

Information Paper 6

Original: English

Status of aquatic biosecurity in the Pacific Region

SPC's Second Regional Technical Meeting on Coastal Fisheries has been organised with funding assistance from:



Introduction

1. Aquaculture is currently the fastest growing food-producing sector in the world (more than 8% growth/year) and for two decades now it contributes to nearly 50 percent of the global food fish supply. Taking into consideration the increasing global population, aquaculture is expected to contribute further to meet the increasing demand for fish in the coming decades.
2. The world's demands for high quality aquaculture (and fisheries) products make control of aquatic biological risks, including aquatic diseases and aquatic invasive species important. Good aquatic biosecurity measures are vital to maintaining healthy aquatic organisms, to reducing the risk of acquiring diseases in aquaculture facilities, to prevent the introduction and spread of aquatic invasive species, and to harvest high quality good yield.
3. Aquatic biosecurity has been described as a system of standardized protocols and measures to deal with biological risks in aquatic environments, such as the risk of diseases and the risk of invasive species.
4. Therefore, the major aim of aquatic biosecurity protocols is to protect marine and freshwater aquatic organisms, existing and future aquaculture development and the human population that depends on these resources, from the ecological and socio-economic harms caused by aquatic invasive species and aquatic diseases and pests.
5. Aquatic biosecurity protocols aim to assist countries in meeting both international obligations and domestic needs to prevent the movement of aquatic invasive species and relevant aquatic diseases, both into and out of countries, and their spread throughout the country. For this reason, the implementation of aquatic biosecurity protocols at the national and regional levels has strong positive implications for both the fisheries and aquaculture sectors.

Relevance for the Pacific

6. The Pacific region, with many comparative advantages regarding fisheries and aquaculture, but at the same time, with unique, bio-diverse and sensible aquatic environments, needs the establishment of context-adapted protocols on aquatic biosecurity, which will support Nations to develop their economies in a sustainable and environmentally friendly manner.
7. Moreover, Pacific countries have an obligation to maintain biosecurity through their commitments to international agreements, such as the World Trade Organization Agreement on the Application of Sanitary and Phytosanitary Measures (SPS) and the United Nation's Convention on Biological Diversity (CBD).
8. The aquaculture sector contributes greatly to improving food and nutrition security and increasing livelihoods within the Pacific region; but most aquatic organisms successfully cultured in the region are introduced (e.g., Nile tilapia, red seaweeds, common carp, blue shrimp and white-leg shrimp), and new species introductions are being pursued for further aquaculture development. It has been estimated that more than 90% of the Pacific aquaculture production, both in volume and value is derived from exotic aquatic species.

9. On the other hand, aquatic diseases are a significant threat to the sustainability and productivity of aquaculture in the region, which is known for its high aquatic health status; potential threats for trans-boundary diseases spreading cannot be overlooked.
10. The geographical isolation of countries, the limited availability of specialist expertise and resources, and narrow prospects for development of specialist capability across multiple disciplines are some of the significant challenges that countries face in implementing sustainable aquaculture development and effective biosecurity governance programmes.
11. Most aquatic biosecurity protocols and standards are primarily directed at the regulation of import, export and domestic movements of regulated articles considered to be of high risk of introducing aquatic invasive species and serious diseases into countries: (i) live aquatic organisms, (ii) live aquatic organism products and (iii) biological products.

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12. Although the term "aquatic biosecurity" is relatively recent for the Region, most countries are taking seriously the protection of their aquatic organisms and ecosystems, as they are of extreme importance for national economies.
13. As illustrative examples to be cited:
 - The **development of legislation** (laws and regulations) **and policies** (national strategies and action plans) aimed at establishing aquatic biosecurity protocols.
SPC has provided assistance towards the development and implementation of National Strategies on Aquatic Biosecurity in Tonga, Samoa, Cook Islands, Solomon Islands, PNG and Fiji.
 - The **establishment of biosecurity authorities** with personnel specifically responsible for aquatic issues (fisheries and aquaculture).
Capacity building and institutional strengthening on aquatic biosecurity has been provided by SPC to all PICTs, including Palau, FSM, Kiribati, Vanuatu, Fiji, Tonga, Samoa, PNG, French Polynesia, New Caledonia, among others.
 - The **development of standards for import/export** of aquatic products and live aquatic organisms.
SPC has assisted Vanuatu and PNG in the development of import and export standards for aquatic organisms and their products.
 - The **development of MoUs** to facilitate the **exchange and introduction of exotic species** within a framework of coherent biosecurity measures.
Examples to be cited are Kiribati, Fiji and RMI, among others, where SPC has facilitated the exchange between countries.

- **Screening and epidemiological surveillance** of aquatic notifiable diseases (most of these diseases are relevant to market access).

SPC has been involved in the screening and epidemiological surveillance of notifiable aquatic diseases in RMI, Cook Islands, Samoa, Tonga, Vanuatu and Kiribati.

14. Our region has a high aquatic health status, which offers a great comparative advantage with respect to other regions of the world: most of the aquatic pathogens are not present in the Pacific. This situation is beginning to facilitate access to more attractive markets.
15. Because of that, most Pacific countries are paying great attention to the following components of aquatic biosecurity protocols, in one way or another:
 - a) Governance: policy, legislation and enforcement.
 - b) Risk analysis.
 - c) Import and export standards, including certification schemes, quarantine, border control and inspection.
 - d) Information systems and databases.
 - e) Aquatic health management, including list of notifiable diseases, diagnostics tests, disease prevention and control, disease surveillance/zoning and disease reporting.
 - f) Emergency preparedness and contingency planning.
 - g) Capacity building.
 - h) Regional and international cooperation on aquatic biosecurity.