

## What is aquatic biosecurity, and what is its relevance for the Pacific Islands region?



Nile tilapia being fed in Papua New Guinea. Nile tilapia (*Oreochromis niloticus*) is an exotic species that has become an important commodity of the aquaculture sector in the Pacific Islands region, contributing to food security in several countries and territories. Nevertheless, new imports of Nile tilapia strains should be carried out following basic biosecurity measures to minimise biosecurity risks (image: Ruth Garcia Gomez).

*The Aquaculture Section of SPC's Fisheries, Aquaculture and Marine Ecosystem Division of has recently launched a new aquaculture-related project funded by New Zealand called "Sustainable Pacific aquaculture development for food security and economic growth". As a novelty for the Aquaculture Section, this project has a component dedicated to "aquatic biosecurity", which sounds like a very abstract word, but which has very practical and real implications for the Pacific Islands region. Aquatic biosecurity could be defined as a set of standardised protocols and measures to deal with biological risks in aquatic environments, such as the risk of pathogens (causal agents of animal diseases and plant pests) and the risk of invasive species. Appropriate aquatic biosecurity measures and protocols should minimise the introduction, spread and impact of the aforementioned biological risks.*

Some of the better-known aquatic biosecurity measures are quarantine, health certification, import and export requirements, disease prevention and surveillance. Aquatic biosecurity requires a holistic and very proactive approach by different institutions, agencies and other key stakeholders at the national, regional and international levels (e.g. including quarantine, biosecurity, customs, agriculture, fisheries, aquaculture, farmers, exporters).

Because the aquaculture sector in the Pacific Islands region is growing, the need to streamline aquatic biosecurity measures is becoming more important for countries. Actually, since the beginning of the project in July 2016, SPC's Aquaculture Section has received official requests for the provision of technical assistance on aquatic bios-

security from 12 countries and territories, which indicates the current interest on the topic, and highlights the existing needs of the region.

It should be noted that, while the aquaculture sector contributes to improving food and nutrition security, and increasing livelihoods within the region, most aquatic animals successfully cultured in the region are introduced or are exotics (e.g. Nile tilapia, common carp and blue shrimp), and new species introductions are being pursued for further aquaculture development. Furthermore, aquatic animal diseases are a significant threat to the sustainability and productivity of aquaculture in the region, which is known for its high aquatic animal health standards.

As a first step to improving the capacities of countries and territories on aquatic biosecurity and to develop a common understanding of the term, the Aquaculture Section has conducted a subregional training workshop on aquatic biosecurity planning for a number of Pacific Island countries at SPC's headquarters in Noumea. The workshop was held from 24 to 28 April, and included a visit to the New Caledonian Technical Aquaculture Centre based in Boulouparis, and a visit to the National Veterinary Laboratory in Port Laguerre.

Nineteen quarantine, biosecurity and aquaculture officers from Cook Islands, Fiji, Federated States of Micronesia, Marshall Islands, Papua New Guinea, Samoa, Solomon Islands, Tonga and Vanuatu attended the training workshop. The training placed special emphasis on the following topics: import risk analysis for live aquatic organisms; import requirements for live aquatic organisms; quarantine operations and facilities for live aquatic organisms; guidelines for certification and inspection of quarantine facilities for live aquatic organisms; health certification; and emergency preparedness.

Furthermore, a full day of the workshop was devoted to building the capacities of participants on the official reporting to the World Organisation for Animal Health (OIE) on the national status of aquatic animal diseases – diagnosis, surveillance and official reporting – in order to raise awareness of the requirements covering all matters under the OIE.

During this subregional training workshop, country delegates also had the chance to exchange ideas about aquatic animal health management, and assess the components that could be part of their respective national aquatic biosecurity strategies. Moreover, steps for implementing these strategic components were assessed and defined.



Post-larvae of white-leg shrimp (*Penaeus vannamei*) imported from Thailand to Vanuatu being quarantined to minimise biosecurity risks. (image: Ruth Garcia Gomez, SPC).

The training was also used to identify key gaps in aquatic biosecurity implementation in island countries. While gaps are many and varied, workshop delegates identified opportunities to address them and improve aquatic biosecurity management strategies, taking into account the diversity and complexity of the region.

---

**For more information:**

*Ruth Garcia Gomez*  
Aquatic Biosecurity Specialist, SPC  
[RuthGG@spc.int](mailto:RuthGG@spc.int)



Participants to the SPC Aquatic Biosecurity Planning Workshop came from nine different Pacific Island countries (image: Jipé Le-Bars, SPC).