



# RESCCUE



## RESCCUE ACTIVITIES IN FRENCH POLYNESIA

The French Biodiversity Agency (AFB) carried out the [RESCCUE](#) project in French Polynesia under the supervision of both SPC and the Government of French Polynesia and in partnership with the IRCP-EPHE, University of French Polynesia, Créocéan, GIE Océanide, PTPU, Vertigo Lab, the SOP Manu association and several individual consultants.

Activities came to an end in October 2018 with a participatory lessons-learned workshop in Papeete and the final project steering committee meeting.

The [final report on RESCCUE in French Polynesia](#) summarises all the project activities and outcomes at the [Moorea](#) and [Gambier Islands](#) pilot sites. All the project reports are available [here](#).

As with all the other pilot sites, RESCCUE in French Polynesia developed its activities in an integrated management and climate change resilience perspective. In line with its overall rationale, the project endeavoured to reduce non-climate stressors on ecosystems so as to increase ecosystem resilience and, in that way, the resilience of the communities that depend on them. The activities were based around several complementary areas.



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## SUPPORT TO INTEGRATED COASTAL MANAGEMENT (ICM) IN 'OPUNOHU AND MANGAREVA

On Moorea, in collaboration with the [INTEGRE](#) project, RESCCUE first carried out an [in-depth assessment](#) with residents at the 'Opunohu pilot site in order to understand and give due weight to the site's historical, social and cultural background. Using a participatory approach, the project helped [identify actions and propose a new governance method for sustainable local development](#) of the site. A number of priority activities were also [carried out](#) and then evaluated.



Participatory workshops on integrated coastal management in 'Opunohu



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In the Gambier Islands, the work carried out with all the stakeholders via a participatory approach made it possible to jointly develop a document entitled [Nukutaireva](#) ("Land, Sea, Sky" in Mangarevian). Seven sustainable development goals, 26 objectives and 32 actions for the area over the next 20 years were identified –15 of which were carried out during the project. Several governance arrangements were discussed with the various stakeholders involved and municipal authorities are now considering the establishment of a management committee.

## HOUSEHOLD WASTE MANAGEMENT

RESCCUE helped the municipality of the Gambier Islands improve its household waste management, not only in economic and budgetary terms (adjusting fees) but also on a technical level with proposals for short-, medium- and long-term actions, based on preparatory studies and a statutory document ([Waste management plan - PGD](#)) which will make it possible to request the funding needed to successfully implement such improvements. The project also allowed the purchase of equipment for the municipality (sorting bins and 4x4 vehicle to support green waste collection and composting). The PGD must now be approved by the Municipal Council and then the Council of Ministers.



Delivery of household waste sorting bins for Mangareva

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## SUPPORT TO THE MOOREA MARITIME AREA MANAGEMENT PLAN (PGEM) REVISION

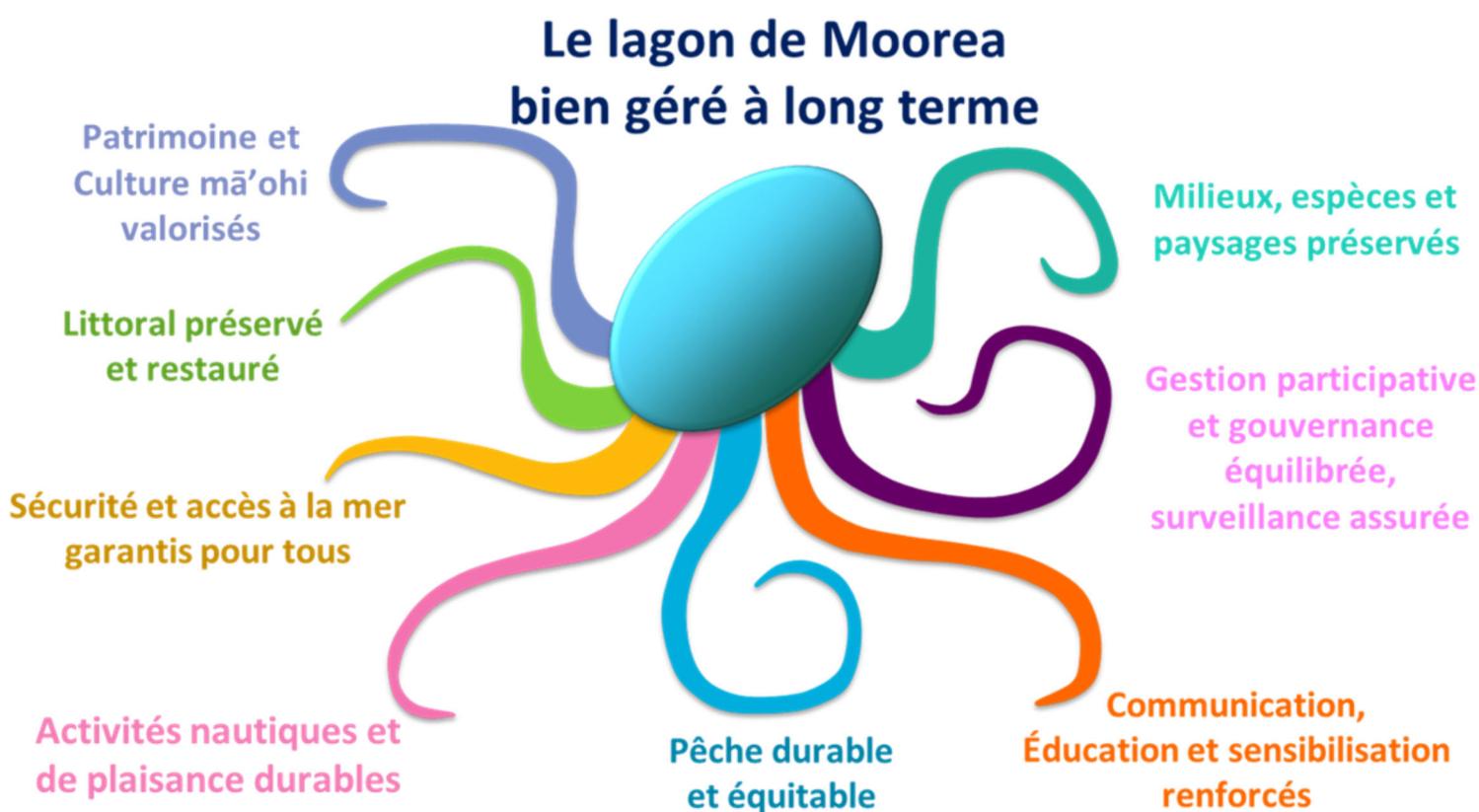
Support for a revision of the PGEM, an area planning code tool designed to plan how Moorea's lagoon is used, began in 2014 with a workshop to jointly develop a [roadmap](#) to carry out the revision in collaboration with the main stakeholders. Information meetings were held with the communities in Moorea's associate municipalities and thematic reviews of the PGEM were carried out and then presented in public.



Discussions with associations and fishers on Moorea

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Building on a significant endeavour to get stakeholders organised (particularly fishers who have now formed local committees), the revision process led to identifying the eight overall management objectives shown here. For each one, specific objectives and proposed actions were identified and discussed with the actors involved, who then proposed them to consultative bodies such as the local maritime area commission in September 2017 and then the Territorial Land Development Committee in November 2017. So, by the end of the project, the Government has a draft revised PGEM (legal provisions, maps and set of objectives), which will be submitted to formal public consultation by the Ministry of Housing and Country Planning from 25 February to 27 April 2019.



Structure of the long-term objective document for managing Moorea's lagoon

## SUPPORT FOR SUSTAINABLE AGRICULTURAL AND PEARL-FARMING PRACTICES

At 'Opunohu site, RESCCUE and INTEGRE jointly provided technical and economic support for sustainable farming practices along with [proposals and actions](#) to control erosion on pineapple fields and access tracks. In particular, RESCCUE made it possible to plant rows of vetiver on a pilot plot at the Domain, where the Agriculture Department has implemented other similar operations. A total of [12 technical and economic factsheets](#) were produced for professionals in this sector.



*Vetiver plants alongside a pilot plot*  
© M.Geoffroy/Moorea Biodiversité

In the Gambier Islands, assistance in moving toward more sustainable pearl farming took several forms, in partnership with the municipality, pearl farmers and the Department of Marine and Mining Resources (DRMM):

- [Analysis](#) of the social and economic impact of Gambier Islands pearl farming;
- A [review of current knowledge about interactions between pearl farming and the environment](#), as well as about [underwater solid waste and the feasibility of collecting it](#);
- [Describing](#) solid waste from pearl farming;
- Collecting solid waste from around abandoned pearl farms;
- Assessing [solutions to recycle](#) some types of plastic waste, with an economic feasibility study and collection and recycling tests (particularly on out-of-use buoys and ropes) to launch a circular-economy-type approach;
- [Feasibility studies](#) on mechanisms to fund sustainable practices, including labels and proposals in particular on tax measures (see below).



*Waste collected from the lagoon to be treated in Papeete*  
© Gambier municipality

By the end of the project, the initial results of the cleaning operations and the pearl-farming plastic waste recycling tests were very promising. A more in-depth experiment to recycle scrap buoys is now underway by a French Polynesian business with a view to introducing a dedicated production line.

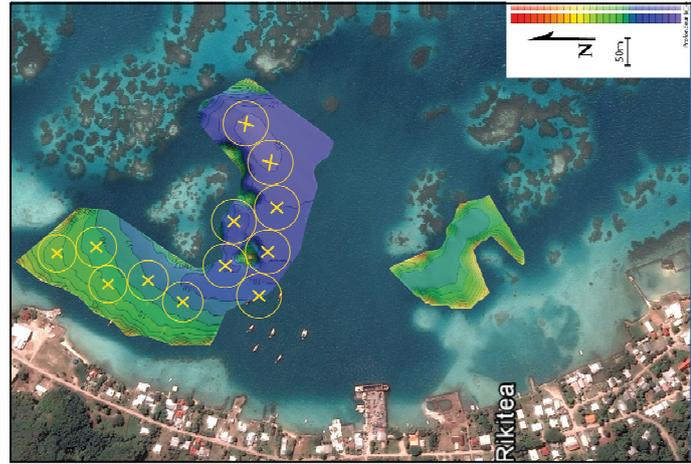
The DRMM is developing a country-wide pearl-farming waste management plan that will use all of RESCCUE's results in that area.



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## SAILBOAT ORGANISATION AND MANAGEMENT

On Moorea and in the Gambier Islands, the project [assessed](#) potential managed mooring sites and proposed various types of management, including model mooring zone regulations and possible fees. In the Gambier Islands, 20 moorings were suggested at three areas that are popular for sailboats. The Tourism Department confirmed that the budget needed to deploy about 10 moorings had been set aside for work at the site in early 2019. On Moorea, 10 moorings are planned for 'Opunohu Bay, in the framework of the PGEM current revision.



Proposed mooring locations in Rikitea, Gambier Islands

©Créocéan

## CONTROLLING SHORELINE EROSION

On Moorea, the project helped control shoreline erosion at two sites of social, environmental and economic importance, i.e. Tahiamanu Beach, one of the last public beaches on Moorea, and the Pahani site.

RESCCUE did baseline studies of the [Tahiamanu](#) and [Pahani](#) sites (erosion, environments, uses), proposed the softest possible restoration solutions and carried out a multi-criteria analysis of those solutions to assist decision-makers in choosing the best ones. For example, for the Tahiamanu site, it was decided to implement a combination of actions designed to stabilise the shore through replanting, replenish the sand that has been lost and build an underwater structure with coral reseedling.

The project then mobilized additional funding to carry out the work, which largely exceeded RESCCUE's funding capacities. So the Tourism Department will begin work on Tahiamanu Beach during the first half of 2019. As for the municipality of Moorea, they have committed to take care of work at Pahani.

### UN SITE PILOTE POUR LUTTER CONTRE L'ÉROSION : LA PLAGE DE TAHIAMANU

Pacific Community Communauté du Pacifique

#### Quelles solutions ?

Aménagements prévus au sud de la plage

- 1 : Atténuer la houle
- 2 : Recréer une plage
- 3 : Maintenir le sable
- 4 : Sites expérimentaux de revégétalisation

#### Zoom sur... les sites expérimentaux de revégétalisation (4)

- Sur des zones test
- Préserver le caractère naturel de la plage
- Contrôler la mobilité du stock de sable sur l'arrière plage
- Limiter l'érosion éolienne (ralentissement de la vitesse du vent au sol)

Exemples de plantes indigènes adaptées aux conditions écologiques du site, à tester en densité élevée.



**Ipomoea pes-caprae (pohue tatahi)**  
Présente sur les littoraux des îles hautes sur sable noir ou calcaire. Liane rampante de haut de plage qui forme de grands tapis denses. Sablisse les sols érodés par les vagues.



**Suriana maritima (o'uru)**  
Présent sur de nombreux rivages tropicaux (notamment aux Tuamotou). Affectionne les sables coralliens et se régénère souvent abondamment sur les zones décupées par la houle.

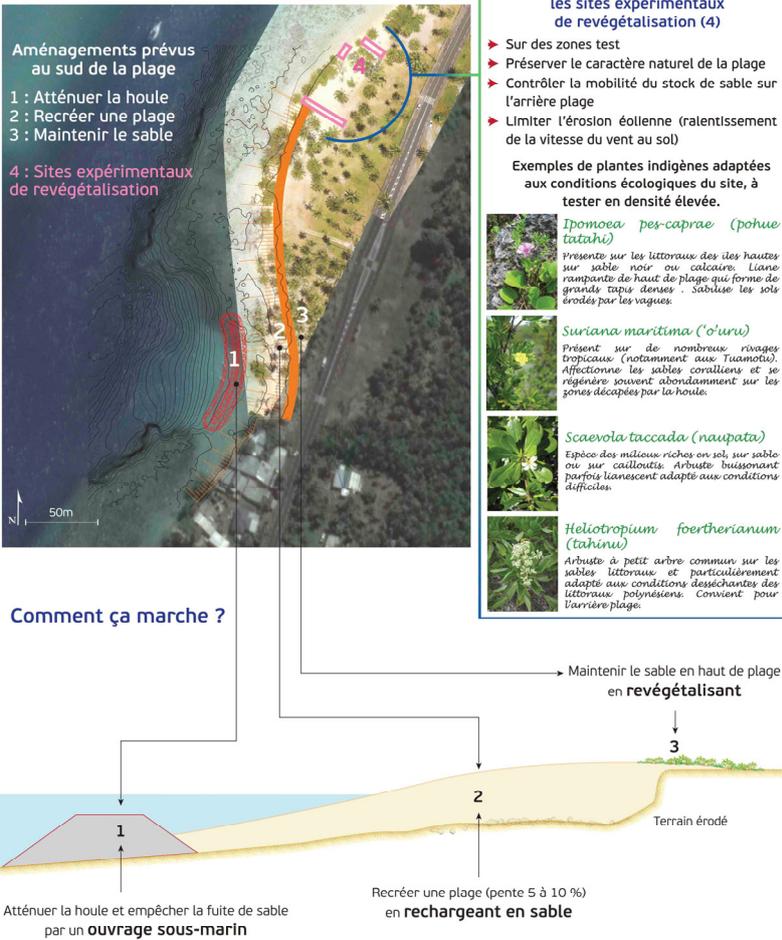


**Scaevola taccada (naupata)**  
Espèce des milieux riches en sol, sur sable ou sur cailloutis. Arbuste buissonnant parfois lancaient adapté aux conditions difficiles.



**Heliotropium foertherianum (tahinu)**  
Arbuste à petit arbre commun sur les sables littoraux et particulièrement adaptés aux conditions desséchantes des littoraux polynésiens. Convient pour l'arrière plage.

#### Comment ça marche ?



Maintenir le sable en haut de plage en revégétalisant

1 Atténuer la houle et empêcher la fuite de sable par un ouvrage sous-marin

2 Recréer une plage (pente 5 à 10 %) en rechargeant en sable

3 Terrain érodé









RESTAURATION DES SERVICES ÉCOSYSTÉMIQUES ET ADAPTATION AU CHANGEMENT CLIMATIQUE

Proposed solutions to control beach erosion at Tahiamanu

## INVASIVE SPECIES CONTROL, BIODIVERSITY CONSERVATION AND ENVIRONMENTAL RESTORATION

On Moorea, the project developed and implemented a participatory invasive-species control [strategy](#) in the 'Opunohu watershed, in particular by supporting Miconia control on 40 ha of heritage forest in partnership with the Moorea Biodiversité association.



*Miconia removal operations in 'Opunohu*

©J-F Butaud

In the Gambier Islands, RESCCUE provided [support to a wide range of activities](#) designed to preserve local flora, i.e. assistance in setting up a multipurpose municipal nursery; restricting access to and providing conservation management of Mangareva's last natural forest; creating an ecotourism bush-trekking trail; developing and implementing conservation plans for the most endangered plants; training local nature guides; producing information materials; holding public meetings and talks in schools (on plant and bird-life); eradicating and controlling invasive plants on the islands of Kamaka, Makarua and Manui (co-funded by the DIREN); and finally, replanting native species on the islands of Kamaka, Makarua and Manui (co-funded by the European BEST project under the municipality and IUCN's supervision).



*Saplings to reforest offshore islands in the Gambier Islands*

©J-F Butaud

RESCCUE supplemented those activities by [monitoring birdlife in the Gambier Islands for conservation purposes](#): biosecurity on those islands that are free of rats and other exotic species that threaten birdlife; eradicating the crazy yellow ant (co-funded by the Environment Department/DIREN); controlling the Polynesian rat and cane toad on Kamaka; and finally, installing acoustic devices to attract petrels to Kamaka and Makarua.



*Young Kotai or Polynesian storm petrel*

©SOP Manu

## CAPACITY BUILDING

The project helped train future nature guides in the Gambier Islands and participation facilitators at the pilot sites. Several elected officials and technical staff were also able to share their experience by speaking at international events such as the International Marine Protected Areas Congress or World Conservation Congress as well as at regional technical workshops.



Eco-tourism guide and local facilitators

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## ECONOMIC ANALYSES AND FUNDING MECHANISMS

In order to bolster the various activity areas listed above, a [wide range of economic analyses](#) was used during the project with three main objectives: information (particularly for advocacy), technical uses (fine-tuning instruments), and decision-making purposes (trade-offs between various management options). A [study](#) on the cost-effectiveness of ICM activities was also carried out.

In addition, RESCCUE studied the [feasibility](#) of about 10 funding mechanisms, mainly to support sustainable pearl farming in the Gambier Islands and sustainable agriculture in 'Opunohu, including some that are now being implemented by the stakeholders involved.

Finally, a study on greening taxes and public subsidies in the primary sector (agriculture, livestock farming, fishing and aquaculture) began in 2018 at the request of the Government of French Polynesia, as an extension to RESCCUE's regional activity in that area. Cofunded by the Government and AFB, it will be finalised during the first half of 2019.



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