# Three years of efforts to promote more sustainable coastal fisheries in Wallis and Futuna: Taking stock

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To ensure that Wallis and Futuna has a sustainable supply of coastal marine resources, in 2020 the Fisheries Service of the territory's Agriculture, Forestry and Fisheries Services Department (DSA) developed a strategy for the sustainable and participatory management of coastal resources. This strategy was implemented in several phases, which included building public awareness, establishing management measures, and supporting local initiatives.

Three years after launching this strategy, an evaluation has shown its success. Awareness of the issues involved in sustainable fisheries has increased and a significant share of the population have changed their fishing practices and consumption patterns.

However, the DSA has not yet succeeded in implementing the sustainable management of coastal fisheries in Wallis and Futuna over this time. Three years of effort have not been enough to radically change thinking and poor fishing practices. There are still barriers to action, and disparities have appeared between the territory's two islands. Seven Recommendations are proposed to strengthen the DSA's efforts: continue awareness initiatives; maintain the fisheries observatory; establish an effective control system; support local initiatives; allocate more human resources to fisheries; help build cooperation through the Fisheries Committee; integrate actions into local development plans; measure the efforts made ; and disseminate the knowledge.

### Introduction

#### Decline in fishing

Coastal fisheries are central to the cultural identity of Wallis and Futuna. In the past, residents had to live off marine resources. Those resources also structured the society. However, a significant change has taken place in recent decades: the share of households involved in fishing has declined sharply, and fresh fish consumption has followed a similar trend (Bouard et al. 2021). This decline is linked to several factors, including a change in residents' dietary habits, but may also be related to a decrease in coastal resources and degradation of coastal habitats (Jaugeon and Juncker 2021; Jaugeon et al. 2023a).

#### Ensuring a sustainable supply of marine resources

This dependence on marine resources could rebound in coming years, however, as a result of the increased costs of raw materials and maritime transport. In addition, a policy encouraging a healthier, local diet could re-establish fish

Sustainable fisheries day 2022 on Nukuteatea, Uvea island.

as central to households' dietary concerns. In this context, ensuring a sustainable supply of coastal marine resources has become a priority for national governments, as various regional declarations and policies demonstrate (FFA and SPC 2015; SPC 2015; SPC 2021). Fisheries co-management methods are preferred to achieve this sustainability objective for fisheries resources. While Wallis and Futuna does have a body of legal provisions for managing fishing, no management measures are actually implemented. Despite several initiatives targeting the integrated coastal zone management (Egretaud et al. 2007a, 2007b; Verducci and Juncker 2007; Moncelon 2017a, 2017b; INTEGRE 2018), a sustainable framework for reef and lagoon resources has not been developed.

#### Fisheries regulations previously unknown or rejected

In 2020, with support from then European-Union-funded PROTEGE<sup>1</sup> programme and the Pacific Community (SPC) as its implementing agency, the DSA's Fisheries Service prepared a stocktake to identify the prerequisites to establishing participatory coastal resource management in Wallis and Futuna (Aubert and Vieux 2021). A major challenge arose: how to promote this management method when the majority of the population does not consider it a priority. Existing fishing regulations were little known, poorly understood and largely rejected. In addition, unsustainable fishing practices persisted without challenge.

Given that context, the DSA's Fisheries Service developed an innovative strategy to launch a paradigm change in fisheries management in Wallis and Futuna with the strategic, technical and financial support of SPC via the PROTEGE project.

This paper reviews three years of actions, an unprecedented communications campaign, and the creation of a fisheries observatory. It evaluates the impact these actions had on the community's perceptions of their fisheries and fishing practices and examines how fisheries became a central concern once again. We conclude by looking towards the future, anticipating the next steps to ensure a continuous supply of fish to the local community in the face of the challenges of climate change.

Artistic expressions to raise awareness of sustainable fishing.@DSA



<sup>1</sup> The PROTEGE programme webpage in English - https://protege.spc.int/en

# *PROTEGE* – *Sustainable coastal resource management action strategy*

Developing a strategy, together with support from the "Trajectoires" and "Hope" consulting firms, made it possible to create an inclusive approach from the outset. Through the use of individual surveys, a comprehensive assessment, and working groups with all representatives of Wallisian and Futunan society, we designed an effective strategy, coupled with a high-impact communications strategy.

## *Challenges facing sustainable management of coastal resources in Wallis and Futuna*

The situation in Wallis and Futuna does not favour implementation of a sustainable coastal-resource-management approach. While population decline offers benefits in terms of pressure on fisheries, it poses an obstacle to involving local communities, leading to a decline in traditional knowledge and social cohesion. Dependence on government subsidies reduces local communities' investment in fisheries management. Complex institutional arrangements make it complicated to coordinate management efforts, and governance conflicts among the various entities impede the decisionmaking process. Regulation of existing fisheries is characterised by a lack of participation, and decisions are often made without adequate stakeholder consultation. Certain unsustainable fishing practices persist (such as night spearfishing, misuse of nets and the harvest of protected species), exerting a selective pressure on certain resources. The lack of awareness is obvious, with widespread ignorance of the impacts such practices have on resource sustainability. Consequently, in 2023, the community still does not perceive coastal resource management to be a concern and no effective management measures or regulations have been implemented. Coordination among the actors is needed to ensure effective and sustainable management (Jaugeon and Juncker 2021; Aubert and Vieux 2021).

Young women from Wallis and Futuna were key players in the campaign. ©Patrice Terraz



#### Strategic approach

In the face of these challenges, participatory workshops were held in 2020 to develop a common strategy. The goal of this three-year strategy was to promote a shared perception of the status of the resources and promote sustainable fishing. It was based on three pillars:

- improved knowledge of fisheries and fishers, particularly subsistence fishers;
- development of tailored communications; and,
- phased implementation of management measures.

Several indicators were designed to evaluate the strategy's effectiveness. They included the number of individuals familiar with good practices; the number of individuals who changed their practices; the number of communication tools and materials developed and disseminated; and the existence of new regulations.

#### Learning and capacity building

It was also important throughout the process to encourage capacity-building among technical service staff and communities. The DSA provided specific participatory management training to 16 service staff. The training's objectives included understanding the importance of participatory management, learning techniques to promote stakeholder commitment, and learning to provide effective facilitation for participatory processes.

#### Key role of external support

It is important to note that this intervention strategy for the sustainable management of marine resources falls under the EU-funded PROTEGE project and that it is aligned with the objectives and regional sustainable fisheries policies in the Pacific region (FFA and SPC 2015; SPC 2021). The DSA's Fisheries Service worked closely with the PROTEGE project team from both SPC's Climate Change and Environmental Sustainability Programme (CCES) and the Fisheries, Aquaculture and Marine Ecosystems Division. Thanks to the latter collaboration, additional funding was obtained from New Zealand's Ministry of Foreign Affairs and Trade (MFAT) and Australia's Department of Foreign Affairs and Trade (DFAT). This technical and financial support was critical to launching our awareness campaign.

#### Knowledge and monitoring of stock status and sampling

Even if the community did not feel an urgent need to manage the fisheries, further knowledge of the status of resources and the pressures exerted on them was crucial. Obtaining and disseminating objective information on fisheries and the status of coastal resources was essential to establish a shared perception, develop interest in resource management, and inform decision-making. These concerns led to the creation of the Wallis and Futuna Coastal Fisheries Observatory (Jaugeon and Juncker 2021, Jaugeon et al. 2023); Virly et al. 2023).



With the development of a community-based marine monitoring toolkit, the campaign sought to engage all fishermen in data collection. ©DSA

#### Decline of fisheries in Wallis and Futuna

During 2019 and 2020, Wallis and Futuna's Territorial Statistics Service conducted a detailed family budget survey. It both contributed to large-scale data collection and enabled an in-depth analysis of this information in order to identify relevant indicators (Bouard et al. 2021). The survey revealed that the community had undergone a profound transformation over the previous 15 years. In Wallis, fishing and the consumption of fresh fish had declined significantly, with only 9% of households fishing in 2020, compared to 35% in 2006. Futuna experienced a similar, although less pronounced, shift, with 35% compared to 51% previously (Jaugeon et al. 2022). The total quantity of marine products consumed in Wallis and Futuna also declined, from 961 tonnes (t) in 2006, to 825 t in 2014, and 273 t in 2020 (Jaugeon et al. 2022). Average annual consumption on both islands was 27 kg/inhabitant in 2020, compared to 75 kg/inhabitant in 2006. Futuna consumes more seafood than Wallis, at, respectively, 34.6 kg/inhabitant compared to 19.4 kg/ inhabitant in 2020. Multiple causes are responsible for this drastic reduction in fishing and seafood consumption, but they may also be linked to reduced coastal resources and degraded coastal habitats. This raised important questions in terms of strategy because this weak reliance on marine resources does not encourage taking action in response.

#### Participatory data collection to help increase awareness

A system to collect landed-fish-catch data regularly was created through the Coastal Fisheries Observatory of Wallis and Futuna, providing a precise assessment of the fisheries resources (Jaugeon et al. 2023a). One of the objectives of this data collection was to create awareness among the community regarding the threats to marine resources. The participatory work carried out with the fishers also offered an opportunity to inform them of the impacts of destructive fishing techniques on resource decline. To encourage fishers to participate in data collection, the DSA held contests rewarding the fishers who were most active in the data collection programme. The information gathered showed that 22 of the 45 species evaluated in Wallis were overfished, particularly the camouflage grouper (Epinephelus polyphekadion), narrow-barred Spanish mackerel (Scomberomorus commerson), great barracuda (Sphyraena barracuda), bluespine unicornfish (Naso unicornis), and nearly all of the parrotfish species (Scaridae) evaluated. Catches are increasingly composed of smallbodied species, such as the humpback red snapper (Lutjanus gibbus) and thumbprint emperor (Lethrinus harak). Night spearfishing, which accounted for 20% of the 204 t caught in 2022, contributes to the overfishing of herbivores, which are essential for coral reef restoration. The initial results of Futuna's 2023 resource evaluation are more positive, with only five of the 18 most frequently caught species overfished.

### Implementing strategic communications – The sea, our source of life

The communications campaign *Te tai matapuna ote mauli* (The sea, our source of life) was rolled out in three phases to create awareness among fishers and the community of the importance of sustainable marine resource management.

#### Phase 01: Rallying communities around sea and fisheries culture

In 2021, the DSA created a favourable climate by disseminating neutral and objective information on marine ecosystems and the status of coastal resources. This phase strengthened the links among fisheries services and with



To amplify the impact of the campaign, the fisheries department launched a call for proposals for local initiatives to promote sustainable fishing. © Patrice Terraz



The communications kit of the awareness campaign includes panels and posters with neutral and objective information on marine ecosystems and the status of coastal resources.



A multimedia stand is used to play awareness videos at local events to promote sustainable fishing.© DSA

fishers through field visits and a social networks campaign. A communications officer was hired specifically to support the campaign. The Fisheries Service also reached out to external service providers to design a brand platform.

#### Phase 02: Encouraging discussion

In 2022, the DSA stepped up discussions on fishing practices. These conversations were held on the awareness campaign's Facebook page and during meetings and events with various audiences. To encourage these exchanges, the DSA produced eight videos to stimulate discussion about fishing practices and management measures. Each video is available in the local languages and in French, combining statements from the population and portraits of experts, and disseminated over social networks. Using the local languages of Wallis and Futuna was a strategic choice to strengthen community ownership of the areas of discussion.



Cover of one of the booklet of the awareness campaign toolkit. A genuine awareness-raising tool, this booklet tells the story of fishing on Wallis and Futuna through a selection of photographs, children's poems and proverbs from the stories of the elders.

<sup>2</sup> facebook.com/pecheurswf



The fisheries department was there at every important event. © DSA

#### Phase 03: Promoting good practices

The key aspect for 2023 was communications focused on regulations. The objective was to create public awareness of existing regulations and stimulate discussion of the practices to adopt. The campaign supported enforcement of the regulations by providing information and support to ensure they would be understood and implemented.

# A range of multilingual communications tools serving the campaign

#### Te tai matapuna ote mauli campaign communications kit

A communications kit was designed at the start of the project to introduce the campaign, its objectives and its key messages. It included a visual identity, animated clips, a Facebook page, exhibition panels, posters, and collections of poems and statements from elders. Four dissemination channels were used to engage target audiences in support of sustainable fishing.

#### Channel 1: Mass media

The campaign was disseminated widely through television and radio, thanks in particular to statements by traditional leaders, fishers, associations, fisheries service technicians, and merchants. Facebook was also an important campaign medium, with more than 2000 people subscribing to the page "The sea, our source of life"<sup>2</sup>. Several competitions were organised on the social network to engage civil society and fishers.

#### Channel 2: Outreach events

The Fisheries Service participated in more than 10 events, such as the forum on maritime and fisheries careers, open house days at the agricultural high school, and the Christmas Fair. More than seven "Sustainable Fishing Days" were held, with up to 400 people participating daily. These days were integrated into the communications strategy from the outset because they provided unique opportunities to spread the word about the campaign and introduce it to the public. An event booth was designed to promote dialogue with the community. It included wall hangings with key messages, display stands and brochures, and an interactive terminal showing videos.

# *Channel 3: Targeted awareness-raising in the field and stakeholder network*

The campaign was based on informal encounters with the community, thanks primarily to the village assessments conducted by the Environmental Department. Connections were established with the traditional leaders, who played an important role in the campaign. A programme to collect data on landed fish catch was also set up. This resource assessment method helped to create awareness among fishers of the impact of their practices. The DSA also created partnerships with local associations, such as *Les enfants du lagon* (children of the lagoon) and *A vaka heke*.

#### Channel 4: Building skills among stakeholder networks

The DSA developed a community toolkit for monitoring the marine environment. It enables communities to conduct their own resource and habitat monitoring.

#### Potential to be tapped

The tools developed proved that they were relevant to meeting the campaign's objectives. However, the time required to design, produce and translate sometimes meant that their deployment was delayed, which limited the time available to implement the campaign in the field. Despite the team's enthusiasm, these tools have not yet been used to their full potential. For example, the videos on fishing practices have not yet been shown on television. The educational resource kit, community toolkit for marine environment monitoring, and the merchant communication tools have not yet been deployed.

#### Coastal Fisheries Observatory

The Fisheries Observatory created a complementary communications strategy, with a distinct visual identity. An annual report and a quarterly newsletter are published.

### Three-year evaluation

Three years after introducing the intervention strategy, it was important to assess its impact. To do that, the DSA service, with consulting support, conducted surveys with various groups on the islands of Wallis and Futuna, including commercial and non-commercial fishers, managers, territorial elected officials, traditional leaders, merchants and consumers. The authors gathered data from a total of 109 people in Futuna and 197 people in Wallis. Based on a population of 11,558, this sample is representative, with a 90% confidence interval and a 5% margin of error. It should be noted that the evaluation questionnaire was not launched until 2023. The information collected during the 2020 initial assessment did not provide information on all of the strategy's indicators. For this kind of evaluation, it is particularly important to start with a solid baseline for comparison with the evaluation data.

### The Fisheries Services' actions are known and recognised

At the outset, the population lacked a solid understanding of the concept of sustainable fishing and its implications. The public was not yet aware of the issue of the sustainable management of coastal resources. Our results suggest that the DSA's actions and information campaigns enjoyed wide visibility and did transmit their messages. In Wallis, 81% of respondents stated that they considered the Fisheries Service to be useful and more than half retained the campaign's messages (for example, regarding the status of the resources and fishing practices). In Futuna, the figures were, respectively, 62% and 13% (Faure, 2023). The campaign's low penetration there may be explained by the fact that the campaign could not be carried out on-site.



Screenshot from one of the eight videos that the DSA produced to stimulate discussion about fishing practices and management measures. In this video, Saleina Taiava, a staff member from the Fisheries Service, interviewed members of the Wallis community about net fishing practices.

#### Effective communications campaign

The surveys also helped to assess the relevance of the tools used. In Wallis, the multichannel approach proved to be effective as all of the tools were mentioned in the survey. In Futuna, the messages were transmitted to the population primarily through Facebook, television and posters. Respondents on both islands expressed a desire for more interventions in the field, such as village meetings and public events. There was also significant demand for radio and TV broadcasts.

#### Gaining awareness of diminishing resources and impact factors

One of the campaign's key impacts was the change in perception regarding the status of the resources and environmental pressures. During the initial assessment, the perception of resource status - specifically in Wallis - was vague and any reductions were often attributed to external factors, such as climate change or foreign vessels (Jaugeon and Juncker, 2021). Today, 65% of fishers questioned in Wallis noted that the resources had diminished, compared to 23% in 2019–2020. In Futuna, a majority of respondents had already noticed that resources were diminishing. This did not change significantly over the course of the campaign, that is, 81% compared to 89% in 2019-2020 (Bouard et al. 2021; Faure 2023). This change in perception was particularly marked among commercial fishers, since 89% of respondents in Futuna and 73% in Wallis stated that resources were diminishing in 2023, compared to 50% in 2020 for Wallis and Futuna combined (Aubert et al. 2021; Faure 2023).

In Wallis, the main cause of diminishing resources now identified is the use of destructive fishing techniques, followed by climate change and overpopulation. In Futuna, the main cause identified is an increase in the number of fishers. However, this perception does not reflect reality because the 2019–2020 family budget survey showed that the number of fishers had declined. On the other hand, fishers are better equipped. Climate change and destructive fishing techniques are also mentioned.

These new perceptions regarding causes and the status of the resources show a greater awareness among the population of the consequences of poor fisheries management and environmental pressures, which is probably the result of the information campaign. The declining species mentioned in Wallis are the parrotfish, surgeonfish, deepwater snappers and sea cucumbers. In Futuna, the species in decline are lobsters, parrotfish, trochus, giant clams and blue sea chubs.

# *Most of the community is familiar with and accepts the regulations*

One change attributable to the campaign is increased knowledge and acceptance of fisheries regulations. At the start of the campaign, the population had a striking lack of knowledge of and rejected certain fisheries rules (Aubert et al. 2021; Jaugeon and Juncker 2021). In 2023, in Wallis and Futuna, the majority of respondents expressed support for adopting minimum size limits, protecting vulnerable species, prohibiting night spearfishing, and setting up marine reserves.

#### A measured change in practices, influenced by the campaign

The survey showed a measurable change in fishing practices and seafood consumption, influenced by the campaign. For example, in Wallis, 35% of respondents reported that they had changed their fishing practices, and 34% had changed their seafood consumption habits. Some 45% of those surveyed stated that they had changed their behaviour as a result of the campaign.

#### Lessons learned and areas for improvement

To summarise, the evaluation of the strategy revealed a strong knowledge of the campaign and a recognition of its value, particularly in Wallis, where activities were undertaken in the field. The population has begun to change its behaviours, perceive the usefulness of the fishing rules, and understand the status of marine resources and the reasons for their decline. The campaign certainly encouraged several initiatives, such as the customary marine area project, the SOS turtle project, the *A Vaka Heke* club's awareness-raising activities, and the *Mala'efo'ou* educational managed marine area.

Customary leaders were key players in the campaign, as seen here with Ului Monua, the minister of primary sector of the kingdom of Uvea. ©Patrice Terraz



A programme to collect data on landed fish catch was also set up. ©DSA



To encourage fishermen to participate in data collection, the campaign offered gift cards that could be used to purchase fishing gear or maintain boats. This incentive was successful in increasing participation in the data collection effort. ©DSA



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We also observed a shared interest in continuing to raise awareness and promote sustainable management of marine resources in both Wallis and Futuna. This work should involve all local actors, including traditional leaders, the Fisheries Service and fishers. The Fisheries Committee could be an excellent governance tool for achieving these objectives.

There is no doubt that the campaign is working, but achieving the expected behavioural changes – specifically, implementation of the regulations – will require extending it into coming years.

#### Setting up relevant management measures

The efforts of the Fisheries Observatory and the communications campaign have helped to guide and support marine resources management initiatives in Wallis and Futuna. Three strategic initiatives have emerged:

#### Fisheries Advisory Committee

The Fisheries Advisory Committee was created in 2022. Its members include representatives of governments, elected officials, traditional leaders, commercial fishers, and civil society. The committee has already supported the DSA in several approaches, specifically, the need to implement fisheries regulations, the need for financial and human resources to conduct fisheries monitoring, and the need to review current regulations in consultation with fishers.

#### Customary marine area project

The commercial fishers' association in Wallis proposed creating a  $2 \text{ km}^2$  customary marine area in Hihifo district. The project has the traditional leadership's support and was formally inaugurated in October 2023.

#### Environmental warden team

A team of environmental wardens was set up in 2023. Its mission is to inform and create awareness among fishers and the general public regarding the regulations in force. The first activities focused on night fishers. Surveys show that fishers who practise this activity are familiar with regulations, but do not comply with them.

### Conclusion

The PROTEGE project has triggered a pro-change momentum in terms of both the perception of the status of the resource and an understanding of the importance of resourcefriendly practices. The strategy used has helped create a collective awareness of the need to manage marine resources.

This strategy has given rise to some promising initiatives, such as the Fisheries Committee, the Hihifo marine area, and the nature wardens. However, these initiatives are still being developed and are fragile at this stage. They need support if they are to be maintained and to have a significant impact on the resources. To date, the DSA's efforts have not brought about sustainable coastal resource management in Wallis and Futuna. Despite growing awareness of the fragility of the marine resources, the transition to action has encountered serious obstacles that the awareness-raising campaign alone cannot overcome. In addition, disparities have appeared between the territory's two islands in implementing the actions related to the participatory coastal resource management under the PROTEGE project. The lack of a local intermediary in Futuna meant that the same level of enthusiasm generated in Wallis could not be achieved there.

Clearly, much remains to be done. Today, it is critical to strengthen and pursue the existing initiatives to ensure that all these efforts are not wasted. The following recommendations are intended to strengthen the efforts already deployed.

- Continue and step up the awareness-raising and communication initiatives to promote collective awareness of the need to manage the coastal resources.
- Maintain the Fisheries Observatory to monitor fishing, the status of the resources, and the impact of management measures.
- Set up an effective control and surveillance system to deter non-compliance and sanction violations.
- Support local initiatives and build local skills.
- Allocate new human resources to the Fisheries Service to create a dedicated marine resources management team.
- Strengthen cooperation among the actors by facilitating the Fisheries Committee.
- Integrate actions in local development plans.
- Monitor and evaluate the actions.
- Safeguard and disseminate the knowledge acquired.

By implementing these measures, the DSA can sustain the momentum initiated by PROTEGE and ensure that fisheries resources remain sufficient to feed the local communities and enable fishers to earn a living.



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