



Fonds Français
pour l'
Environnement Mondial

The French Global Environment Facility (FFEM)
is a partner for the preservation and sustainable
management of natural resources

The activities of the FFEM to **protect the global marine environment**



Collection
Leveraging Experience

↘ The challenges of the marine world

Oceans cover about 70% of our planet. They host an extraordinarily rich biodiversity, much of which remains undiscovered. Marine ecosystems provide resources as well as essential and diverse ecological services: food, medicines, coastal protection against storm, wastewater and pollution filter, climate control, etc.



For example 30 million people worldwide depend entirely on coral reefs for their food (UNESCO), which represents 25% of the fishing potential of all the developing countries.

The benefit of marine biodiversity also encompasses the use of active substances of marine origin (algae, sponges) utilised in various fields such as cosmetics, agriculture, but mainly healthcare: half the drug research against cancer is based on marine organisms; several substances are of particular importance in the so-called diseases of the South (malaria, dengue, but also cancer, inflammation, disorders of the nervous system, antibiotics): the AZT used to fight HIV is extracted from sponge reefs in the Caribbean.

With an exclusive economic zone (EEZ) of 11 million km², the third biggest in the world, France has a great responsibility in protecting the world's oceans: from the poles to the tropical waters of the Pacific, from Saint Pierre and Miquelon to the Southern and Antarctic lands, from the Western Mediterranean to the Caribbean, it covers almost all the seas and oceans. France is also responsible for 10% of the world's coral reefs.

However, habitats are being degraded, diversity is decreasing and resources are depleting.

In tropical areas, 55% of the world's coral reefs have been destroyed or are in a critically endangered. 35% of mangrove forests have disappeared in the last two decades. In the Mediterranean, natural areas disappear, replaced by artificial arrangements, particularly on the north coast of the Mediterranean. The Blue Plan estimates that 50% of the Mediterranean coasts will be rapidly transformed into a continuous urban area with irreversible changes to coastal environments and associated ecological processes.

Priority habitats and species

Increased attention is given to vulnerable marine habitats, such as tropical and cold-water coral reefs, underwater mountains, hydrothermal vents, mangroves, seagrass beds, and all functional areas of interest such as a spawning nurseries. Turtles and marine mammals are also the subject of attention.



➤ Marine protected areas

Tools for protecting marine biodiversity and economic development

Marine Protected Areas (MPAs) are considered the most effective tools for the protection and restoration of marine biodiversity. The first marine reserves were developed in the 60s. Today MPAs have also achieved recognition as instruments of local development, including activities such as fishing and tourism, which they strive to manage in a sustainable way.

However, with a total of nearly 11,000 MPAs worldwide for 8.3 million km², only 2% of marine areas are protected worldwide, (compared to 12% of the land surface). To achieve the objectives of the Convention on Biological Diversity (CBD) and the target rate of 10% for 2020, considerable efforts are still required to protect the world's marine environment.



With 20 projects relating to MPA's, the FFEM makes an important contribution to this global commitment

For nearly 20 years, the FFEM has worked to protect marine biodiversity and fisheries resources

Among its topic areas, FFEM intervenes in conservation and management of biodiversity and natural resources and protection of continental and marine international waters. The integrated management of coastal and marine areas is also one of the strategic priorities for 2013-2014. It is in these areas that FFEM projects for the protection of marine biodiversity are implemented.

The projects have supported the activities of the French Government in protecting marine biodiversity who which has seen increased commitment in recent years: creation of the National Agency for Marine Protected Areas in 2006, the Grenelle of the Sea Area in 2009, a report to the Senate in 2008 which assessed fisheries resources and fisheries management and stated that the government was committed to protect 10% of the French marine territory by 2012 and 20% of French waters by the end of 2020.

In connection with the Aichi targets set by the Convention on Biological Diversity, the FFEM's projects are designed to fulfill international commitments to achieve a level of protection

equivalent to 10% of marine and coastal areas, to develop ecological networks that are representative of the world's biological diversity and to ensure effective management of MPAs and to better assess and adapt them.

They achieve this by relying on international best practices such as **participatory approaches**, which ensure that all stakeholders are involved in planning decisions, that **co-management** occurs where local communities are involved in the management of the MPA alongside the authorities and that the **ecosystem approaches** integrate all environmental and human components present in the same territory.

Beyond the protection of biodiversity, which is at the heart of the concerns of the MPA, the FFEM's projects endeavor to ensure the development of the local territory in the MPA as well as develop its resources for the benefit of the public. Fisheries, which in countries of intervention are often subsistence fishing essential to the survival of local populations, and tourism, which brings substantial benefits to MPAs, are particularly supported by the fund.

Capacity building and new skills development for MPAs' managers through exchanging information and sharing experiences contribute to enhanced management and are favored in all projects. The FFEM supports also the development MPAs' managers networks and the multi-stakeholder approaches in several regions.

The objectives of the Convention on Biodiversity by 2020

"At least 10% of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascape"

Since 1994, when it started a first marine conservation project in the Caribbean, 20 marine projects have been financed by FFEM with a total funding of € 24.5 million.

The FFEM acts in the seas and oceans of the world, affecting nearly 50 countries: the Mediterranean, which contains the largest number of projects, the Pacific, the Indian Ocean and the Caribbean.

The FFEM has allowed the creation or direct reinforcement of nearly 120 MPAs, covering approximately 20,000 km², in addition to supporting the creation of the world's largest MPA (Phoenix Island).



Intervention priorities of FFEM

- **The development of ecological networks in MPAs**, participation on a scale of an ocean basin or an identifiable ecoregion and/or evaluating the most remarkable sites and representativeness of regional biodiversity;
- **The creation and management of MPAs**, with support for the development of regulatory and institutional frameworks, management tools such as management plans, business plans and the evaluation of management to periodically review the directions taken;
- **The identification of long-term mechanisms for MPAs** through the sharing of benefits from economic activities that improve protection and through dedicated financial facilities such as conservation trust funds;
- **The development of alternative income generating activities (AIGA)**, to support economic activities around the protected area and to propose alternatives to the disadvantaged stakeholders following the implementation of the MPA;
- **Support for the development and sustainable management of fisheries and promotion of tourism activities;**
- To ensure good management, projects are also based on the supporting pillars of scientific research, environmental and socio-economic monitoring as well as environmental education and even developing management skills;
- To contribute to the integrated management of the sea and coastline, the FFEM supports institutions with responsibilities for the management of the Land/Sea interface, in order to improve stakeholder coordination, the effectiveness of management efforts and environmental quality.



Development of ecological networks with a coherent biogeographical scale

International recommendations include the establishment of networks of marine protected areas representative of the diversity of the marine world, at a coherent regional scale. Since if an «individual» MPA is effective for a species in a particular location or habitat, only MPAs developed and connected within a coherent network are capable of providing protection for species that travel in the open and ever-changing oceanic environment.

🔗 The FFEM supports the creation and effective management of MPA networks across the country (Tunisia, Croatia) or at a regional level, in all the oceans: South Pacific, Indian Ocean, Caribbean, Mediterranean, Meso-america, West Africa.



Create new MPAs, improve management effectiveness of existing MPAs

A period of about 15 years is needed to establish a sustainable MPA. The MPA projects go through three development phases, each of them employing specific activities:

Preliminary phase: from creation to official gazettement of the MPA

Pioneering phase: from early operation to the strengthening of the management and teams,

Autonomous phase: up to technical, institutional and financial autonomy of the MPA.

🔗 The FFEM intervenes, depending on the project, in all these phases: it facilitates the establishment of legal frameworks, liaises with stakeholders for the designation of the MPA, implements the means of management and monitoring (offices, boats ...), develops management plans, evaluates the effectiveness of the management...



Ensuring sustainable financing of MPAs

Too many MPAs that are created as projects do not survive after the end of the provided support due to a lack of sustainable funding, especially in developing countries. Recognizing this critical issue for the viability of MPAs, the FFEM very quickly started to support sustainable funding mechanisms for the conservation of marine biodiversity. It also funds research on payments for ecosystem services, still a very innovative concept and supports the establishment of mechanisms such as trust funds, in Central America (MARFUND project), the Pacific (RESCUE project) or in the Mediterranean where a study from the Blue Plan enabled to assess the «economic value» of the services provided by biodiversity and thus the economic rationale for conservation.



Assessing the economic benefits of MPAs

Several projects have attempted to estimate the Total Economic Value (TEV) of some sites and the Internal Rate of Economic Return (IRER) of certain FFEM projects which have approached positive values ranging from 3 to over 50%! While the data produced by these studies is very heterogeneous and the methods implemented can be improved, these exercises do contribute to a greater awareness among policy makers on the need to sustainably manage the natural environment. They also contribute to identify more precisely the real economic issues in the areas studied.

A diversified portfolio to meet the protection needs in the area

CRISP and eco-regional analysis

Member institution: Agence Française de Développement and Ministry of Foreign Affairs
Country: 17 countries from the South Pacific
Date: 2004-2007
Funded by the FFEM (out of total CRISP): € 2 000 000

Developed as partnerships (scientists, managers, local population), with support from the WWF, regional eco analyses lead to the collection, compiling and synthesis of knowledge relating to biodiversity in the area and the identification of sites of critical importance. More than 100 points of interest have been identified in the Pacific. In New Caledonia this work formed the basis to get the lagoon recognized as a World Heritage Site by UNESCO.

MEDPAN and evaluation of the network of MPAs in the Mediterranean

Member institution: Ministry of sustainable development
Country: the 21 Mediterranean countries, 7 of which directly
Date: 2011-2013
Funded by the FFEM: 750 000 €

The objective of the study conducted in 2012 by MedPAN and CAR/ASP was to evaluate the growth of the Mediterranean MPA system vis-a-vis the objectives of the CBD. The study showed that with less than 5% of the area protected, and low annual progress, the CBD target of 10% is far from being achieved, the geographical distribution of the MPA remains unbalanced between the South, East and North banks, whilst MPAs are still mainly coastal, the representations of ecological sub-regions, habitats and species is very uneven, and finally that the ecological consistency remains low across the Mediterranean. Despite the significant attention paid to this unique sea, considerable efforts remain to be completed.

Economic analysis

The IREER assessment of the 3 MPAs created thanks to the FFEM financing (Mnazy Bay, Qurimbas, Bamboung) showed that the relative shares of sectors which establish IREER are extremely variable: restoring biodiversity to Mnazy Bay (44%), fishing in Bamboung (80% against 20% for the other two MPAs) and alternative income generating activities in Qurimbas (45%).

The CRISP program evaluated the economic value of coral reefs and the economic efficiency of several MPAs. The results of these studies were also compared and raised the question of methods but all prove the existence of a

critical value. All the studies show that the results depend heavily on fishing and tourism. The often overlooked value of coastal protection is sometimes very large (up to 80% of the total economic value).

A cost-benefit analysis was conducted on 5 MPAs in Vanuatu and reinforced the benefits of these MPAs. It shows that every 1 € invested in an MPA produces an average of 2 €, with an estimated potential between 4 and 21 €.

East Pacific (€ 1.1m)

Costa Rica

- Protection of the Coco Island MPA

South Pacific (€ 4m)

Samoa, Cook Islands, Solomon Islands, Fiji, Micronesia, Papua New Guinea, Marshall Islands, Vanuatu, Kiribati, Tonga, Tuvalu, Niue, Wallis and Futuna, New Caledonia, French Polynesia

- Coral Reef Conservation (CRISP)
- Post-larval capture and culture (CRISP)
- Restoration of ecosystem services (RESCUE)

Mesoamerica and the Caribbean (€ 3.4m)

Honduras, Guatemala, Belize, Mexico Organisation of Eastern Caribbean States (OECS): St. Lucia, Dominica, St Vincent, Grenadines, St. Kitts and Nevis, Antigua and Barbuda

- MPA and benefit sharing (Caribbean)
- Support for MPA in the Meso-american Reef
- Trust fund for protection of the Meso-american Reef (MAR FUND)



Protection of biodiversity in the marine conservation area of Coco Island (ACMIC)

Member institution: Ministry of sustainable development
Country: Costa Rica
Date: 2003-2006
Funded by the FFEM: 1 065 000 €

- strengthened the protection against illegal fishing and diving regulations, strengthened resources for surveillance and enforcement of law;
- improved the understanding and management of marine and coral reefs;
- reduced tourism impacts: assessed sites' carrying capacities, managed visitors' impact, developed diving good practice...



MARFUND: a sustainable funding mechanism for the management of natural resources

Member institution: Ministry of sustainable development
Country: Mexico, Belize, Guatemala, Honduras
Date: 2013-2018
Funded by the FFEM: 1 060 000 €

- Creation of an endowment fund for long-term civil society initiatives for the conservation and management of marine protected areas;
- Support local communities and NGOs through proposals for management projects in 14 MPAs;
- Strengthen 4 priority MPAs which receive infrastructure investment and equipment, support for management and productive sustainable community activities;
- Facilitate the MPA network, share and disseminate best practices and knowledge learnt



Mediterranean (€ 7.2m)

Turkey, Montenegro, Croatia, Bosnia and Herzegovina, Albania, Syria, Lebanon, Palestine, Egypt, Libya, Tunisia, Algeria, Morocco

- Conservation of marine and coastal biodiversity
- Development of the Mediterranean MPA network
- Support for network of MPA managers (MedPAN)
- MPA managers capacity building through the exchange of experiences
- Mediterranean Small Islands' Pilot project (PIM)
- Ecosystem-based fisheries management
- Integrated management of coastal, island and marine areas

Southwest Asia (€ 1m)

Thailand

- MPA network and sustainable tourism on the Andaman coast

Indian Ocean (€ 3.2m)

Seychelles, Mauritius, Rodrigues, Madagascar, Comoros, Reunion, Mayotte

- Support for MPA network and development of a managers network (RAMP-COI)
- Integrated Coastal Zone Management : experience sharing and pilot projects
- Assessment and monitoring of regional fisheries resources and fishing practices impact

Deep ocean areas

- Knowledge and governance of deep ocean ecosystems (seamounts, hydrothermal vents) outside national jurisdiction

West Africa (€ 2.5m)

Mauritania, Senegal, Gambia, Guinea Bissau, Guinea Conakry, Sierra Leone, Cape Verde

- Strengthening MPAs
- Conservation of fishery resources by fishing communities
- Banc d'Arguin and Coastal and Marine Biodiversity Trust Fund (BACOMAB)

East Africa (€ 1.1m)

Tanzania, Mozambique

- Creation of the Quirimbas National Park (Mozambique)
- Strengthening the Mnazi Bay and Ruvuma Estuary Marine Park

South Africa (€ 1m)

Marine area of Addo Elephant National Park

Promoting ecosystem-based management of fisheries and other uses of the marine environment around a network of Marine and Coastal Protected Areas in Northern Tunisia

Member institution: Ministry of sustainable development

Country: Tunisia

Date: 2012

Funded by the FFEM: 1 000 000 €

- Develop a network of protected marine and coastal areas (The Galite, Zembra, Cape Negro, Cape Serrat and Tabarka).
- Ensuring better fisheries management: developing practices, fishing equipment, consultation with stakeholders
- Strengthen the teams in the Agency for Coastal Protection and Management (APAL)
- Capitalise on this new approach and disseminate the results

Support for local innovations and partnerships Integrated Coastal Zone Management in the south west Indian Ocean

Member institution:

Ministry of Foreign Affairs

Country: Seychelles, Comoros, Madagascar, Mauritius and Rodrigues

Date: 2013

Funded by the FFEM: 1 200 000 €

- Capitalise and disseminate the approaches that have been validated by field experience in the areas of integrated coastal zone management (ICZM) and the protection of marine and coastal biodiversity with the support of active partnerships with local and regional stakeholders
- Develop good practice in ICZM and apply the same to 3 pilot sites; Ste Marie island Madagascar, Moheli in the Comoros and Rodrigues (Mauritius).

Exemplary management of coastal, marine and island territories in the Mediterranean

Member institution: Ministry of sustainable development

Country: Albania, Algeria, Lebanon, Libya, Morocco, Montenegro, Tunisia, Turkey

Date: 2013

Funded by the FFEM: 1 948 606 €

The project is built around a partnership between the Conservatoire du Littoral, the MedPAN Association and the WWF Mediterranean Programme. The aim is to implement policies and take real action towards Integrated Coastal Zone Management (ICZM) in remarkable territories, MPAs and adjacent coastal islands. It will allow to strengthen sustainable management of these areas and reduce differences that remain deeply anchored between «development» and «conservation.»



Support the ecosystem based fisheries management

Fisheries activity is vital in almost all MPAs: up to 80% of households in Mozambique are dependent on it. The management of this activity is often essential to the success of the MPA: changing fishing techniques, stopping destructive practices, implementation of management plans, designation of non-fishing zones, establishment of Fish Aggregating Devices or artificial reefs and catch monitoring.

👉 **The FFEM projects have developed innovative approaches. In all cases, working closely with all fisheries' stakeholders and involving fishermen is essential: jointly select the new techniques, construct and test with them innovative solutions.**



Support local development and develop income-generating activities (AIGA)

Designed both to reduce fishing pressure and raise the standard of living of the people, AIGAs are developed in several FFEM projects and they appear in a variety of areas: development of marine resources (development of fresh or processed oyster production, oyster sauce, anchovy sausages, etc.), aquaculture, seaweed farming, tourism (community accommodation, training guides, whale watching, crafts), beekeeping, etc. Experience demonstrates that the success of these AIGAs depends on many factors, including a good match between the activities and the needs of the people, local market opportunities, and particularly the need for long term professional support.



Beyond MPAs, develop an integrated management of coastal and marine areas

Beyond the MPAs boundaries, the FFEM now directs its efforts towards the integrated management of coastal and marine areas taking into account the continuation of watersheds/coastline/sea and aims to develop a collaborative approach with all stakeholders within a homogeneous territory.



Protect deep-sea ecosystems in the deep ocean

Deep oceans represent 64% of the world's oceans which are almost half the surface of the planet and remains virtually unknown to this day. It is home to deep-sea ecosystems of unique diversity such as underwater mountains and hydrothermal vents. Underwater mountains are important fishery resources, making them vulnerable to exploitation by large commercial fishing industries whose very dense trawling destroys the environment. Their mining resources begin to be coveted by the major mining groups.

👉 **Outside areas of national jurisdiction, these systems need to invent original and innovative forms of governance, which the FFEM will soon engage with in the Indian Ocean.**

➤ Tangible results

In addition to the creation and/or strengthening of over 100 MPA, the promotion of the protection of marine biodiversity and fisheries resources over about 20,000 km², (more than 500,000 km² indirectly), the FFEM contributed to significant advances in various areas.

- **Highly remarkable advances in knowledge** in the South Pacific, 14 new areas of previously unknown coral reefs were surveyed and several thousand species have been outlined overall: corals, algae, fish, crustaceans, sponges... as well as several hundreds of them that were found to be new to the surveyed territories whilst more than 50 species being new to science. This work has resulted in nearly 3,000 titles in publications and reports. 37 new potentially active molecules for the development of new drugs have been described In the Indian Ocean, an oceanographic campaign will soon explore the underwater sea mountain at Walters Ridge in the deep ocean off Madagascar.
- **Development of important skills:** managers, fishermen, local communities. For MPA managers it is particularly effective to identify and disseminate proven and successful management practices and share experiences and exchange expertise. In this regard, the FFEM launched the first network of MPA managers in the Indian Ocean (on hold by lack of resources), supported the network of locally managed marine areas in the Pacific (LMMA) and provides ongoing support to MEDPAN, the network of managers in the Mediterranean.
- **Improving local governance**, by increasing local involvement in the management, supervision or monitoring of protected areas, increasing the recognition of traditional rights, strengthening institutional private and scientific partnerships,...
- **Support for an extensive network** of monitoring biological, socio-economic and assessments of the effectiveness of the MPA management
- **The development of methods and innovative tools** such as the compass chart (rose des vents) that allows the administrator to monitor and evaluate the performance of their management over time.

Small-scale initiatives programme in partnership with the IUCN French Committee

➤ Small projects for big challenges

These small, diverse and highly focused FFEM projects support the efforts to protect the wealth of marine life.

The protection of mangroves in Benin and Ghana, sea turtles in Cameroon, Congo and Gabon, management of fishery resources in Madagascar, Congo and Sao Tome and Principe, the development of whale watching in Madagascar, training of ecoguides in Cape Verde, sustainable management of shellfish by women entrepreneurs in Senegal

Among 150 small initiatives implemented by small NGOs in the South, 16% regard to marine/coastal protection





Summary of the FFEM

The FFEM is a public bilateral fund created as part of an initiative of the French government in 1994. It works for the protection of the global environment and sustainable development, by providing analyses and innovative actions in several areas: climate change, biodiversity, international waters, land degradation, deforestation, persistent organic pollutants, stratospheric ozone loss.

The FFEM provides grants for innovative projects that have economic and social development objectives that will have a significant and lasting impact on the global environment.

As a collaborative instrument of French bilateral and multilateral aid, the FFEM contributes to the fulfillment of France's international commitments and complies with the guidelines of the international environmental agreement to which France is a signatory.

The FFEM is:

- a laboratory of innovation, which funds innovative projects for further protection of the global environment and sustainable development;

- a place of knowledge capitalisation, which supports innovative concepts and methods and replication of pilot schemes on a larger scale by other stakeholders in new geographic areas;
- a promoter of North-South partnerships and the transfer of technology founded upon cooperation with French stakeholders;
- a key player in development, going beyond mere protection of the environment to coordinate strategies for economic and social development in beneficiary countries.

Governance and operation of the FFEM

FFEM is governed by a inter-ministerial steering committee and operates with the support of a scientific and technical committee and a secretariat

The Steering Committee, chaired by the President of the Ministry of Economy and Finance, is the decision-maker of the FFEM. Six institutions are members:

- Ministry of Economy and Finance
- Ministry of Foreign Affairs
- Ministry of Sustainable Development
- Ministry of Research
- Ministry of Agriculture
- French Development Agency, also responsible for managing the FFEM

The Scientific and Technical Committee (STC) is the advisory body. It is composed of twelve French scientists who analyse the project data, conduct and maintain specific studies from a scientific perspective which may alter the strategic considerations of FFEM.

The FFEM Secretariat is the operational management authority of the fund. Composed of ten agents, the FFEM Secretariat is entrusted to the Agence Française de Développement (AFD), which provides the materials and human resources necessary for its operation. The secretariat is attached to the Strategy Division within the AFD.

In the marine world,
where habitats are
degraded, diversity is
decreased and resources
are depleted,
**FFEM and its
partners are
mobilised.**

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