

Working Paper 5

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**Work in progress towards the development
of a regional aquatic biosecurity framework
for the Pacific Island Countries and Territories (PICTs)**

**Joint Paper prepared by the Secretariat of the Pacific Community
and the Food and Agriculture Organization of the United Nations**



Work in progress towards the development of a regional aquatic biosecurity framework for the Pacific Island Countries and Territories (PICTs)

Purpose

1. The purpose of this paper is to:
 - i. highlight the work in progress for the development of regional aquatic biosecurity framework based on outcome of the recent SPC/FAO Regional Aquatic Biosecurity Workshop in Nadi, October, 2012;
 - ii invite Heads of Fisheries to discuss and endorse the elements that would comprise the development of the regional aquatic biosecurity framework.

Background

2. Aquaculture contributes to livelihood and food security issues in the Pacific region. Most aquatic animals successfully cultured in the region are introduced and new species and activities are being pursued for development. Aquatic animal diseases are a significant threat to the sustainability and productivity of aquaculture in the region. Potential threats for transboundary diseases spreading cannot be overlooked.
3. 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 PICTs face in implementing sustainable aquaculture development and effective biosecurity governance programmes.
4. The approach to develop a regional pathway for aquatic biosecurity has already been addressed at a number of regional for a by both the FAO and the SPC. At the 2007 Regional Workshop on Implementing Ecosystem Approach to Coastal Fisheries and Aquaculture, organized by SPC and supported by FAO, Leaders were introduced to the concept of risk analysis and application to aquaculture. During the 6th Heads of Fisheries (HOF) in 2008, Leaders endorsed the concept of a regional aquatic biosecurity program (WP6). In June 2010 and June 2012, SPC organized regional workshops to train appropriate fisheries, quarantine and animal health staff in using OIE information system for animal health reporting procedures including non-detrimental findings. During the 5th FAO COFI Sub-Committee on Aquaculture, PICTs expressed interests for aquatic biosecurity. The 2011 joint SPC/FAO Regional Aquaculture Scoping Workshop identified aquatic biosecurity as one of the core programme areas.
5. A coordinated approach is needed to raise the level of capacity among the PICTs and the region in terms of resources and capacity to manage aquatic animal health and aquatic species introductions effectively.

6. The recent regional workshop on Aquatic Biosecurity and Aquaculture Statistics was convened jointly by FAO and SPC, 1-6 October 2012 in Nadi, Fiji. The Workshop addressed aquatic biosecurity and aquaculture statistics being two of the six core programs identified as priority focus areas for Pacific aquaculture development during the FAO/SPC Regional Scoping Workshop in Nadi in 2011.

Approach

7. The 2012 Nadi Workshop addressed the following specific objectives on aquatic biosecurity:
 - i. on aquatic animal health (AAH) - to develop capacity of PICTs on aquaculture biosecurity governance through a regional framework and programme on aquatic animal health that will enable PICTs to manage biosecurity threats derived from or affecting aquaculture industries;
 - ii. on aquatic species introductions - to promote responsible use and control of introduced or translocated aquatic species in aquaculture and fisheries in the PICTs.
8. Thirty five participants representing 17 PICTs (American Samoa, Cook Islands, Federated States of Micronesia, Fiji, French Polynesia, Guam, Kiribati, Nauru, New Caledonia, Northern Marianas Islands, Palau, Papua New Guinea, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu) attended the workshop. Participation of the member countries and territories involved two representatives from Quarantine/Biosecurity and Fisheries/Aquaculture Sectors from each Member State of FAO and Member States and Territories of SPC.
9. Prior to the Workshop, both the FAO and SPC sent questionnaires covering aquatic animal health, aquatic species introductions and aquaculture statistics to identify country needs assessment in these areas. Synthesis of the country questionnaires were presented as a core component of the Workshop.

Outcome

Aquatic animal health

10. The AAH performance and capacity survey (composed of 18 sections) was completed by 18 of 22 PICTs. Major constraints to aquatic animal health in the region were identified as a lack of: (i) dedicated funding, (ii) specific policy, (iii) dedicated infrastructure, (iv) capacity, (v) appropriate legislation, (vi) enforcement, (vii) public awareness, and (viii) coordination between agencies. The results and analysis were used during the development of the draft AAH strategy. The draft AAH Strategy presented as Appendix 1 contains the Purpose, Vision, 11 Guiding Principles, and 12 Strategy Programme Elements (Policy, legislation, enforcement; Risk analysis; Pathogen lists; Information systems; Diagnostics, health certification and quarantine; Surveillance, monitoring and reporting; Zoning; Emergency preparedness and contingency planning; research; Institutional structure; Research; Human resources development; and Regional and international cooperation). Potential activities/projects were identified pertaining to each of the 12 Strategy Programme Elements and discussed within the 4 broad programme themes of governance, capacity development, information, and cooperation and networking including responsibilities for implementation of each activity/project at national and regional levels.

Aquatic species introductions

11. The following programme components were identified for aquatic species introductions:

- improve regulatory framework;
- build capacity;
- improve FAO data base on aquatic species introductions (DIAS);
- improve linkages at national and regional level;
- clarify and improve international instruments and guidelines and the applicability at the national level on aquatic species introductions;
- improve capacity at the national level on applying risk analysis for aquatic species introductions; and
- address knowledge gaps to better enable science-based decisions to be made about aquatic species introductions

Detailed outcome of the aquatic species introductions session is tabulated in Appendix 2.

12. Analysis of the PICTs survey highlighted the following challenges to improving capacity in the region. These include the need to improve policy and planning, improve specialist expertise, need for specialized infrastructure for diagnosis and quarantine, need for better monitoring and control, need to improve diagnostic techniques, need to improve legislation and need for the provision of better extension services.
13. It is recommended to link future efforts on aquatic species introductions with the ongoing global process on aquatic genetic resources in the framework of the Commission on Genetic Resources for Food and Agriculture (CGRFA) and countries' efforts towards preparation of a State of the World on Aquatic Genetic Resources to be presented to the Commission in 2017.

Consultation

14. The SPC and the FAO will finalize the regional aquatic biosecurity strategy for the Pacific Island Countries and Territories in 2013.

APPENDIX 1: Draft PICT Regional Aquatic Animal Health Strategy

15. This draft regional strategy has been formulated by the FAO-SPC Team based on the outcomes of the Working Group exercises of the Aquatic Animal Health session of the FAO/SPC Regional Workshop on Aquatic Biosecurity and Aquaculture Data and Statistics in the Pacific Region, held from 1 to 3 October 2012, in Nadi, Fiji.
16. The following are the major components of the PICTS RAAH Strategy:
 - Purpose
 - Vision
 - Guiding Principles
 - Programme Elements
 - Activities/Projects

Purpose

17. The strategy is a long-term, regionally harmonized approach and plan of activities to improve aquatic animal health management in the PICTs region. Its purpose is to maximize and improve the health of farmed stocks by increasing our knowledge of targeted aquatic species and pathogens in order to: (i) improve the sustainability and productivity of aquaculture industries; (ii) facilitate development of potential new aquatic production systems; (iii) maintain and strengthen the capacity to engage in fair trading practices; (iv) protect the health and biodiversity of aquatic animals and aquatic ecosystems; and (v) maintain the high health status levels believed to be present within the region. The strategy will be submitted to appropriate authorities for endorsement and funding support, including to the SPC/Heads of Fisheries Meeting, the SPC Pacific Plant Protection Organization, the FAO Committee on Fisheries (COFI) and the COFI Subcommittee on Aquaculture, and to the Secretariat of the Pacific Regional Environment Programme (SPREP).

Vision

18. The PICTs Regional Aquatic Animal Health Strategy will develop and maintain a sustainable aquaculture sector, protect the environment and provide socio-economic benefits to all members of society through enabling policies, enhanced investment and improved technical capacity, leading to a better understanding of the regional aquatic animal health status in order to meet international standards and ensure food safety and security through environmentally friendly practices.

Guiding Principles

Principle 1 - Aquatic animal health management should enable aquaculture to make a positive contribution to the economies of PICTs through being internationally competitive in the marketplace and economically viable at a national level.

Principle 2 - Aquatic animal health management measures should facilitate aquaculture to develop in harmony with nature, managing and minimizing transient environmental impacts and avoiding significant, cumulative, long-term or irreversible changes to ecological systems, to cultural remains or to valued landscape and scenery.

Principle 3 - Aquatic animal health measures should foster strong aquaculturists' links, recognizing and supporting the needs of private-sector aquaculturists and working with community initiatives to manage local environments for mutual benefit.

Principle 4 - National aquatic animal health programmes should contribute to social, economic and environmental sustainability and embrace the precepts of transparency, integration, coordinated government and fit-for-purpose regulation, partnership and stakeholder participation, accountability, ethics and regard for animal welfare, and a culture of best practice and continuous improvement.

Principle 5 - Aquatic animal health is important for economic, social, development and public resource purposes. Collaboration among all stakeholders including governments, public institutions, the private sector and existing aquaculture and fishing industries is important to achieve effective health management.

Principle 6 - The role of aquatic animal health management is to reduce the risks arising from the culture, the reproduction, the potential entry, establishment or spread of pathogens and the diseases they cause. This is necessary to protect living aquatic resources, the natural aquatic environment and the aquatic biodiversity in PICTs and neighbouring regions, countries or territories.

Principle 7 - PICTs may introduce or maintain sanitary measures resulting in a higher level of protection than would be achieved by measures based on the relevant international standards, guidelines or recommendations (e.g. the OIE Aquatic Animal Health Code); however, such measures must be justifiable based on science (i.e. risk analysis) and be consistent with the country's acceptable level of protection (ALOP). Control measures applied to movements of aquatic animals within the country must also be consistent with this ALOP.

Principle 8 - The PICTs Regional Aquatic Animal Health Strategy and related procedures will adhere to international and regional standards and be harmonized on as wide a basis as possible.

Principle 9 - The aquaculture sector is encouraged to use preventative measures to limit their exposure to pathogens and disease. Such measures include but are not limited to the use of Better Management Practices (BMPs), health certification, specific pathogen free (SPF) and high health (HH) stocks, biosecurity and vaccination protocols.

Principle 10 - Health management measures will be effective, practical, cost-effective and utilize readily available resources. These resources will allow the development of appropriate national and regional policies and regulatory frameworks as required to reduce the aquatic animal health risks incorporated in the culture, reproduction and movement of aquatic animals.

Principle 11 - Access to relevant national aquatic animal health capacity (infrastructure and specialized expertise) is crucial for health management of aquatic animals. Collaboration with international organizations and countries will be sought wherever possible to further increase the capacity of PICTs in aquatic animal health issues.

Programme Elements of the Regional Aquatic Animal Health Management Strategy

19. The following are the 12 major elements of the regional strategy:

Element 1 - Policy, legislation and enforcement

Element 2 - Risk analysis

Element 3 - Pathogen lists

Element 4 - Information systems

Element 5 - Diagnostics, health certification and quarantine

Element 6 - Surveillance, monitoring and reporting

Element 7 - Zoning

Element 8 - Emergency preparedness and contingency planning

Element 9 - Research

Element 10 - Institutional structure

Element 11 - Human resource development

Element 12 - Regional and international cooperation

Activities/Projects

20. The following table presents the activities/projects that comprise the PICTs Regional Aquatic Animal Health Strategy and identifies the responsibility for their implementation.

No.	Programme Elements	Activities/Projects	Implementation		Programme Themes Addressed
			National	Regional	
1	Policy, legislation and enforcement	i. Develop and/or update national aquatic animal health strategies	x	x	Governance, Capacity Development, Information Supports all Programme Elements
		ii. Adopt national strategies and use them in national policy and planning exercises	x		
		iii. Establish functional linkages between relevant government agencies	x		
		iv. Establish an ad hoc regional/subregional working group on aquatic animal health legislation		x	
		v. Identify Competent Authority on aquatic animal health	x		
		vi. Review existing legislation, regulations, policies and laws to be determine compliance with international and regional agreements and best practice (e.g. risk analysis, health certification)	x	x	
		vii. Review import and export requirements, procedures and regulations	x	x	
2	Risk analysis	i. Review regional and national pathogen risk analysis capacity (survey)	x	x	Governance, Capacity Development
		ii. Organize regional/subregional/national training/workshops for aquaculture risk analysis	x	x	Supports elements 5,6,7
3	Pathogen lists	i. Develop regional pathogen list	x	x	Supports elements 2,4
		ii. Develop national pathogen lists	x		

No.	Programme Elements	Activities/Projects	Implementation		Programme Themes Addressed
			National	Regional	
4	Information systems	i. Establish a Regional Aquatic Animal Health Information System, to include: <ul style="list-style-type: none"> • regional cultured species database • pathogen database • regional aquatic animal import/export database • regional legislation database • regional aquatic animal health expert database 		x	Information Supports all elements
5	Diagnosics, health certification & quarantine	i. Assess national capacity and needs for aquatic animal health diagnostics (survey) ii. Short-term training courses on Level 2 and 3 diagnostics techniques iii. Regional training course on Level 1 disease diagnosis iv. Official designation of a regional or subregional laboratory for aquatic animal health v. Conduct training on sampling and packaging procedures for disease testing vi. Review import and export requirements, procedures and regulations vii. Improve existing national AAH laboratories in PICTs viii. Conduct training at regional and national levels on quarantine protocols for aquatic animals ix. Develop minimum recommended quarantine procedures (SOPs) for regional compliance	x		Capacity Development Supports elements 1,2,3,4,6,7,8,11,12
6	Surveillance, monitoring and reporting	i. Improve national capacity to comply with OIE World Aquatic Animal Health Information System (WAHIS) reporting (national and regional reporting and feedback system) ii. Establish a design for a regional surveillance system for a list of priority diseases iii. Implement general and targeted surveillance systems at national levels	x	x	Governance, Capacity Development, Information Supports elements 1,2,3,4,7,8,11,12

No.	Programme Elements	Activities/Projects	Implementation		Programme Themes Addressed
			National	Regional	
7	Zoning	i. Conduct case studies on understanding the concept of disease zoning ii. Develop/improve national aquaculture farm registration systems based on GIS	x	x	Capacity Development Supports element 8
8	Emergency preparedness and contingency planning	i. Develop emergency response plans for key diseases, including task force and SOPs and conduct simulation exercises	x	x	Governance, Capacity Building
9	Research	i. Collect baseline data on health status of cultured species and wild populations ii. Conduct research on the effect of Mozambique and Nile tilapias on local biodiversity iii. Identify the cause of declining seaweed production iv. Identify the cause of giant clam not spawning v. Conduct population identification studies on local stocks of milkfish	x x x x	x x x x	Capacity Building. Information Supports elements 2,3,7
10	Institutional structure	National responsibility			
11	Human resource development	i. Develop and establish competency of border security team for enforcement of regulations, inspection & quarantine, etc.	x	x	Governance
12	Regional and international cooperation	i. Develop a regional reference laboratory to assist PICTs with disease diagnostics in order to improve existing quarantine measures for aquatic animals (e.g. sample processing, pathology, molecular analysis) ii. Establish a regional aquatic animal health website, communication strategies and networking iii. Establish linkages and cooperation between regional and international laboratories	x	x	

Appendix II: Draft PICT Regional Aquatic Species Introduction Strategy

Objectives	Activities
1.Improve regulatory framework for species introduction	I. Review available legislation in the region and develop appropriate national legislation. II. Explore the development and use of voluntary versus legally binding international or regional instruments to achieve responsible use and control of aquatic species introductions
2.Build capacity of Competent Authority	Improve skills of local personnel
3.Develop database on species introduction	Conduct training on proper use of databases and other instruments
4.Improve linkages at national and regional level	Conduct meetings with stakeholders, e.g. fisheries, biosecurity, environment, business partners
5.Clarify and improve international instruments and guidelines applicable to aquatic species introduction	I. Develop streamlined international guidelines which are more straight forward and less time consuming. II. Develop a set of guidelines for PICTs regarding aquatic species introductions and translocations. III. Develop biosecurity measures templates (e.g. import standards, quarantine protocols) for commodities that are actively transported within the region
6. Improve capacity on applying aquaculture risk analysis	Organize regional/sub-regional/national risk analysis training