The FAO Fisheries and Aquaculture Department has published the hard copy and CD-ROM of the Glossary of aquaculture. The glossary was already available online at http://www.fao.org/fi/glossary/aquaculture/ since April 2006. However in order to target a wider audience and particularly to make it available for those not having easy internet connection, it has been decided to produce a hard copy as well as a CD-ROM containing the same copy of the online version.

This aquaculture glossary was prepared by the Aquaculture Management and Conservation Service of the FAO Fisheries and Aquaculture Department and funded by the regular programme. This publication aims (i) to facilitate communication among technical experts and scientists involved in aquaculture research and development; and (ii) to enhance communication between aquaculture research and development technicians and scientists, developers, consultants and users from other disciplines such as administrators, agriculturists, economists, engineers, environmentalists and policymakers.

The glossary contains approximately 2,500 terms and includes definitions, information sources, synonyms and related terms when available. It has been compiled using existing textbooks and glossaries, in particular those already prepared by various services of the organization, namely the Fisheries and Aquaculture Department and the Agriculture and Consumers Protection Department.

The glossary is presented in the following format: terms, definitions, information sources, aquaculture subject areas, synonyms, related terms and images.

Terms and definitions are available in five FAO official languages (English, French, Spanish, Arabic and Chinese) in the same page of the hard copy or the user can get instant translation from English, French, Spanish, Arabic and Chinese by clicking on the related language in the CD-ROM and the online version. The whole glossary is available as a PDF file in the entry page of the CD-ROM and at the end of each subject area.

This glossary will be revised continuously and updated with inputs from the users. Suggestions of new terms or definitions, comments on current terms and submission of new images are strongly encouraged. Submissions can be made simply by completing specific forms available on the Web site which are sent to the FAO-Glossary administrators for validation and then uploaded onto the online version.

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World bivalve production and consumption has increased significantly during recent years, from a combined total for wild catch and aquaculture of approximately 10.7 million tonnes in 1999 to 14 million tonnes in 2006. Furthermore, the development of freight by air and sea and preservation techniques has enabled consumers, in different parts of the world, to enjoy eating bivalves produced in distant waters. Such developments in distribution and trade have in turn led to emerging challenges for consumer protection, particularly in relation to the safety of bivalves from pathogenic micro-organisms. Several species of bivalves are consumed live or raw (e.g. oysters), or lightly cooked (e.g. mussels) which make them a high risk food product category requiring proper control measures to eliminate or reduce to acceptable levels potential biological, chemical and physical hazards. This document is intended to provide a basic introduction to the public health problems that can be associated with shellfish consumption and to provide guidance to the bivalve industry as to how a depuration centre, and the associated systems, should be planned, constructed and operated. It is mainly targeted at new operators or those with limited experience, as well as fishery and public health officers who deal with the bivalve industry. This is of particular importance for several developing countries, where the bivalve industry is expanding quickly with the aim of winning an ever larger share of the bivalve international market.


Aquaculture in the Southeast Asian region has been growing steadily over the last few decades, requiring more space to accommodate it. The search for additional areas to expand the aquaculture industry as a whole and the identification of new farming species of commercial value to satisfy the growing local and export markets are pushing the sector in some countries to broaden activities in the sea, including further offshore where more space is available and where, to a lesser extent, competition is currently not so intense. The Fisheries and Aquaculture Department of the Food and Agriculture Organization of the United Nations (FAO) in collaboration with the Network of Aquaculture Centres in Asia-Pacific (NACA) organized the regional workshop entitled “The Future of Mariculture: a Regional Approach for Responsible Development in the Asia-Pacific Region” from 7 to 11 March 2006. The workshop was conducted in collaboration with the Ministry of Fisheries of the People’s Republic of China and the Guangdong Ocean and Fisheries Administration. The workshop was convened in response to requests from FAO and NACA Member countries to identify key trends and issues affecting mariculture growth in the Asia-Pacific region and to strengthen regional collaboration for future responsible development of mariculture.


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.


The FAO Expert Workshop on the Use of Wild Fish and/or Other Aquatic Species as Feed in Aquaculture and its Implications to Food Security and Poverty Alleviation was convened in Kochi, India, from 16 to 18 November 2007. It was attended by a wide range of researchers, development specialists and industrial experts in aquaculture from around the globe and was hosted by the Marine Products Export Development Authority (MPEDA), India. The workshop was organized with three objectives: a) to review and analyse the status and trends of feed/reduction fisheries and the use of low-value/trash fish in aquaculture production; b) to identify key issues and challenges for sustainability of these fisheries in relation to food security, poverty alleviation, long-term ecological sustainability and environment; and c) to prepare an outline for technical guidelines on the “Use of wild fish and other aquatic species as feed in aquaculture”. The workshop consisted of technical presentations and working group discussions. The technical presentations were intended to orient the participants about the interregional commonalities, differences and issues pertaining to the use of wild fish as feed in aquaculture and included regional reviews, case studies, a global synthesis and a number of invited presentations. The workshop served to address the following thematic areas and other issues of significance emerging from the regional reviews and case studies: a) fisheries management; b) policy development; c) food security; d) poverty alleviation; e) social and ethical issues; and f) aquaculture technology and development. Following several working group deliberations, the workshop agreed on a series of principles and guidelines on the use of wild fish as feed in aquaculture, concluded that such use should be governed by the above guiding principles and recommended a number of actions for the FAO to undertake to address issues raised. The workshop proceedings including the working group discussions and recommendations, regional reviews, case studies and global synthesis will form the basis of two major documents: a) an FAO Fisheries Technical Paper “Fish as feed inputs for aquaculture and its implication to food security and poverty alleviation”; and b) FAO Technical Guidelines for Responsible Fisheries on the “Use of wild fish and other aquatic species as feed in aquaculture”. The Technical Paper will include the global synthesis, regional reviews and case studies, as well as a summary of key issues and findings on the status and trends in feed/reduction fisheries is currently in preparation and will be published in due course.


Aquaculture is a diverse and multibillion dollar economic sector that uses various strategies for fish production. The harvesting of wild individuals from very early stages in the life cycle to large mature adults for on-growing under confined and controlled conditions is one of these strategies. This system, referred to as capture-based aquaculture, is practised throughout the world using a variety of marine and freshwater species with important environmental, social and economic implications. The need to evaluate the sustainability of this farming practice in light of its economic viability, the wise use of natural resources and socio-environmental impacts as a whole has been extensively discussed at national, regional and international levels. This publication contains technical information prepared in support of and background material for the “FAO international workshop on technical guidelines for the responsible use of wild fish and fishery resources for capture-based aquaculture production” held in Viet Nam in October 2007. This publication contains two parts. Part 1 consists of two reviews on (a) environmental and biodiversity and (b) social and economic impacts of capture-based aquaculture and Part 2 consists of eleven species review papers. Both marine and freshwater examples have been reviewed and include finfish (mullet, bluefin tuna, European eel, cod, grouper, yellowtail, Claris catfish, Indian major carps, and snakehead and Pangasiid catfish), crustaceans (mud crab) and molluscs (oyster).