develop a communication/information tool (e.g. Online score chart) on park management, with a degree of interactivity – Regularly provide feedback to stakeholders involved in implementation of the management plan, show them the score chart	
+ Means :	

Chapter 3: GOOD GOVERNANCE

Obj. 12 : STRENGTHENING, OPTIMISING AND POOLING RESOURCES

Sub-objective 32: **ORGANISING EFFICIENT, OPERATIONAL MONITORING AND FOLLOW-UP**

+ Description :

The park needs to follow and monitor what happens within its boundaries: visits, activities and exceptional events. The size of the park gives rise to problems regarding the resources necessary for its operational monitoring and for following-up on management measures. The high cost of traditional resources means new monitoring methods must be explored. Collaborative activities and pooling of resources must also be prioritised, including regionally given the conservation issues in this area.

+ Indicators:	**+ Targets:**
– Number of monitoring days undertaken by *Amborella* – Number of monitoring days undertaken by the State's maritime and air resources – Number of observation days (fishing + scientific campaigns) – Number of accumulated observation days of the Park – Number of penalties/prosecutions/sanctions – Number of partnership agreements	- 50 days per year - 200 days per year - 300/year

Illustrations of actions (not exhaustive):

– Develop a cartographic application showing areas covered by type of surveillance and by period of the year
– Develop surveillance partnerships with countries bordering the park
– Undertake technological monitoring of technological innovations (e.g. Air and sea drones etc.)
– Develop partnerships with maritime (and air) companies?
– Systematise the presence of observers on scientific vessels
– Involve and train fishing observers
– Make control and surveillance measures state of the art and adapted to the context of NC
– Define the methods (including legal) of involving users in surveillance efforts
– Develop means of surveillance and indirect/automated monitoring and work with institutions to make them legal
– Train tourism operators and fishermen in observation procedures (sea mammals, illegal fishing etc.)
– Involve the prosecutor's office to ensure efficient implementation of the criminal justice system
– Propose that certain agents take an oath
– Explore the available intervention means to combat pollution, including in the region *(obj ,7 sub-obj 3)*

+ Means :

Chapter 3: GOOD GOVERNANCE

Obj.12: STRENGTHENING, OPTIMISING AND POOLING RESOURCES

Sub-objective 33: **APPLYING A BROAD RANGE OF STRATEGIES TO SEEK FINANCE**

+ Description :

The ambitious park objectives require the establishment of numerous activities. New sources of financing are vital so that the park can achieve its objectives. Any acceptance of financing must be undertaken in accordance with the park's ethics and objectives and in such proportions so as to retain the independence of the park in relation to those providing funding.
New Caledonia's commitment to manage its maritime area is beneficial to all countries in the region and, more broadly, the planet. The financial burden of this commitment

can legitimately be shared.

+ Indicators:	**+ Targets:**
–Number of FTEs involved in seeking finance –Number of sources of financing identified –Number of responses to calls for projects –Budget acquired by mobilising new sources of financing	

Illustrations of actions (not exhaustive):

– Commit the human resources required to seek financing and develop self-financing capacities
– Keep an index of potential sources of financing
– Explore the possibility of creating local financing mechanisms based on the potential of the park (ecotourism tax, compensation measures)
– Ensure active monitoring of sources of financing and calls for projects
– Respond to calls for projects
– Develop self-financing capacities
– Create a legal and moral park management entity which can collect and use public and private funds *(obj 9, sub-obj 1)*
– Draft a chart on ethics in seeking financing

+ Means :

Chapter 3: GOOD GOVERNANCE

Obj.12: STRENGTHENING, OPTIMISING AND POOLING RESOURCES

Sub-objective 34: **IMPROVING KNOWLEDGE FOR PARK MANAGEMENT**

+ Description :

The strategic analysis of New Caledonia's maritime area undertaken before the creation of the park revealed a lack of data in several domains. Supporting knowledge-acquisition projects which will enable the management plan's objectives to be achieved will contribute to improving park management.
For the natural park, this is about going beyond its current role which consists simply of making statements about the potential dangers of such and such a scientific mission in the park. The Natural Park wants
Become the catalyst that drives knowledge-acquisition for the benefit of the park's management.
Based on the needs expressed by the management committee, a shared research agenda should be developed. This should bring together all the matters of interest to the park: biology, geology, cultural etc., which will enable finance to be sought.
The data compiled during scientific campaigns in the park should be retained, shared and optimised.

+ Indicators:	**+ Targets:**
– Number of scientific missions undertaken in the park and part of the park's research agenda/number of total scientific missions undertaken in the park	- 80 %

Illustrations of actions (not exhaustive):

- Regular meetings of the scientific committee
- Recruit a full-time scientific manager for the Natural Park
- Develop a shared multi-year scientific agenda
- Use the image of the park to support scientific bodies that respond to international research tenders
- Regularly publish all scientific results pertaining to the Natural Park
- Organise outreach meetings to announce results
- Define a scientific agenda on tangible and intangible cultural material
- Obtain feedback from past scientific campaigns before renewing support for teams
- Use independent scientific expertise where necessary

+ Means :

Chapter 4: A LOCALLY, REGIONALLY AND INTERNATIONALLY INTEGRATED PARK

Obj. 13 : WORKING IN HARMONY WITH LOCAL MANAGERS

Sub-objective 35: SEEKING TO HARMONISE PARK MANAGEMENT MEASURES AND MANAGEMENT INITIATIVES THROUGHOUT NEW CALEDONIA

+ Description :

For the park management measures to be effective, they must be consistent with management measures taken for provincial waters.
The park should encourage application of shared approaches with the provinces, municipalities, world heritage management committees, customary bodies and any body involved in protected areas.

+ Indicators:	**+ Targets:**
– Rate of participation of provinces in the harmonisation committee	- 50 %

Illustrations of actions (not exhaustive):

- Meetings of the harmonisation committee
- Meetings of the CRM
- Ensure consistency in management measures and objectives as well as follow-ups
- Share available information
- Inform other managers about measures taken in the park
- Ensure the park management plan is taken into account in other plans, programmes and blueprints of the government of NC
- Identify all government bodies with which work should be undertaken
- Ensure consistency in the regulations in the provinces and the park
  Monitor research operations and sample biological material
  (obj 8, sub-obj 1)
- Develop and promote reference documents for shared responsible activities
- Support exchanges and include UNESCO management associations and committees throughout the consultation and decision-making process regarding cultural heritage
- Attend meetings of the customary bodies and involve them in the decision-making process (customary councils, district councils, coastal group councils) as it relates to cultural heritage
- Use local knowledge and expertise on species and marine species
- Pursue collaboration with customary institutions and other local structures (associations and management committees, cultural centres, provincial services)

+ Means :

Chapter 4: A LOCALLY, REGIONALLY AND INTERNATIONALLY INTEGRATED PARK

Obj. 13 : WORKING IN HARMONY WITH LOCAL MANAGERS

Sub-objective 36: SEEKING TO HARMONISE PARK MANAGEMENT MEASURES AND MANAGEMENT INITIATIVES THROUGHOUT NEW CALEDONIA

+ Description :

In the context of comprehensive management of the sea environment and in order to best pool resources and share information easily, there must be consistency in the monitoring and evaluation methods in all areas of management of the sea environment. This is all the more important for heritage species, migratory species and interconnected habitats and ecosystems.

+ Indicators:	**+ Targets:**

Illustrations of actions (not exhaustive):

- Identify and standardise monitoring indicators, methods and protocols between the park, world heritage sites and provinces while targeting:
  - Heritage, migratory and rare species (shark, whale, manta ray, Napoleon wrasse, birds, coral, molluscs etc.)
  - Interconnected ecosystems and habitats (Entrecasteaux ⇔ Grand Lagon Nord, Norfolk rise ⇔ Grand Lagon Sud, Pétrie-Astrolabe ⇔ Beautemps-Beaupré)

+ Means :

Chapter 4: A LOCALLY, REGIONALLY AND INTERNATIONALLY INTEGRATED PARK

Obj. 14 : DEVELOPING REGIONAL COOPERATION FOR THE BENEFIT OF THE CORAL SEA REGION

Sub-objective 37: SEEKING TO HARMONISE PARK MANAGEMENT MEASURES AND THE MANAGEMENT MEASURES OF NEIGHBOURING COUNTRIES

+ Description :

For the park's management measures to be effective, they must be consistent with the management measures taken in the Coral Sea region.
Apart from New Caledonia, the Coral Sea washes up on the coasts of several countries: Fiji, Vanuatu, the Solomon Islands, Australia and Papua New Guinea. Priority bilateral partnerships must be established with our neighbours.

+ Indicators:	**+ Targets:**

Illustrations of actions (not exhaustive):

- Develop the Australia-New Caledonia-France roadmap
- Forge a "Coral Sea" partnership with countries bordering the Natural Park
- List priority activities to be developed with neighbouring countries
- Strengthen collaboration and share experiences with:
  - Fiji (feedback on experiences of the LMMA [Locally Managed Marine Area] Network, management of a common migratory resource: albacore tuna)
  - The Solomon Islands (issue of dolphins)
  - Vanuatu (work to establish a peace park)
  - Australia (exchanges on management of whales, sharks and turtles, in connection with Norfolk and the Great Barrier Reef)
  - New Zealand (link to Kermadec and others)
- Develop monitoring partnerships with bordering countries *(obj 12, sub-obj 1)*
- Take into account good management practices, including traditional methods, used at regional level: involve regional and international neighbours in the work of the management committee, in particular by encouraging effective control of fishing efforts and other extractive uses
- Contribute to a greater transfer of knowledge in the region, in particular through cooperation, in order to improve the evaluation of common resources, by providing information on the measures used in the park
- Strengthen collaborative research partnerships involving scientists, managers and decision-makers, including having a regular symposium on the Park of the Coral Sea
- Use existing dynamics and links around heritage designation of the ocean (Cook Islands, Vanuatu, Polynesia etc.) and join existing initiatives via regional structures (Pacific Voyagers, Mālama Honua) *(ob 4, sub-obj 2)*
- Participation in regional and international meetings and networks focusing on this issue (Big Ocean, twinning, exchanging experiences about large Protected Marine Areas in the Pacific) (obj 4, sub-obj 2)

Document de travail, non validé

+ Activities already initiated – Twinning with the Cook Islands – Signing of an Australia-New Caledonia-France roadmap – Joint newsletter Australia/New Caledonia – Signing of a joint statement for concerted management with Vanuatu and the Solomon Islands (oceania meeting declaration)
+ Means :

Chapter 4: A LOCALLY, REGIONALLY AND INTERNATIONALLY INTEGRATED PARK	
Obj. 14 : DEVELOPING REGIONAL COOPERATION FOR THE BENEFIT OF THE CORAL SEA REGION	
Sub-objective 38: SEEKING TO HARMONISE THE PARK'S MONITORING AND ASSESSMENT MEASURES WITH THOSE TAKEN BY NEIGHBOURING COUNTRIES	
+ Description : In order to ensure regional consistency in evaluation and follow-up measures, the park can rely on regional strategies and frameworks such as the emblematic marine species conservation strategy or the Pacific strategy for the conservation of nature and protected areas.	
+ Indicators:	**+ Targets:**
Illustrations of actions (not exhaustive): – Promote whale, shark, turtle, bird, sea snake sanctuaries so that NC works within the region for the benefit of these emblematic species beyond the local limits of protected areas – Optimise studies developed by the SPC on plankton (Biopelagos)	
+ Means :	

Chapter 4: A LOCALLY, REGIONALLY AND INTERNATIONALLY INTEGRATED PARK
Obj. 15 : PLAYING A FULL PART IN INTERNATIONAL RELATIONS
Sub-objective 39: **SHARING AND PROMOTING GOOD PRACTICE**
+ Description : New Caledonia should take advantage of the experience acquired by other countries to swiftly achieve the park's objectives. New Caledonia could also share its positive or negative experiences with other countries and enable them to more swiftly achieve their sustainable development goals. In order to do this, bilateral partnerships must be established.
+ Indicators: **+ Targets:**
Illustrations of actions (not exhaustive): – With non-neighbouring sites (e.g. Cook Islands-New Caledonia twinning agreement) to share and strengthen sustainable management experiences and capacities – With regional and international agencies to drive regional strategies and use them for the sustainable management of the Park of the Coral Sea (e.g. Effective control of fishing effort and other extractive uses) – Promote cooperation to reduce cases of IUU (illegal, unreported and unregulated) fishing – Optimise good practices of the Coral Sea Natural Park as an entity in the Pacific Oceanscape at international level – Participation in regional and international meetings and networks focusing on the issue of tangible and intangible cultural heritage (Big Ocean, twinning, exchanging experiences about large Protected marine areas in the Pacific) (obj 4, sub-obj 2) – Take into account good management practices, including traditional methods, used at regional level: involve regional and international neighbours in the work of the management committee, in particular by encouraging effective control of fishing efforts/catch and other extractive uses *(obj 14, sub-obj 35)* – Contribute to a greater transfer of knowledge in the region, in particular through cooperation, in order to improve the evaluation of common resources, by providing information on the measures used in the park *(obj 14, sub-obj 35)*
+ Means :

Chapter 4: A LOCALLY, REGIONALLY AND INTERNATIONALLY INTEGRATED PARK
Obj. 15 : PLAYING A FULL PART IN INTERNATIONAL RELATIONS
Sub-objective 40: **RAISING AWARENESS OF THE PARK AND HAVE IT RECOGNISED IN INTERNATIONAL BODIES**
+ Description : New Caledonia should share work undertaken by the park in order to make it better known and to seek new sources of finance. This sharing of information can be done in particular through participation in international conferences and fora on the marine environment. New Caledonia could optimise the park's activities in order to fulfil the recommendations of international instruments and achieve the Aichi targets.
+ Indicators: **+ Targets:**
Illustrations of actions (not exhaustive): – Participate in and drive big conferences, in particular those organised by the IUCN (World Conservation Congress, World Parks Congress, International Protected marine areas Congress), meetings of the PROE, the SPC, the WCPFC and the Fisheries Improvement Project, of the World Heritage Marine Programme, meetings of the Big Ocean and LMMA networks (maintain and strengthen Oceania meetings) – Ensure that the park contributes to achieving the Aichi targets – Use internationally recognised tools, including protection, security and environmental standards, equivalent to those of neighbouring countries (e.g.: IUCN types of protected areas) – Promote scientific cooperation and involve researchers in the regional management meetings – Present the park for inclusion on the IUCN green list
+ Means :

IV. Glossary

Definitions taken from the following French sources and translated
(1)dictionnaire-environnement.com
(2)www.larousse.fr
(3)Lexique d'écologie, d'environnement et d'aménagement du littoral, François Cabane, IFremer, maJ 2012
(4)Bureau definitions

Aichi: The "Aichi Targets" are a new strategic plan for biological diversity 2011-2020 of the planet. They were adopted by the Parties to the Convention on Biological Diversity (CBD) in October 2010.

Biodiversity: Biodiversity refers to the diversity of the living world at all levels: diversity of environments (ecosystems), diversity of species, genetic diversity within the same space. (1)

Biomass: Biomass refers to all plants and animals as well as their associated organic waste. (1) Biomass is all organic material of plant or animal origin. (Actu-environnement.com) Total weight of an individual, group, age class, stock, population etc. (3)

Active biomolecule: Active substance for therapeutic, cosmetic, aquaculture or environmental (ASR) purposes/Substance containing therapeutic properties.Molecules possessing biological properties or biologically active substances.

Connection: Ecological connection refers to the functional and effective connection necessary for the long-term functioning, stability and resilience of ecosystems. Connection is manifest at different levels of space, function and time. It is an essential driver of species distribution. (Strategic analysis of the maritime area of New
Caledonia, Agency of Protected marine areas)

Conservatoire des espaces naturels (CEN) [Conservatory of Natural Areas] The CEN's mission is to study, understand, conserve, protect, restore, optimise and raise awareness of New Caledonia's land and sea natural spaces in order to ensure comprehensive and sustainable management. It works on the conservation of the dry forest, on coordinating and managing world heritage property and coordinating the fight against invasive species. (www.cen.nc)

Ecosystem: An ecosystem results from the association of a community of living species with its physical environment as well as the numerous interactions which unite them. (4)

Endemic: Refers to living species belonging to a well-defined territory. (2)
Refers to an animal or plant population developing in an isolated place with unique features, even to the point of forming a species which exists only in this place. (3)

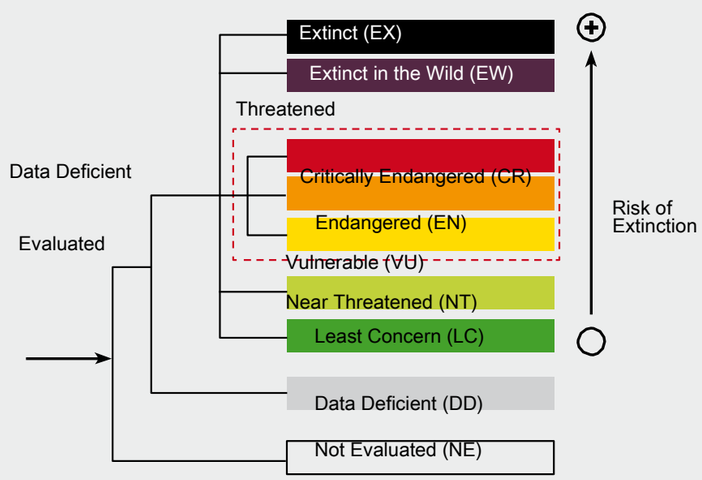
Integrated management: Integrated management refers to a mode of managing certain activities which involves, from the design stage onwards, a range of ecological, economic and social factors which are linked to the activities. (1)
Governance: Governance refers to how the park is controlled, in particular the composition and functioning of its governing bodies and the methods they use to make decisions relating to the park. Good governance can be concretely seen in terms of effectiveness: it means decisions that satisfy criteria like participation, transparency, responsibility and even respect for practices and customs. (4)

Habitat: Habitat refers to the place(s) where a population of a given species or group of species lives, for part or all of their life cycle. It encompasses all features necessary for their survival (food, shelter, reproduction).
It is termed "remarkable" when it exercises important functionalities and brings together scientific, ecological, economic and/or socio-cultural issues. (4)

Impact: Refers to an aspect of an action that may cause an effect. Environmental impact refers to any modification of the environment, negative or beneficial, resulting totally or partially from the activities, products or services of an organism. (1) Regarding the environment, this term refers to the effect of a local environmental change on the rest of the environment. (3)

Interaction: Reciprocal action relationship between two elements. (1)

Threatened/vulnerable/in danger:
The IUCN's red list categories and criteria is a simple and easy-to-understand system for classifying species at risk of disappearing globally.
Endangered (EN): A taxon is Endangered when the best available evidence indicates that it meets any of the criteria A to E for Endangered (see Section V) and it is therefore considered to be facing a very high risk of extinction in the wild.
Vulnerable (VU): A taxon is Vulnerable when the best available evidence indicates that it meets any of the criteria A to E for Vulnerable (see Section V) and it is therefore considered to be facing a high risk of extinction in the wild. (2001 IUCN Red List Categories and Criteria version 3.1, IUCN)



Migratory: Refers to a species which moves on a seasonal basis from one habitat to another, sometimes over long distances. (1)

International Maritime Organisation (IMO): Specialised agency of the United Nations with responsibility for ensuring the security and safety of marine transport and preventing pollution of the seas by vessels. (www.imo.org)

Longliner: Fishing vessel that uses hooks, for fishing groundfish at sea (flatfish, congers, dogfish, tuna), constituting a long cord with threads with hooks attached. (2)

Management plan: Art. L. 334-5: “The management plan determines the measures of protection, knowledge, optimisation and sustainable development to be implemented. ”

Protection/conservation/preservation:
Protection is an overarching term that includes preservation, which is eco-centred and conservation, which is bio-centred.
Conservation: Refers to protection, to as strict a degree as possible, working towards ring-fencing. **Preservation:** Conversely, refers to lighter protection, a specific response to a proven threat, does not imply ring-fencing nature. (4)

Strict reserve: A strict reserve is an area which is intact or little changed, having retained its natural character and influences and is devoid of any permanent or significant buildings: it is protected and managed in order to maintain its natural state. Access to a strict reserve is strictly limited and controlled [...] (Deliberation n° 51/CP of 20 April 2011 on the definition of protected areas)

Natural reserve: A natural reserve is an area whose purpose is to preserve the ecological integrity in ecosystems and to exclude any exploitation or occupation which is incompatible with this objective, while offering opportunities to visit for spiritual, scientific, educational, recreational and tourism purposes, in full respect of the natural environment and the culture of local communities [..] (Deliberation n° 51/CP of 20 April 2011 on the definition of protected areas)

Resilience: Refers to an environment’s resilience to disturbances. (1)
In ecology, this term refers to the capacity of a population to recover, or return to its normal state after an “impact” (which may have altered its numbers, its specific diversity, its richness etc.). (3)

Risk: The concept of risk, as defined by the European Commission, takes into account two elements: the likelihood of a dangerous event occurring and the severity of its consequences. Risk for the environment is the likelihood of exposure of the populations constituting the ecosystems to a danger. The risk associated with a particular event is characterised by its likelihood and the seriousness of its effects. (1)
Likelihood of a danger occurring (likelihood of occurrence x seriousness of consequences). The risk is the likelihood of suffering damage due to a danger. For there to be risk, there must exposure to danger (to take a risk = to expose oneself to danger). (3)

The International Union for Conservation of Nature (IUCN): Founded in 1948, the IUCN is a union of members comprising governments and civil society organisations. It provides public, private and non-governmental organisations with the knowledge and tools necessary so that human progress, economic development and the conservation of nature take place in harmony. The only environmental organisation with official Observer status at the United Nations, it ensures that nature conservation is discussed at the highest levels of international governance. (www.iucn.org)
To optimise: To give, have taken, the value of something. To give increased importance to something, highlight it. (2)

Important Bird and Biodiversity Area (IBA): Refers to a site of great ornithological importance due to its hosting of populations of birds judged to be of importance to the community. These areas were listed under a national inventory undertaken under the auspices of the Ministry of the Environment and coordinated by the League for the protection of birds. (1)
An area recognised by the European Communities as necessary for the survival and ecological balance of bird populations, in particular regarding migratory birds needing to find their way or needing, at the end of their trip, areas for rest, nesting or feeding without which they would disappear from the community. (3)

Remarkable area: Area of ecosystems life and services which fosters good species resilience.
A remarkable area is characterised by unusual, uncommon, traits which distinguishes it from common areas. This could involve a particularly beautiful landscape, a site of rare quality, vegetation that includes rare plants, a biotope which supports the survival of an animal species threatened elsewhere etc (3)

This document was developed with financial assistance from the European Union Its contents are the sole responsibility of the fishing and environment services of the Maritime Affairs Management and under no circumstances should be considered as reflecting the position of the European Union.

Parc naturel de la mer de Corail

GOUVERNEMENT DE LA NOUVELLE-CALÉDONIE

BEST