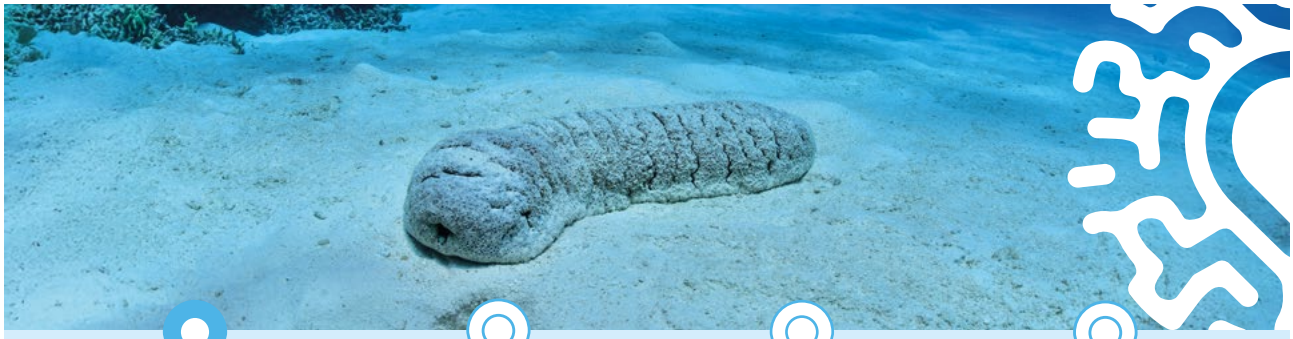
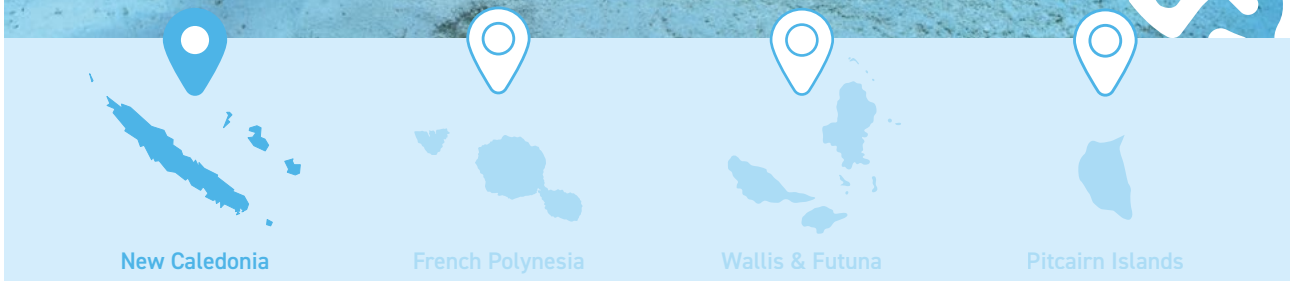
FINAL LESSONS-LEARNED FACTSHEET

ASSESSMENT OF THE POTENTIAL FOR RANCHING AND RESTOCKING

PROTEGE
PACIFIC TERRITORIES REGIONAL PROJECT FOR SUSTAINABLE ECOSYSTEM MANAGEMENT

Funded by European Union





BUDGET: EUR 147,000 (XPF 17.5 million)

ACTION TIME PERIOD: February 2020 – June 2022

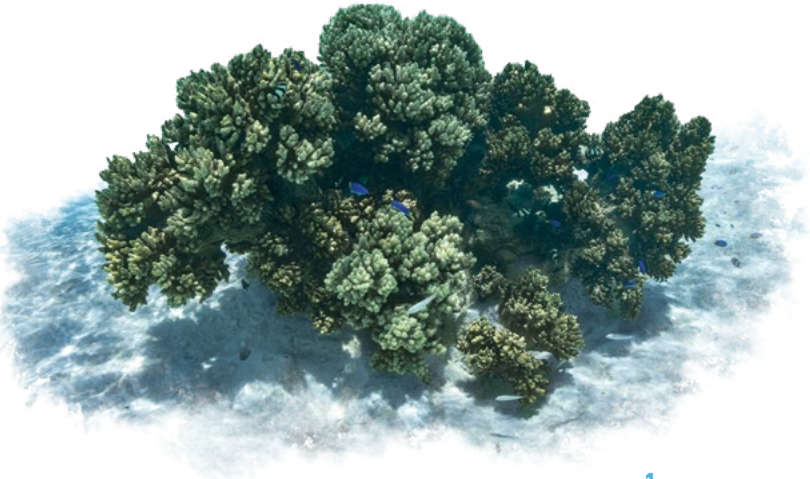
PARTNERS:

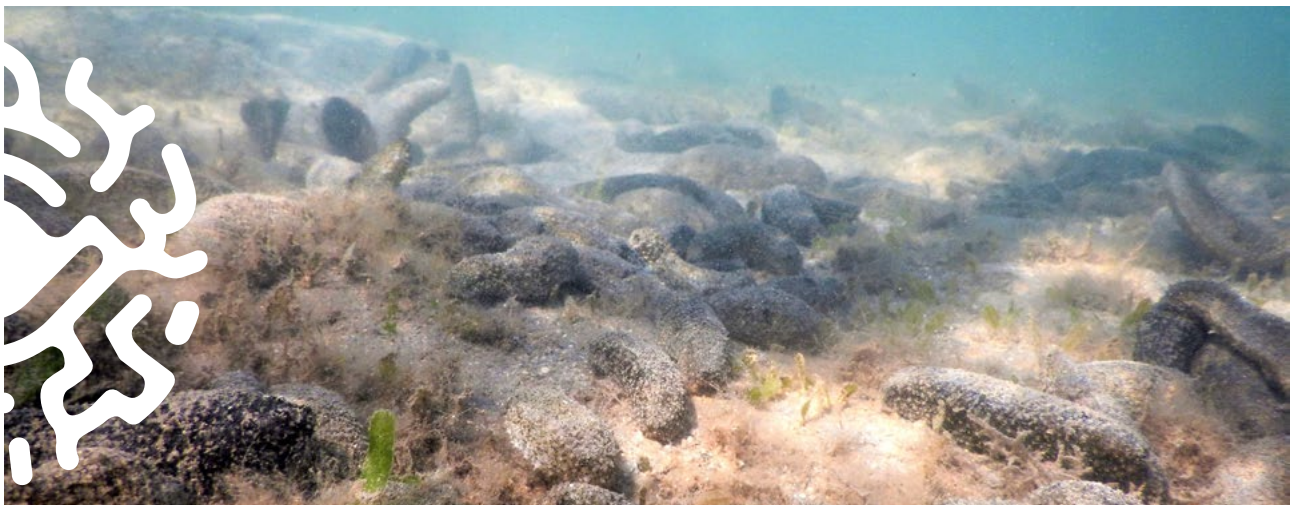
BRIEF SUMMARY

Ranching and restocking operations address managers' wishes to develop new business operations while preserving their resources and environment. New Caledonia examined the legal framework and circumstances conducive to keeping the fish in sea pens and aquaculture farms in the lagoon, while working to restock juvenile sea cucumber on New Caledonia's southwestern and northwestern coasts.

The operation was complex to implement for a host of reasons related to the number of stakeholders (including managers, producers, aquaculture farmers and fisher communities); acceptance of these practices; controls; and surveillance. **This operation, which was carried out only in New Caledonia, drew interest from the other OCTs in the context of a study on the feasibility of an aquaculture industry on Wallis** (see Factsheet "Developing sustainable fisheries and aquaculture master plans").

From an operational perspective, after studying social acceptability within the definition of a legal framework for offshore aquaculture operations in the Northern Province, 9000 sea cucumbers were transferred to sea and to an aquaculture farm. The observations showed a barely 1% survival rate in the weeks following restocking. Mortality by predation could explain these poor results. It is also possible that the sea cucumbers whose cryptic behaviour as juveniles was not detected properly or that they may have escaped the pen to join those in the sea. Given the projections regarding economic viability and potential ecological benefits, the mixed outcomes of these tests led the managers to cut the operation short.





BACKGROUND

Over the last decade, several areas of focus were developed for sandfish (*Holothuria scabra*): mastering *H. scabra* juvenile production techniques using a private hatchery, as well as tank grow-out trials, alternating with shrimp cycles and attempts at sea ranching.

This operation thus sought to combine the strengths of these three links and draw lessons from the challenges in order to establish a virtuous and economically viable system.

Restocking invertebrates in the wild would help to rebuild their stocks. This strategy could be developed when certain marine resources are over-harvested locally (because they are easy to access, relatively immobile and have high added value, such as sea cucumbers and clams). Ranching can be considered a form of extensive aquaculture, with very little human intervention and infrastructure.

Whatever the opportunity – restocking vs. sale – these high-demand species are bred by a method known as sea ranching. These extensive systems involve breeding the juveniles in the sea and harvesting them when they reach market size or using them to restock other sites. These farms rely on access rights that are exclusive to the developers (individuals or groups), which, in the Pacific region, requires co-building appropriate legal solutions.

ISSUES & OBJECTIVES

The goal of the operation was to **develop ranching activities with high added-value species along with initiatives to restock lagoons with fish and invertebrates by shoring up the technical and legal aspects.** It had a dual goal of managing resources through restocking to replenish or maintain fisheries stocks and creating business for biological material producers and coastal zone operators.

KEY FIGURES

Only 1% of the sea cucumbers were found in the weeks after stocking; three pens built

3 proposals for legal and procedural provisions promoting the social acceptability and strengthening of marine aquaculture projects in the Northern Province

OUTCOMES

To support future offshore aquaculture projects, it was necessary to **guarantee legal security, while facilitating the acceptability of these activities.** The goal was to hold consultations on the creation, under general law, of innovative initiatives for the sustainable development of marine aquaculture. A study was thus funded to identify proposals for legal and procedural provisions promoting the social acceptability and safety of aquaculture projects in the Northern Province. Three areas of intervention were proposed:

1) For greater social acceptability, the "tools" should be legally binding, including provisions in general law (Facilities Classified for Environmental Protection (ICPE) and the Development Code) that offer the option of requiring a traditional indigenous "preliminary agreement" or "informed consent" if so wished;

2) For greater non-binding social acceptability, project sponsors should comply with the Northern Province's internal case handling procedures based on multiple dialogue solutions with local stakeholders (including scope of work with traditional stakeholders, traditional decision-making and simple information/consultation);

3) Choosing an approach that combines points **1** and **2** above, guaranteeing that the Northern Province has the opportunity to require, based on internal criteria, a level of stakeholder consultation appropriate to the social and territorial context of each project.

From a concrete, operational perspective, restocking in New Caledonia followed a standardised four-step method: characterising the stocked sites; completing a baseline; stocking previously grown-out individuals; and post-stocking monitoring. Post-stocking success was assessed by estimating the growth of the stocked sea cucumbers and the contribution of the stock.

"Secure aquaculture projects legally and ensure social acceptability"

Thus, in the Northern Province, *Société d'Elevage Aquacole* (SEA, an aquaculture company), supplied nearly 10,000 sea cucumbers to the sea pens deployed on the Touho reef flat, as well as the Voh prawn farm pen. The juveniles were transferred to the Touho reef flat in the first half of 2022. However, the second phase was not implemented, because, according to the count data gathered during the weeks following, less than 1% of the specimens were observed in the seeded areas. Similar results were noted in the Southern Province, even though nearly 150,000 juveniles had been seeded in a pond on Aquawa farm for grow-out before restocking in the wild. The action was terminated in light of the inconclusive results obtained in phase one.

On **Wallis**, sea cucumber farming for restocking purposes has been raised as an opportunity to develop eco-friendly aquaculture in the territory (see Factsheet "Developing sustainable fisheries and aquaculture master plans").

FIRST-HAND ACCOUNT

MARIE-RENÉ PABOUTY

Commercial fisher, Touho, New Caledonia

> *Sea cucumbers play a major role in the marine environment. I'd choose aqua-culture over harvesting wild sea cucumbers in the lagoon. It's a way of preserving stocks and keeping our reef nice and clean.*

PROSPECTS AND SUSTAINABILITY

Before ADECAL closed SEA in 2023, **there were no short-term prospects on the horizon, because there was no public sector project leader in New Caledonia.** This experiment, however, and the results obtained – although inconclusive – offer lessons that can be shared with the region's countries and territories.

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REPORTS

- Gie Océanide (2021). Atelier participatif «projets aquacoles en mer : acceptabilité sociale / coutumière, processus de concertation et corpus juridique». Rapport de la Phase 2 de l'étude «Concertation pour le cadrage juridique des droits d'occupation du Domaine Public Maritime/DPM pour le développement de l'aquaculture en mer en N-C». Nouméa, Nouvelle-Calédonie.

- Gie Océanide (2021). Rapport provisoire : «Proposition de dispositions juridiques et procédurales favorisant l'acceptabilité sociale et la sécurisation des projets aquacoles en province Nord». Nouvelle-Calédonie.

- Gie Océanide (2021). Synthèse rapport final : Concertation pour le cadrage juridique des droits d'occupation du Domaine Public Maritime (DPM) pour le développement de l'aquaculture en mer en Nouvelle-Calédonie.

- (2020). Concertation pour le cadrage juridique des droits d'occupation du domaine public maritime (DPM) pour le développement de l'aquaculture en mer en Nouvelle-Calédonie.

DOCUMENTARY RESOURCES

PROTEGE

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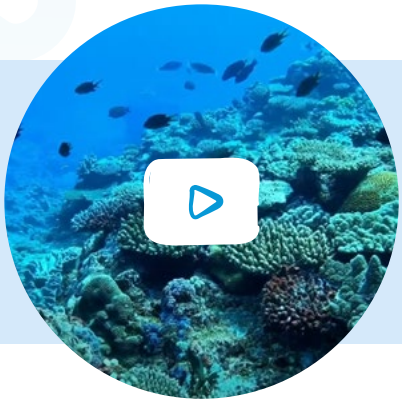
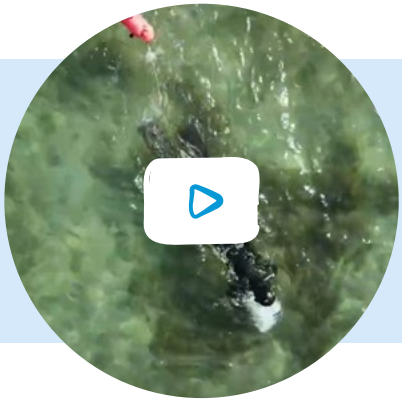


Résilience playlist: 31 videos in French and English.
PROTEGE project documentaries

Gardiens du Pacifique S1 Ep15 :
Marie-René, Nouvelle-Calédonie

Résilience Episode 3 :
Les holothuries : un trésor du Pacifique



Résilience épisode 3
Préserver et gérer durablement les holothuries en Nouvelle-Calédonie

VIDEOS

FLIPBOOK
Final lessons-learned factsheet

Find all the lessons-learned factsheets on
coastal fisheries and aquaculture **freely available on our website.**

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SUSTAINABLE ECOSYSTEM MANAGEMENT

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