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POLICY BRIEF

The importance of aquatic biosecurity for the Pacific Islands region

Purpose

Highlight the relevance of aquatic biosecurity for Pacific Island countries and territories (PICTs)

Key messages

National and regional aquatic biosecurity protocols will:

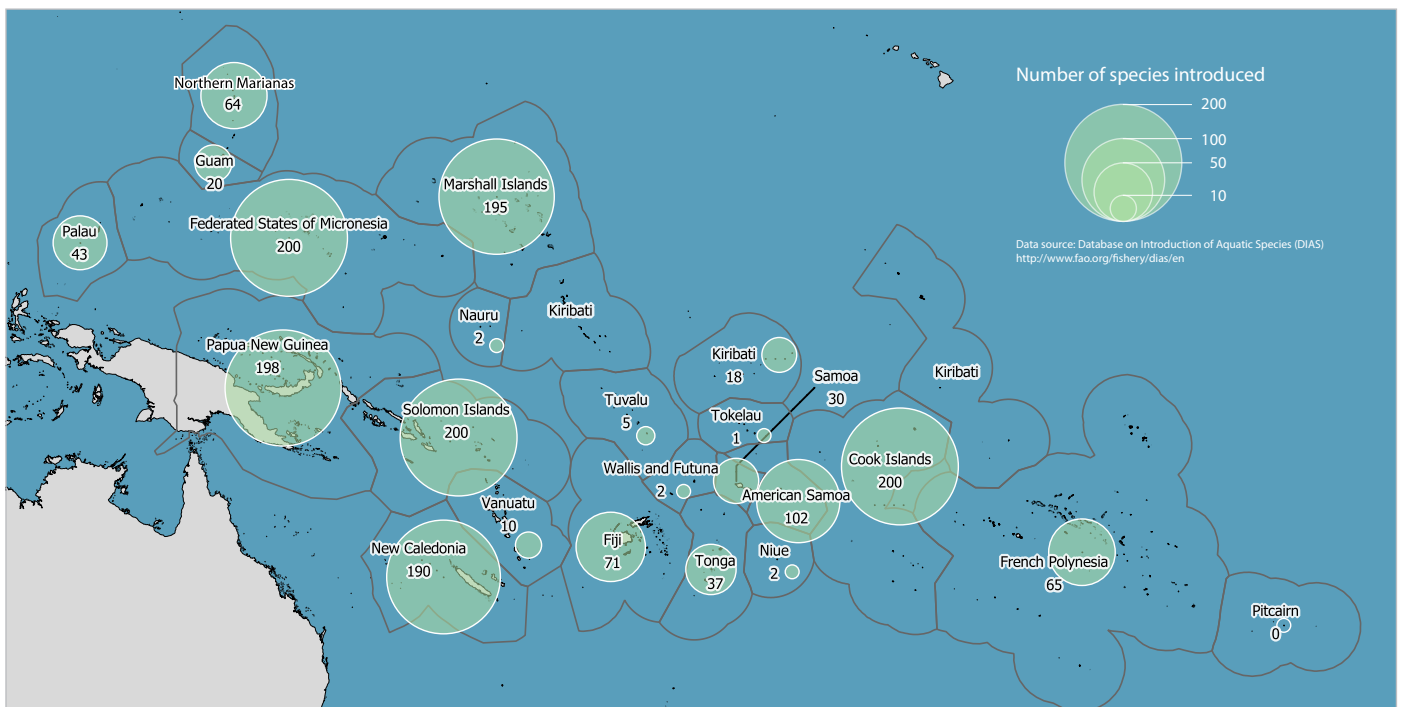
- improve the sustainability and productivity of the aquaculture sector;
- maintain traditional and cultural uses of aquatic resources in the Pacific region;
- facilitate the development of new aquaculture production systems;
- maintain and strengthen the capacity of the aquaculture sector to engage in fair trading practices;
- protect the health and biodiversity of aquatic organisms and aquatic ecosystems; and
- maintain the high health status of wild and farmed aquatic organisms within the Pacific region.



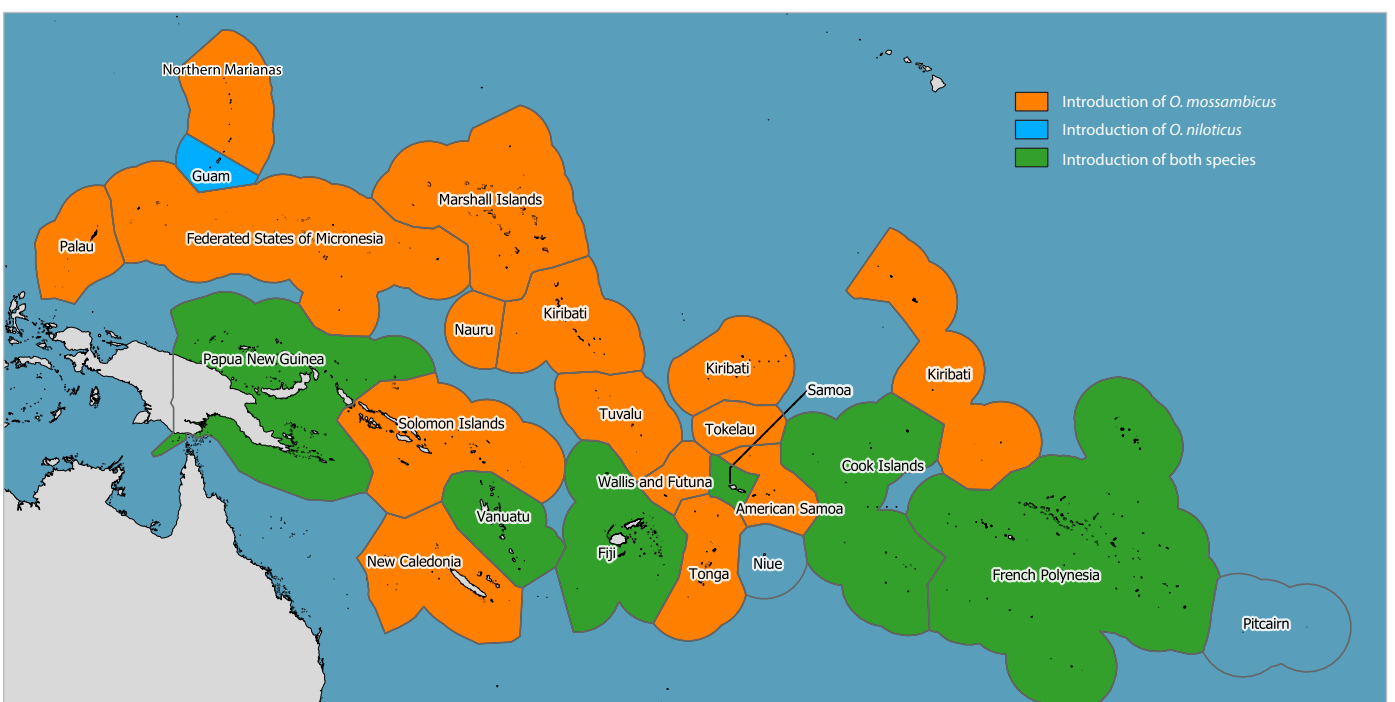
What is aquatic biosecurity?

Aquatic biosecurity is a set of standardised protocols to minimize the impact of biological risks in aquatic environments, such as aquatic pathogens and aquatic invasive species.

- Aquatic pathogens** (diseases and pests). These are aquatic microbes that can cause diseases in humans, animals or plants. Disease is defined as a disorder in the function or structure of any living organism. As an example, the Network of Aquaculture Centres in Asia-Pacific estimated that aquatic animal diseases caused losses to aquaculture production in Asian countries of more than USD 3 billion in 2017.
- Aquatic invasive species.** These are non-indigenous species to a certain country that cause harm to the environment and native species. These species have been introduced to a certain country either deliberately (e.g. for aquaculture purposes or mosquito control) or accidentally (e.g. through ballast water or biofouling).



Number of aquatic species introductions in Pacific Island countries and territories



Introduction of Nile tilapia (*Oreochromis niloticus*) and Mozambique tilapia (*O. mossambicus*) in Pacific Island countries and territories

Aquatic biosecurity standards focus on three major areas:

1. Aquatic health management.
2. Control and management of aquatic invasive species.
3. Food safety issues related to the consumption of seafood products.

Aquaculture in the Pacific

Aquaculture is an important and expanding food-producing sector in the Pacific region, which has been actively promoted in all PICTs, as a way to:

- improve food and nutrition security;
- generate income in isolated rural areas;
- reduce fishing pressure;
- mitigate climate change challenges; and
- increase resilience in isolated rural areas.

The aquaculture sector is becoming a relevant economic activity for the Pacific region and its local communities. In order to achieve sustainable development of this sector, it is critical that farmed aquatic species are healthy and free from diseases and pests so that they can perform at their maximum capacity. Moreover, it is necessary to protect and conserve the rich and highly biodiverse, but very fragile, natural aquatic environment.

World demands for high-quality aquaculture specimens and their products make the control of biological risks – including pathogens that could affect human, animal and plant communities – increasingly important.

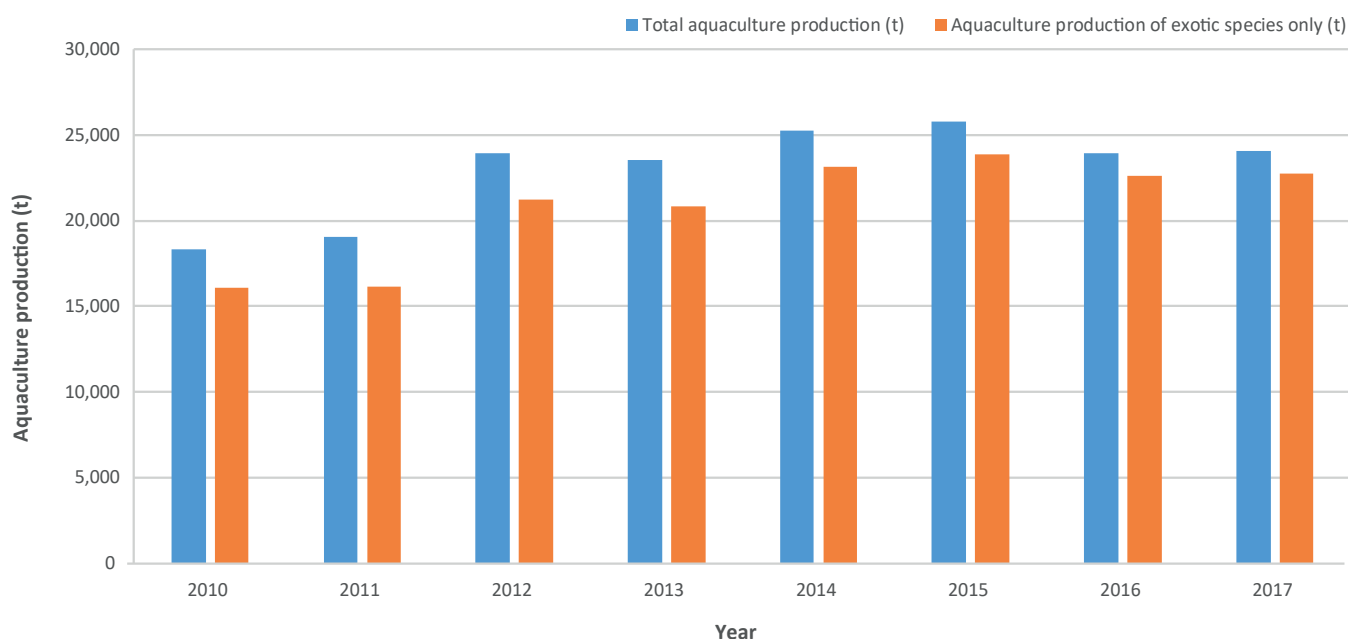
Relevance of aquatic biosecurity for PICTs

Comparative advantages of the Pacific for the promotion and development of the aquaculture sector:

- High aquatic health status
- Availability of suitable farming sites
- Diversity local aquatic species for aquaculture
- Existence of a strong ornamental sector
- Existence of a strong, in certain countries, still promising, aquaculture sector
- Extreme relevance of the fisheries sector and therefore, aquatic habitats, for PICTs national economies
- Tradition of fish consumption
- Decreased coastal fisheries stocks

However, aquaculture is a productive sector that faces important biosecurity risks such as:

- the movement of goods and people;
- limited national resources, capacities and infrastructure on aquatic biosecurity;
- limited and complex border control;
- importation of many agriculture products, including seafood;
- aquaculture sector mostly based on exotic aquatic species;
- frequent introduction and re-introduction of aquatic species for aquaculture purposes; and
- very biodiverse and fragile aquatic ecosystems.



Comparison of total aquaculture production with aquaculture production of exotic species

Regional framework on aquatic biosecurity

In a region like the Pacific – which has comparative advantages, but also many technical and logistical limitations to handle aquatic biological risks – the regional framework on aquatic biosecurity will facilitate the harmonisation of legislation, capabilities and infrastructure, and protocols related to aquatic biosecurity.

This framework focuses on the following components:

- Governance.
- Practises and infrastructure.
- Aquatic species introductions and transfers.
- Training and cooperation.

The regional framework on aquatic biosecurity requires a holistic approach, involving government stakeholders from various backgrounds involving aquaculture, fisheries, environment and public health, among others as well as farmers, and importers and exporters.

The regional framework on aquatic biosecurity will allow PICTs to develop and implement coherent and transparent aquatic biosecurity protocols.

For more information or technical assistance,
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SPC has provided strong technical and financial assistance on aquatic biosecurity to PICTs over the past five years:

- Quarantine and laboratory: improvement of infrastructures and capacities.
- Governance: development of specific laws, regulations, policies and plans.
- Capacity building: in the fields of disease management, introduction of aquatic exotic species, food safety for seafood products, and others.
- Development of national standards for importing and exporting aquatic organisms and products.

Recommended policy actions

At a regional level

- Develop a regional framework on aquatic biosecurity in partnership with member countries and territories to provide guidance on aquatic biosecurity for the Pacific region.

Within PICTs

- Develop national aquatic biosecurity plans and strengthen legislation to enhance governance in aquatic biosecurity.
- Strengthen capacity development of government officers, farmers and other key stakeholders in aquatic biosecurity.
- Develop national-level aquatic biosecurity risks assessments and standards.



Black-lip pearl oyster farming in Savusavu, Fiji. Basic biosecurity measures should be applied at all farming levels, with special emphasis on highly stressful moments. (image: SPC)

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