

Procedures for the quarantine of live aquatic animals

A manual



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Inset, top left: Examining fish samples. Courtesy of J. Yulin/China.

Inset, bottom right: Trout farm in Bosnia and Herzegovina; FAO/R.P. Subasinghe.

Centre collage, clockwise from top left: Typical severe mycotic granulomas from muscle section of fish with epizootic ulcerative syndrome; FAO/M.G. Bondad-Reantaso. Inner shell of *Pinctada maxima* showing *Polydora*-related shell damage or mud-filled blisters; FAO/M.G. Bondad-Reantaso. Necrotic gills of koi herpes virus-infected koi carp; FAO/R.P. Subasinghe. Carapace of shrimp showing distinctive white spots of white spot syndrome virus; FAO/R.P. Subasinghe.

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by

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Preparation of this document

This manual was prepared as part of FAO's continuing effort to provide valuable information sources that can be used to improve aquatic animal biosecurity at the regional, national and local levels. The development of capacity to quarantine aquatic animals is in line with *FAO Technical Guidelines for Responsible Fisheries No. 5, Suppl. 2. Aquaculture development. Health management for responsible movement of live aquatic animals*, the second supplement of a series of technical guidelines that support the aquaculture development within the FAO's *Code of Conduct for Responsible Fisheries*.

This document is one of a number of publication outputs under the Aquatic Animal Biosecurity Project implemented by the Aquaculture Management and Conservation Service of the FAO Fisheries and Aquaculture Department and funded under the Strategic D1 Objective of FAO's Cooperation Agreement with Norway, one of the aims of which is to strengthen national capacities to promote an integrated biosecurity approach.

Abstract

Quarantine is an important risk management measure and a key activity that should be considered when developing national strategies for aquatic animal health management. It can also be used effectively to increase biosecurity at the farm production level.

This manual outlines the technical requirements for setting up quarantine facilities at three levels, based on the general level of risk (as determined by risk analysis) represented by the specific consignment of aquatic animals being moved: (i) the quarantine of “high risk” species (e.g. aquatic animals being moved either internationally through introductions and transfers or domestically between regions of different health status that are destined for use in aquaculture, capture fishery development or other applications where release or escape of animals or any pathogens they may be carrying into the natural environment is likely to occur; (ii) the quarantine of “lower risk” species (e.g. aquatic animals destined for the ornamental trade) to improve biosecurity for aquatic animals whose trade is an established practice; and (iii) the routine quarantine of aquatic animals at production facilities (e.g. new, domestically produced or locally captured broodstock or juveniles or animals whose movement has been contingent upon additional, more stringent, risk management measures, such as the use of Specific Pathogen Free stocks, international health certification, pre-border and/or border quarantine, etc.).

This manual should be useful to government policy-makers and responsible national and state agencies in assessing their need for quarantine capacity and in implementing aquatic animal quarantine in an effective and cost-efficient manner within the framework of national and state aquatic biosecurity programmes. It also provides useful guidance to responsible agencies, their technical staff and the private sector in setting up of effective quarantine facilities and their daily operation.

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Abbreviations and acronyms

AGND	Nutrition and Consumer Protection Division (FAO)
AGPP	Plant Protection Service (FAO)
ALOP	appropriate level of protection
ALOR	acceptable level of risk
APEC	Asia-Pacific Economic Cooperation
AQIS	Australian Quarantine and Inspection Service
ASEAN	Association of Southeast Asian Nations
ASEC	ASEAN Secretariat
BMPs	Better management practices
CA	Competent Authority
CCRF	Code of Conduct for Responsible Fisheries
CFHPR	Canadian Fish Health Protection Regulations
CuSO₄	Copper sulfate
DAFF	Department of Agriculture, Fisheries and Forestry, Australia
DFO	Department of Fisheries and Oceans, Canada
EIFAC	European Inland Fisheries Advisory Commission
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FIES	Fisheries and Aquaculture Information and Statistics Service (FAO)
FIMA	Aquaculture Management and Conservation Service (FAO)
F1	Filial generation
GPS	Global positioning system
KMN₀₄	Potassium permanganate
ICES	International Council for the Exploration of the Sea
LFHO	Local Fish Health Officer
MAF	Ministry of Agriculture and Fisheries, New Zealand
NACA	Network of Aquaculture Centres in Asia-Pacific
OIE	World Organisation for Animal Health (formerly the Office international des épizooties)
PCR	polymerase chain reaction
PEI	Prince Edward Island
pH	potential of hydrogen
PL	postlarvae
ppm	parts per million
SOPs	standard operating procedures
SPF	specific pathogen free
SPR	specific pathogen resistant

TAADs transboundary aquatic animal diseases
UV Ultraviolet