



Organisation
Mondiale
de la Santé
Animale

World
Organisation
for Animal
Health

Organización
Mundial
de Sanidad
Animal

72 SG/12/CS4 B

Original: English
October 2003

REPORT OF THE MEETING OF THE BUREAU OF THE OIE AQUATIC ANIMAL HEALTH STANDARDS COMMISSION

Paris, 6–10 October 2003

The Bureau of the OIE Aquatic Animal Health Standards Commission (in brief, Aquatic Animals Commission) met at the OIE headquarters from 6 to 10 October 2003. The meeting was chaired by Dr Eva-Maria Bernoth, President of the Commission, and Dr Ricardo Enriquez, Secretary General, acted as Rapporteur. Prof. Donald Lightner and Dr Franck Berthe joined the meeting for certain agenda items. The Commission was welcomed by Dr Alejandro Schudel, Head, OIE Scientific and Technical Department, on behalf of the Director General, Dr Bernard Vallat. Dr Schudel explained the new meeting schedule for the OIE Specialist Commissions, which will require them to meet jointly in January of each year. The Bureau of the Commission will meet on at least one further occasion during the same year. Dr Vallat joined the meeting on the 9th October and clarified several points that are discussed elsewhere in this report.

The Agenda and List of Participants are given at [Appendices I](#) and [II](#), respectively.

1. Member Country comments on the report of the previous meeting (June 2003)

Member Country comments were considered in detail and, where agreed, appropriate changes were made to the *Aquatic Code* chapters. Consideration of these comments necessitated new definitions for a number of items, such as basic disease security conditions and official declaration of freedom from disease, and revisions of Articles in Chapters 1.1.2., 1.3.1., 1.5.2 and 1.5.5 (see [Appendices III](#) to [VII](#), on which Member Countries are invited to send comments by **30 December 2003**). Amendments to the draft disease chapters in the *Aquatic Code* and the revised list of diseases are discussed below (see Items 2.2 and 2.3).

2. Aquatic Animal Health Code

2.1. Planning the seventh edition of the *Aquatic Code*

The Bureau of the Aquatic Animals Commission discussed the need to reconsider the relative contents of the *Aquatic Code* and *Aquatic Manual* in view of inconsistencies with the contents of the *Terrestrial Code* and *Terrestrial Manual*. This issue will be progressed at the Commission meeting in January 2004.

OFFICE INTERNATIONAL
DES EPIZOOTIES



12, rue de prony

75017 paris france

tél. 33 (0)1 44 15 18 88

fax 33 (0)1 42 67 09 87

www.oie.int

oie@oie.int

2.2. Revision of the list of diseases

Some Member Countries raised concern with [Appendix IX](#) of the June report, which contained proposals for the delisting of certain diseases based on the application of the adopted criteria for listing an aquatic animal disease. Although certain arguments were put forward in support of retaining some of these diseases, the Commission agreed that the claims made so far were not sufficiently detailed for a decision to be reached. The Commission would ask Member Countries to provide fuller justification, supported by scientific evidence and reasoning, for consideration at its January 2004 meeting. Member Countries will need to develop the justification taking into account the revised disease chapters in the *Aquatic Code* (see Item 2.3 below). The Commission reviewed the revised list and made some further amendments: for epizootic haematopoietic necrosis virus (EHNV), it has been decided to separate the disease into EHNV, European sheatfish virus (ESV) and European catfish virus (ECV) in accordance with advice received from the Reference Laboratory, which stated that it is possible to identify the three agents using molecular biology techniques. The opinion of the International Committee on Taxonomy of Viruses (ICTV) regarding the classification of iridovirus and yellowhead virus, will be sought. For white spot disease (WSD), it is suggested to modify the disease notification criteria 2 because the effect of the virus on wild aquatic animals is only suspected and has not yet been published (see [Appendix VIII](#), on which Member Countries are invited to send comments by **30 December 2003**).

Member Countries are reminded that the primary purpose of listing a disease is for the OIE to collate information on its occurrence world-wide and for exporting countries to make available to trading partners details of the disease status in the exporting country.

2.3. New template for *Aquatic Code* disease chapters for fish, molluscs and crustaceans

The Bureau, together with Prof. Lightner and Dr Berthe, considered the comments made by Member Countries on the draft chapters on epizootic haematopoietic necrosis, infection with *Marteilia refringens* and white spot disease. Substantial changes were made in response to these comments, and further improvements were identified during the discussion. The revised new templates illustrate these amendments: for epizootic haematopoietic necrosis see [Appendix IX](#), for infection with *Marteilia refringens* see [Appendix X](#), and for white spot disease see [Appendix XI](#). Member Countries are invited to send comments on these three Appendices by **30 December 2003**. Based on comments received, the Commission will prepare draft disease chapters for all diseases on the revised list at the January 2004 meeting for comment prior to finalisation and submission for adoption by the International Committee at the 72nd General Session in May 2004.

2.4. New chapter on the general principles of disinfection of aquaculture establishments

The Bureau of the Commission agreed that there needs to be general chapter on the general principles of disinfection of aquaculture establishments in the *Aquatic Code*. A draft will be prepared for consideration by the Commission at its meeting in January 2004.

2.5. Harmonisation of the naming principles for diseases of fish, molluscs and crustaceans

The Bureau of the Commission considered the case for renaming the diseases of fish along the lines of the naming of mollusc diseases, i.e. 'Infection with disease agent', but decided that it was preferable to retain the existing name and define the disease in each chapter in the *Aquatic Code* as an 'infection with [name of agent]', e.g. epizootic ulcerative syndrome means infection with *Aphanomyces invadans*. The crustacean disease names will be reviewed at the Commission meeting in January 2004. This exercise will be completed when the new disease list is adopted by the International Committee.

2.6. Development of guiding principles for the listing of closely related disease agents

The Bureau of the Commission agreed to approach OIE Reference Laboratories for advice on whether the closely related disease agents currently identified in the same disease chapters should be regarded as causing distinct diseases that should be treated separately, as was done for the chapters on Tetrahedral baculovirosis (*Baculovirus penaei*) and Spherical baculovirosis (*Penaeus monodon*-type baculovirus) and is proposed for epizootic haematopoietic necrosis (see [Appendix VIII](#)). After consideration of the responses, the Commission will consult with the Terrestrial Animal Health Standards Commission on the implications of taking this approach.

3. Manual of Diagnostic Tests for Aquatic Animals

3.1. Planning the fifth edition of the *Aquatic Manual*

The Bureau of the Aquatic Animals Commission discussed the need to reconsider the relative contents of the *Aquatic Code* and *Aquatic Manual* in view of inconsistencies with the contents of the *Terrestrial Code* and *Terrestrial Manual*. It will also be necessary to bring the *Aquatic Manual* chapters in line with the changes being made to the chapters in the *Aquatic Code*. This will be progressed at the Commission meeting in January 2004.

3.2. OIE procedure for validation and certification of diagnostic assays (test methods) for infectious animal diseases

The Bureau of the Commission was informed about progress being made towards developing an OIE procedure for validation and certification of diagnostic assays (test methods) for infectious animal diseases. The Bureau agreed that it would monitor developments with a view to adopting the procedures for aquatic animal diagnostic tests.

3.3. Spring viraemia of carp – additional diagnostic method

Following a request from a Member Country to include the polymerase chain reaction method for confirmatory identification of spring viraemia of carp virus (SVCV) in the disease chapter in the *Aquatic Manual*, the OIE Reference Laboratory produced the draft at [Appendix XII](#), on which Member Countries are invited to send comments by **30 December 2003**.

4. Joint meeting with the Central Bureau/Terrestrial Animal Health Standards Commission

The Bureau of the Aquatic Animals Commission was joined by Dr David Wilson, Head of the International Trade Department, and Dr Alejandro Thiermann, President of the OIE Terrestrial Animal Health Standards Commission.

4.1. Update on implementation of new disease list (date January 2005)

Dr Wilson explained that at the 71st General Session the International Committee asked that the List A and List B diseases of terrestrial animals be abolished and that all the listed diseases be merged into a single list. The next step is for Member Countries to propose new diseases for listing, based on the new listing criteria, in time for implementation of the new reporting arrangements by the target date of January 2005. Reporting requirements for the new single list of aquatic animal diseases (see 2.2 above) will be implemented at the same time.

4.2. OIE Working Group on Animal Welfare

Dr Wilson reported that the OIE Working Group on Animal Welfare, which includes Prof. Tore Håstein as an aquatic representative, has met several times in preparation for the OIE Global Conference on Animal Welfare, to be held at the OIE headquarters in February 2004. The presentations will include general topics such as pain, stress, starvation, etc., and aquatic animal welfare will be covered. Information on the conference is available on the OIE website.

Four expert groups will develop guiding principles for land-based transport, sea transport, humane slaughter and killing for disease control purposes, for inclusion in the *Terrestrial Code*.

4.3. Transport of pathogens (risk categorisation of aquatic animal pathogens)

Dr Schudel reported on a meeting entitled 'Infectious Substances – Transport by Air After January 2005', held by the Centers for Diseases Control and Prevention (CDC), United States of America, which had been attended by Dr J.E. Pearson, on behalf of the OIE. The ICAO¹ Dangerous Goods Panel is reviewing the IATA² regulations with a view to facilitating the shipment of diagnostic specimens to laboratories. New regulations are expected to be adopted from January 2005 in which diagnostic specimens that do not contain pathogens considered to be 'dangerous goods' under UN 2814 (human infections) or UN 2900 (animal infections) may be shipped under the less stringent requirements of UN 3373. The draft lists of pathogens had been drawn up on advice from WHO³. It was noted that none of the examples of pathogens classed as 'dangerous goods' under UN codes 2814 or 2900 were related to diseases of aquatic animals. Under the proposed new regulations therefore aquatic animal samples and organisms can be shipped under the less stringent requirements of 'diagnostic samples' (UN 3373). However, any pathogen that has been amplified or propagated to generate a high concentration must be shipped under UN codes 2814 or 2900. In view of this, Prof. Barry Hill undertook to amend Chapter 1.5.6 of the *Aquatic Code* in time for review by the Commission at the next meeting of (January 2004).

4.4. Availability of *Aquatic Code* and *Aquatic Manual* to visually impaired people and those without language skills in English, French, or Spanish

Prof. Hill inquired whether the Central Bureau has given any consideration to making the *Aquatic Code* and *Aquatic Manual* available in languages other than English, French, or Spanish, or to visually impaired people through means of text-to-voice conversion, to make those documents more widely accessible. Dr Wilson informed the Bureau of the Aquatic Animals Commission that translation into other languages is being considered where external funds have been offered to support this. Production of copies in Braille could also be considered subject to external funding becoming available. He pointed out that the *Aquatic Code* and *Aquatic Manual* are available electronically on the OIE website, but thought will be given to ways and means to making the documents accessible to visually impaired people.

4.5. Continuing work on harmonisation of horizontal chapters in both *Aquatic* and *Terrestrial Codes*

Drs Wilson and Thiermann informed the meeting that work on harmonising chapters on topics such as surveillance, epidemiology, and risk analysis in both *Aquatic* and *Terrestrial Codes* continues. An expert group reporting to the Scientific Commission for Animal Diseases will be established to drive this process forward. The meeting agreed that this group should have an aquatic representative. It is planned that a single code containing all the general principles applicable to terrestrial and aquatic animals will ultimately be produced.

As a step towards harmonisation of the *Aquatic* and *Terrestrial Codes*, references to disease free aquaculture establishments in the *Aquatic Code* were removed in the proposed disease chapters (see Item 2.3.). All model international aquatic animal health certificates were also revised (see [Appendix XIII](#), on which Member Countries are invited to send comments by **30 December 2003**).

5. The role and activities of the OIE in the field of aquatic animals

5.1. Presentations at international meetings and workshops

Prof. Tore Hastein, the Former President of the Aquatic Animals Health Commission, represented the OIE at the Second Session of the COFI⁴ Sub-Committee on Aquaculture, which was held in Trondheim, Norway, 7–11 August 2003. The Bureau of the Commission noted his mission report and agreed with his conclusion that OIE be represented at such meetings in the future in order to increase awareness of the role of the OIE in aquatic animal health to those unfamiliar with it.

1 ICAO: International Civil Aviation Organization

2 IATA: International Air Transport Association

3 WHO: World Health Organization

4 COFI: Food and Agriculture Organization of the United Nation Commission on Fisheries

6. OIE Reference Laboratory activities

6.1. Updating the list of OIE Reference Laboratories

The Commission recommends acceptance of the following two new applications for OIE Reference Laboratory status:

Yellowhead disease

Australia Animal Health Laboratory (AAHL), CSIRO⁵ Livestock Industries, Private Bag 24, Geelong, Victoria 3220, Australia.

Tel.: (+61.3) 52.27.50.00, Fax: (+61.3) 52.27.55.55; E-mail: peter.walker@csiro.au

Designated Reference Expert: Dr Peter Walker.

Crayfish plague (Aphanomyces astaci)

Institute of Zoology, Fish Biology and Fish Diseases, Kaulbachstr. 37, 80539 Munich, Germany.

Tel.: (+49-89) 21.80.22.83, Fax: (+49-89) 28.67.57.71, E-mail: oidtmannb@rki.de

Designated Reference Expert: Dr Birgit Oidtmann.

7. Meeting with the Head of the Animal Health Information Department

7.1. Accuracy of disease reporting

The meeting was joined by Dr Karim Ben Jebara, Head, Animal Health Information Department. The meeting discussed the continuing problems in the timeliness and accuracy of disease reporting to the OIE by some OIE Member Countries, and whether information gathered by OIE Reference Laboratories could be better used to improve this situation. It was agreed that a letter should be sent from the Director General to all OIE Reference Laboratories for aquatic animal diseases advising them that when informing the Delegate of an OIE Member Country of diagnostic findings that fulfil the criteria for notification of aquatic animal diseases to also inform the OIE Central Bureau.

Dr Bernoth raised the issue of inconsistencies between data on aquatic animal diseases submitted by some Member Countries for inclusion in Handistatus II and those published by the OIE Regional Representation for Asia and the Pacific in the quarterly aquatic animal disease reports. Dr Ben Jebara explained that the entire OIE disease information management system will be revised to accommodate the new disease lists for aquatic and terrestrial diseases and the new reporting requirements, which will be proposed for adoption at the 72nd General Session in May 2004 for implementation in January 2005. The new system will also integrate weekly, monthly, and annual reporting.

At a subsequent meeting with the Director General, the Commission emphasised its growing concern with the declining quality and continuing indifference of aquatic animal disease reporting from some Member Countries and suggested suspension of the payment of per diems to those Delegates concerned.

7.2. Status of Aquatic Animals Commission Internet activities

Dr Bernoth raised the issue of access to Member Countries' aquatic animal disease emergency management plans through the OIE web site. Dr Ben Jebara replied that the page on the OIE web site on national disease contingency plans now included a section for aquatic animals. This page can be consulted at http://www.oie.int/eng/info/en_prepaurgence.htm.

5 CSIRO: Commonwealth Scientific and Industrial Research Organisation

7.3. Collaborating Centre – status of disease database; mapping facility

Prof. Hill reported on progress in developing a mapping facility for the international database on aquatic animal diseases. The mapping facility being developed for terrestrial animal diseases by DEFRA⁶ (the host of the aquatic animal database) in the United Kingdom, which it had been hoped could be applied to the aquatic database, has proved to be too costly for this purpose. He enquired of Dr Ben Jebara whether the disease mapping programme being developed for Handistatus II could be used for the aquatic disease data. Dr Ben Jebara responded that this might be possible but it would have to await the outcome of the reconstruction of the disease information management system.

Prof. Hill pointed out that some of the disease names used in the current aquatic database have not been changed to those used in the *Aquatic Code*, but proposed to await the adoption of the new single list of diseases by the International Committee.

8. Any other business

8.1. Cooperation and partnership with other international and regional organisations

8.1.1. FAO⁷, and other international organisations

Dr Rohana Subasinghe had circulated for approval by the Commission the document entitled 'Surveillance and Zoning for Aquatic Animal Diseases', which is the output of the FAO/DFO Canada⁸/OIE Expert Consultation on Surveillance and Zonation for Responsible Movement of Live Aquatic Animals: A Framework for Reducing the Risk of Trans-Boundary Spread of Aquatic Animal Diseases, which was held from 14 to 18 October 2002 in Rome, Italy. The Commission found that the document in its present form was not ready for OIE approval. Detailed comments will be sent to Dr Subasinghe by the President of the Commission.

8.1.2. Second annual meeting of the Asia Regional Advisory Group for Aquatic Animal Health, Bangkok, Thailand, 10–12 November 2003

The President of the Commission informed the meeting that she will attend and represent the Commission at the above-named meeting. The President will provide a verbal update to the meeting on the outcomes of the June and October meetings of the Aquatic Animals Commission. The Commission requested that the President take the opportunity to emphasise the need to align the regional quarterly aquatic animal disease reporting with the new provisions for notification and epidemiological information in the *Aquatic Code*.

8.1.3. Cooperation between Fishery and Veterinary Authorities, Conference of the OIE Regional Commission for Asia, the Far East and Oceania, Noumea, New Caledonia, 25–28 November 2003

In January 2002, the Aquatic Animals Commission had suggested to the OIE that aquatic animal health should be a Technical Item at the 23rd Conference of the OIE Regional Commission for Asia, the Far East and Oceania, to be held in Noumea, New Caledonia. This proposal was accepted, demonstrating the importance placed by the OIE on aquatic animal health. In preparation for the Conference, a questionnaire had been circulated to Member Countries in the region. The President of the Commission presented the draft report, which draws upon the findings of the questionnaire, and the Bureau of the Commission provided comments that will assist the President in finalising this Technical Item. The purpose of the report will be to demonstrate the current low level of interest in aquatic animal health matters shown by Veterinary Authorities in some Member Countries, deficiencies in communications between Veterinary Authorities and other Competent Authorities involved in aquatic animal health, and inaccuracies and inconsistencies in aquatic animal disease reporting to the OIE. Recommendations on how to improve this situation will be drafted for the Regional Commission with a view to presenting them to the International Committee in May 2004.

6 DEFRA: Department of Environment, Food and Rural Affairs (of the United Kingdom)

7 FAO: Food and Agriculture Organization of the United Nations

8 DFO: Federal Department of Fisheries and Oceans (Canada)

The Aquatic Animals Commission intends to make similar presentations at other Regional Commission Conferences.

8.1.4. Aquaculture Biosecurity: Approaches to the Prevention, Control, and Eradication of Aquatic Animal Disease (Special Session of World Aquaculture Society Triennial Conference, 'Aquaculture 2004', Hawaii, 1–5 March 2004)

The President of the Commission will represent the Aquatic Animals Commission at this Conference. Profs Hill and Lightner will also attend, and contribute to increasing awareness of the work of the Aquatic Animals Commission.

8.1.5. International Symposium on Veterinary Epidemiology and Economics (ISVEE 10, Viña del Mar, Chile, November 2003)

The Bureau of the Commission noted that there will be a session on aquatic animal epidemiology at the above-named symposium and that it is proposed to hold the inaugural meeting of the International Society for Aquatic Animal Epidemiology in conjunction with this symposium. It was agreed that Dr Enriquez should attend this session, as it would be useful for the Commission to be represented at these meetings.

8.2. Amphibian disease issues – Evaluation of the OIE Questionnaire on amphibian diseases

As decided at the June meeting of the Commission, Prof. Hill has sought alternative sources of information on international trade in live amphibians through representatives of the aquatic pet industry. The indication so far is that the trade in pet amphibians is of limited scale and may not be sufficient to present significant risk of disease transfer. However it is understood that there is a larger trade in live amphibians, in particular of edible frogs, for cultivation. Details of this trade are still awaited from the FAO. Prof. Hill will continue to pursue the matter in order for the Commission to reach a decision on whether there is a need to include amphibians within its remit.

8.3. Review of Aquatic Animals Commission work plan for 2003–2004

The Bureau of the Commission updated the work plan for the rest of 2003 and for 2004 (see [Appendix XIV](#)).

8.4. Dates of next meetings

The next meeting of the Aquatic Animals Commission will be from 5 to 9 January 2004.

.../Appendices

**MEETING OF THE BUREAU OF
THE OIE AQUATIC ANIMAL HEALTH STANDARDS COMMISSION**

Paris, 6–10 October 2003

Agenda

- 1. Member Country comments on the report of the previous meeting (June 2003)**
- 2. *Aquatic Animal Health Code***
 - 2.1. Planning the seventh edition of the *Aquatic Code*
 - 2.2. Revision of the list of diseases
 - 2.3. New template for *Aquatic Code* disease chapters for fish, molluscs and crustaceans
 - 2.4. New chapter on general principles of disinfection of aquaculture establishments
 - 2.5. Harmonisation of the naming principles for diseases of fish, molluscs and crustaceans
 - 2.6. Development of guiding principles for the listing of closely related disease agents
- 3. *Manual of Diagnostic Tests for Aquatic Animals***
 - 3.1. Planning the fifth edition of the *Aquatic Manual*
 - 3.2. OIE procedure for validation and certification of diagnostic assays (test methods) for infectious animal diseases
 - 3.3. Spring viraemia of carp – additional diagnostic method
- 4. Joint meeting with the Central Bureau/Terrestrial Animal Health Standards Commission**
 - 4.1. Update on implementation of new disease list (date January 2005)
 - 4.2. OIE Working Group on Animal Welfare
 - 4.3. Transport of pathogens (risk categorisation of aquatic animal pathogens)
 - 4.4. Availability of *Aquatic Code* and *Aquatic Manual* to visually impaired people and those without language skills in English, French, or Spanish
 - 4.5. Continuing work on harmonisation of horizontal chapters in both *Aquatic* and *Terrestrial Codes*
- 5. The role and activities of the OIE in the field of aquatic animals**
 - 5.1. Presentations at international meetings and workshops
- 6. OIE Reference Laboratory activities**
 - 6.1. Updating the list of OIE Reference Laboratories
- 7. Meeting with the Head of the Animal Health Information Department**
 - 7.1. Accuracy of disease reporting
 - 7.2. Status of Aquatic Animals Commission Internet activities
 - 7.3. Collaborating Centre – status of disease database; mapping facility

8. Any other business

8.1. Cooperation and partnership with other international and regional organisations

8.1.1. FAO and other international organisations

8.1.2. Second annual meeting of the Asia Regional Advisory Group for Aquatic Animal Health, Bangkok, Thailand, 10–12 November 2003

8.1.3. Cooperation between Fishery and Veterinary Authorities, Conference of the OIE Regional Commission for Asia, the Far East and Oceania, Noumea, New Caledonia, 25–28 November 2003

8.1.4. Aquaculture Biosecurity: Approaches to the Prevention, Control, and Eradication of Aquatic Animal Disease (Special Session of World Aquaculture Society Triennial Conference, 'Aquaculture 2004', Hawaii, 1–5 March 2004)

8.1.5. International Symposium on Veterinary Epidemiology and Economics (ISVEE 10, Viña del Mar, Chile, November, 2003)

8.2. Amphibian disease issues – Evaluation of OIE Questionnaire on amphibian diseases

8.3. Review of Aquatic Animals Commission work plan for 2003–2004

8.4. Dates of next meetings

**MEETING OF THE BUREAU OF
THE OIE AQUATIC ANIMAL HEALTH STANDARDS COMMISSION**

Paris, 6–10 October 2003

List of participants

MEMBERS OF THE BUREAU

Dr Eva-Maria Bernoth (*President*)
Office of the Chief Veterinary Officer,
Agriculture, Fisheries and Forestry –
Australia, GPO Box 858, Canberra ACT
2601, AUSTRALIA
Tel.: (61-2) 62.72.43.28
Fax: (61-2) 62.73.52.37
Email: eva-maria.bernoth@daff.gov.au

Prof. Barry Hill (*Vice-President*)
CEFAS – Weymouth Laboratory
Barrack Road, The Nothe
Weymouth, Dorset DT4 8UB
UNITED KINGDOM
Tel.: (44-1305) 20.66.26
Fax: (44-1305) 20.66.27
Email: b.j.hill@cefas.co.uk

Dr Ricardo Enriquez
(*Secretary General*)
Patología Animal/Ictiopatología
Universidad Austral de Chile
Casilla 567 - Valdivia
CHILE
Tel.: (56-63) 22.11.20
Fax: (56-63) 21.89.18
Email: renrique@uach.cl

OTHER PARTICIPANT

Dr Franck Berthe
(*Member of the Commission, Mollusc expert*)
IFREMER, Laboratoire de Génétique et Pathologie, BP
133, 17390 La Tremblade, FRANCE
Tel.: (33-5) 46.36.98.43
Fax: (33-5) 46.36.37.51
Email: fberthe@ifremer.fr

OBSERVER

Prof. Donald V. Lightner (*Crustacean Expert*)
Aquaculture Pathology Section, Department of Veterinary
Science, University of Arizona, Building 90, Room 202,
Pharmacy/Microbiology, Tucson, AZ 85721, USA
Tel.: (1-520) 621.84.14
Fax: (1-520) 621.48.99
Email: dvl@u.arizona.edu

OIE CENTRAL BUREAU

Dr Bernard Vallat
Director General,
12 rue de Prony
75017 Paris
FRANCE
Tel.: (33-1) 44.15.18.88
Fax: (33-1) 42.67.09.87
Email: oie@oie.int

Dr Alejandro Schudel
Head, Scientific and Technical Dept
Email: a.schudel@oie.int

Dr Dewan Sibartie
Deputy Head, Scientific and Technical Dept
Email: d.sibartie@oie.int

Dr David Wilson
Head, International Trade Dept
Email: d.wilson@oie.int

Dr Alejandro Thiermann
President, Terrestrial Animal Health Standards
Commission
Email: a.thiermann@oie.int

Dr Karim Ben Jebara
Head, Animal Health Information Department,
Email: k.benjebara@oie.int

Ms Sara Linnane
Scientific Editor, Scientific and Technical Dept
Email: s.linnane@oie.int

SECTION 1.1.
GENERAL DEFINITIONS

CHAPTER 1.1.1.
DEFINITIONS

Article 1.1.1.1.

For the purpose of this *Aquatic Code*:

[Affected establishment

means any *aquaculture establishment* in which a *disease* included in this *Aquatic Code* has been diagnosed.]

Basic disease security conditions

means a set of conditions applying to a particular *disease*, and a particular *zone* or country, required to ensure adequate disease security, such as:

- a) the *disease* is compulsorily notifiable to the *Competent Authority*, including notification of suspicion; and
- b) an *early detection system* is in place within the *zone* or country; and
- c) import requirements to prevent the introduction of *disease* into the country or *zone*, as outlined in the *Aquatic Code*, are in place.

Crustaceans

means all life stages of *aquatic animals* belonging to the phylum Arthropoda, a large class of *aquatic animals* characterised by their chitinous exoskeleton and jointed appendages, e.g. crabs, lobsters, crayfish, shrimps, brine shrimp, prawns, isopods, ostracods and amphipods.

Early detection system

means an efficient system for ensuring the rapid recognition of signs suspicious of a *listed disease*, or an *emerging disease* situation, or unexplained mortality, in *aquatic animals* in an *aquaculture establishment* or in the wild, and the rapid communication of the event to the *Competent Authority*, with the aim to activate diagnostic investigation with minimal delay. Such a system will include the following characteristics:

- a) broad awareness, e.g. among the personnel employed at *aquaculture establishments* or involved in processing, of the characteristic signs of the *listed diseases*;
- b) veterinarians or aquatic animal health specialists trained in recognising and reporting suspicious disease occurrence;
- c) ability of the *Competent Authority* to undertake rapid and effective disease investigation;
- d) access by the *Competent Authority* to laboratories with the facilities for diagnosing and differentiating *listed* and *emerging diseases*.

Infected aquaculture establishment

means an aquaculture establishment in which a disease listed in this Aquatic Code has been diagnosed.

Official declaration of freedom from disease

means that the Competent Authority of the country concerned has formally declared the country or a zone of the country to be free from a listed disease based on implementation of the provisions of the Aquatic Code and Aquatic Manual.

Subclinical

means without clinical manifestations, for example a stage of infection at which signs are not apparent or detectable by clinical examination.

...

[] deleted

CHAPTER 1.1.2.

DISEASE NOTIFICATION CRITERIA

Article 1.1.2.1.

Criteria for listing an aquatic animal disease

Diseases proposed for listing must meet all of the relevant parameters set for each of the criteria, namely A. Consequences, B. Spread and C. Diagnosis. Therefore, to be listed, a *disease* must have the following characteristics: 1 or 2 or 3; and 4 or 5; and 6; and 7; and 8.

No.	Criteria (A–C)	Parameters that support a listing	Explanatory notes
A. Consequences			
1.		Where it occurs, the disease has been shown to cause significant production losses due to morbidity ⁹ or mortality at a national or multinational (zonal or regional) level.	There is a general pattern that the disease will lead to losses in <i>susceptible</i> ¹⁰ species, and that morbidity or mortality are related primarily to the agent and not management or environmental factors.
2.	Or	The disease has been shown to, or is strongly suspected to, negatively affect wild aquatic animal populations that are shown to be an asset worth protecting.	See above
3.	Or	The agent is of public health concern.	
And			
B. Spread			
4.		Infectious aetiology of the disease is proven.	
5.	Or	An infectious agent is strongly associated with the disease, but the aetiology is not yet known.	Infectious diseases of unknown aetiology can have equally high-risk implications as those diseases where the infectious aetiology is proven. Whilst disease occurrence data are gathered, research should be conducted to elucidate the aetiology of the disease and the results be made available within a reasonable period of time.

⁹ 'morbidity' includes, for example, loss of production due to spawning failure

¹⁰ 'susceptible' is not restricted to 'susceptible to clinical disease' but includes 'susceptible to covert infections'

No.	Criteria (A–C)	Parameters that support a listing	Explanatory notes
6.	And	Potential for international spread, including via live animals, their products and inanimate objects.	<u>International trade in aquatic animal species susceptible to the disease exists or is likely to develop and,</u> under international trading practices, the entry and establishment of the disease is a likely risk.
7.	And	Several countries/zones [are] <u>may be officially declared free</u> of the disease based on the [recommendations of the <i>Aquatic Animal Health Code</i> and <i>Manual of Diagnostic Tests for Aquatic Animals</i>] <u>general surveillance principles outlined in Chapter 1.1.4 of the <i>Aquatic Manual</i>.</u>	<i>Free countries/zones</i> could still be protected. Listing of diseases that are ubiquitous or extremely widespread would render notification unfeasible, however, individual countries that run a control programme on such a disease can demand its listing provided they have undertaken a scientific evaluation to support their request. Examples may be the protection of <i>broodstock</i> from widespread diseases, or the protection of the last remaining <i>free zones</i> from a widespread disease.
<p>And</p> <p>C. Diagnosis</p>			
8.		A repeatable, robust means of detection/diagnosis exists.	A diagnostic test should be widely available and preferably has undergone a formal standardisation and validation process using routine field samples (see <i>OIE Manual of Diagnostic Tests for Aquatic Animals</i>).

...

[] deleted

SECTION 1.3.

**OBLIGATIONS AND ETHICS
IN INTERNATIONAL TRADE**

CHAPTER 1.3.1

GENERAL OBLIGATIONS

Article 1.3.1.1.

International trade in aquatic animals and aquatic animal products depends on a combination of health factors that should be taken into account to ensure unimpeded trade, without incurring unacceptable risks to human and aquatic animal health. As a general principle, international trade in aquatic animals and their products from populations known to be infected with a listed disease and considered to be capable of transmitting the disease should only be done with the [full knowledge] prior agreement of the importing and exporting countries.

...

[] deleted

CHAPTER 1.5.2.

**AQUATIC ANIMAL HEALTH MEASURES
APPLICABLE BEFORE AND AT DEPARTURE**

...

Article 1.5.2.2.

Each country should only undertake the exportation [from approved zones] of live *aquatic animals* or *eggs* or *gametes* destined for a country or zone or *aquaculture establishment* officially declared free from one or more of the *diseases listed by the OIE*, when the *exporting country* or zone or *aquaculture establishment* of origin is itself *officially declared free* of the same *disease(s)*. [If the *exporting country* is not declared free from *diseases listed by the OIE*] If the live *aquatic animals* or *eggs* or *gametes* originate in an *infected aquaculture establishment* or *infected zone*, with respect to the *disease(s)* in question, the *exporting country* should not [carry out the] export [of live] the *aquatic animals* or *eggs* or *gametes* [that may harbour such *disease agents*] if they have been exposed to *infection* by direct or indirect contact of a kind likely to cause transmission of the *disease agent(s)*, without the prior agreement of [unless accepted by] the *importing country*.

...

[] deleted

CHAPTER 1.5.5.

**AQUATIC ANIMAL HEALTH MEASURES
APPLICABLE ON ARRIVAL**

Article 1.5.5.1.

1. An *importing country* should only accept into its *territory*, live *aquatic animals* that have been subjected to examination by a member of the *personnel of the Competent Authority* of the *exporting country* or a *certifying official* approved by the *importing country*, and that are accompanied by an *international aquatic animal health certificate* (see Model Certificates given in Part 6).
2. An *importing country* may require sufficient advance notification regarding the proposed date of entry into its *territory* of *aquatic animals*, stating the species, quantity, means of *transport* and the name of the *frontier post*.

In addition, any *importing country* shall publish a list of the specified *frontier posts* supplied with the equipment required for conducting control operations at importation and enabling the importation and transit procedures to be carried out in the most speedy and efficacious way.

- [3. An *importing country* may prohibit the introduction into its *territory* of *aquatic animals* when the *exporting country* is considered to harbour or contain an *OIE-listed disease/disease agent* that is capable of being that transmitted to its own stock of *aquatic animals*, unless the *aquatic animals* are derived from a *zone* with equal or better *disease* status for the *disease* in question than the *zone* to which they will be introduced.]

...

[] deleted

Appendix VIII

Aquatic animal diseases currently listed in the <i>Aquatic Code</i>	Meets new disease listing criteria adopted in 2003								Retain on OIE list?
	1	2	3	4	5	6	7	8	
Epizootic haematopoietic necrosis	-	+	-	+	NA	+	+	+	Yes
<u>Infection with European sheatfish virus</u>	<u>±</u>	<u>≡</u>	<u>≡</u>	<u>±</u>	<u>NA</u>	<u>≡</u>	<u>±</u>	<u>±</u>	<u>No</u>
<u>Infection with European catfish virus</u>	<u>±</u>	<u>±</u>	<u>≡</u>	<u>±</u>	<u>NA</u>	<u>≡</u>	<u>±</u>	<u>±</u>	<u>No</u>
Infectious haematopoietic necrosis	+	+	-	+	NA	+	+	+	Yes
<i>Oncorhynchus mason</i> virus disease	?	?	-	+	NA	-	+	+	No
Spring viraemia of carp	+	+	-	+	NA	+	+	+	Yes
Viral haemorrhagic septicaemia	+	+	-	+	NA	+	+	+	Yes
Channel catfish virus disease	+	-	-	+	NA	+	+	+	Yes
Viral encephalopathy and retinopathy	-	-	-	+	NA	-	?	+	No
Infectious pancreatic necrosis	+	-	-	+	NA	+	-	+	No
Infectious salmon anaemia	+	-	-	+	NA	+	+	+	Yes
Epizootic ulcerative syndrome	+	+	-	+	NA	+	+	+	Yes
Bacterial kidney disease (<i>Renibacterium salmoninarum</i>)	-	-	-	+	NA	+	+	+	No
Enteric septicaemia of catfish (<i>Edwardsiella ictaluri</i>)	+	-	-	+	NA	+	-	+	No
Piscirickettsiosis (<i>Piscirickettsia salmonis</i>)	+	-	-	+	NA	-	-	+	No
Gyrodactylosis (<i>Gyrodactylus salaris</i>)	-	+	-	+	NA	+	+	+	Yes
Red sea bream iridoviral disease	+	-	-	+	NA	-	-	+	No
White Sturgeon iridoviral disease	-	-	-	+	NA	-	-	+	No
Infection with <i>Bonamia ostreae</i>	+	?	-	+	NA	+	+	+	Yes
Infection with <i>Bonamia exitiosus</i>	+	?	-	+	NA	+	+	+	Yes
Infection with <i>Mikrocytos roughleyi</i>	-	-	-	+	NA	-	+	+	No
Infection with <i>Mikrocytos mackini</i>	-	-	-	+	NA	+	+	+	No
Infection with <i>Haplosporidium nelsoni</i>	+	+	-	+	NA	-	?	+	No
Infection with <i>Marteilia refringens</i>	+	+	-	+	NA	+	+	+	Yes
Infection with <i>Marteilia sydneyi</i>	+	?	-	+	NA	-	+	+	No
Infection with <i>Perkinsus marinus</i>	+	?	-	+	NA	+	+	+	Yes
Infection with <i>Perkinsus olseni/atlanticus</i>	+	-	-	+	NA	+	+	+	Yes
Infection with <i>Haplosporidium costale</i>	-	-	-	+	NA	-	+	+	No
Infection with <i>Candidatus Xenohalotus californiensis</i>	+	+	-	+	NA	+	+	+	Yes
Taura syndrome	+	-	-	+	NA	+	+	+	Yes
White spot disease	+	[+] <u>±</u>	-	+	NA	+	+	+	Yes
Yellowhead disease	+	-	-	+	NA	+	+	+	Yes
Tetrahedral baculovirus (<i>Baculovirus penaei</i>)	+	-	-	+	NA	+	+	+	Yes
Spherical baculovirus (<i>Penaeus monodon</i> -type baculovirus)	+	-	-	+	NA	+	+	+	Yes
Infectious hypodermal and haematopoietic necrosis	+	+	-	+	NA	+	+	+	Yes
Crayfish plague (<i>Aphanomyces astaci</i>)	+	+	-	+	NA	+	+	+	Yes
Spawner-isolated mortality virus disease	-	-	-	-	+	+	+	-	No

CHAPTER 2.1.1.

EPIZOOTIC HAEMATOPOIETIC NECROSIS

Article 2.1.1.1.

For the purposes of this *Aquatic Code*, [the disease agents of] epizootic haematopoietic necrosis (EHN) [are: EHN virus (EHN~~V~~), European sheatfish virus (ESV) and European catfish virus (ECV)] means infection with EHN virus (EHN~~V~~).

[Provisions for recognition of freedom from EHN means that the conditions as outlined below are met for all of the agents listed above.]

Article 2.1.1.2.

Susceptible species

- 1) Naturally susceptible species in which clinical signs of EHN[V infection] are known to develop are: redbfin perch (*Perca fluviatilis*) and rainbow trout (*Oncorhynchus mykiss*). [The diseases agents listed in Article 2.1.1.1.] EHN~~V~~ can also cause [asymptomatic] subclinical infection in [their respective susceptible species listed in Article 2.1.1.2] these species.
- 2) Experimental EHN~~V~~ infections have been reported in Macquarie perch (*Macquaria australasica*), silver perch (*Bidyanus bidyanus*), mountain galaxias (*Galaxias olidus*), [and] mosquito fish (*Gambusia affinis*) and other species belonging to the family Poeciliidae.

[Naturally susceptible species in which clinical signs of ESV infection are known to develop are: sheatfish (*Silurus glanis*).

Naturally susceptible species in which clinical signs of ECV infection are known to develop are: catfish (*Ictalurus melas*).

Article 2.1.1.3.

The disease agents listed in Article 2.1.1.1] can cause asymptomatic infection in their respective susceptible species listed in Article 2.1.1.2.

Article 2.1.1.4.

Experimental EHN~~V~~ infections have been reported in Macquarie perch (*Macquaria australasica*), silver perch (*Bidyanus bidyanus*), mountain galaxias (*Galaxias olidus*), and mosquito fish (*Gambusia affinis*) and other species belonging to the family Poeciliidae.]

Article 2.1.1.[5]3.

Suspect cases of natural infection with [any of the agents listed in Article 2.1.1.1] EHN~~V~~ in species other than those listed in Article[s] 2.1.1.2 [and 2.1.1.3] should be referred immediately to the appropriate OIE Reference Laboratory, whether or not clinical signs are associated with the findings.

Article 2.1.1.[6]4.

Methods for surveillance, diagnosis and confirmatory identification of the disease agents are provided in the *Aquatic Manual*.

Article 2.1.1.[7]5.

EHN free country

A country may be [considered] officially declared free from EHN if it meets the conditions in [Articles 2.1.1.8 or 2.1.1.9] point 1) or 2) below.

If a country shares a water catchment area with one or more other countries, it can only be declared an EHN free country if all the shared water catchment areas are declared free *zones* [(see Articles 2.1.1.10 to 2.1.1.12)] (see Article 2.1.1.6).

[Article 2.1.1.8]

1) A country where none of the species listed in Article[s] 2.1.1.2 [and 2.1.1.3] is present or where susceptible species are present but there has never been any observed occurrence of the disease for at least the past 25 years despite conditions that are conducive to its clinical expression, as described in Chapter 2.1.1 of the Aquatic Manual, may be officially declared [considered] free from EHN when [prescribed biosecurity] basic disease security conditions have been in place continuously in the country for at least the previous [2] 10 years and infection is not known to be established in wild populations [as follows:

- a) EHN is compulsorily notifiable to the *Competent Authority*, including notification of suspicion; and
- b) an *early detection system* is in place within the country enabling the *Competent Authority* to undertake effective disease investigation and reporting, including access to laboratories capable of diagnosing and differentiating relevant diseases, and training of veterinarians or fish health specialists in detecting and reporting unusual disease occurrence; and
- c) infection is not known to be established in wild populations; and
- d) conditions applied to imports to prevent the introduction of EHN into the country are in place (see Section 1.4)].

[Article 2.1.1.9]

OR

2) A country where the last known clinical occurrence was within the past 25 years or where the infection status prior to targeted surveillance was [previously] unknown, for example because of the absence of conditions conducive to clinical expression, as described in Chapter 2.1.1 of the Aquatic Manual, may be officially declared [considered] free from EHN when:

- a) it meets [the prescribed biosecurity] basic disease security conditions [detailed in Article 2.1.1.8]; and
- b) *targeted surveillance* as described in Chapters 1.4 and 2.1.1 of the *Aquatic Manual* has been in place for at least the past 2 years in *aquaculture establishments* holding any of the susceptible species listed in Article[s] 2.1.1.2 [and 2.1.1.3] without detection of [the disease agent listed in Article 2.1.1.1] EHN. If there are areas of the country in which there are no such aquaculture establishments but in which there are wild populations of any of the susceptible species listed in Article[s] 2.1.1.2 [and 2.1.1.3], those populations must be included in the *targeted surveillance*.

Article 2.1.1.[10]6.

EHN free zone

An EHN free *zone* may be established and officially declared free within the *territory* of one or more countries of infected or unknown status for EHN, if the *zone* meets the conditions referred to in [Articles 2.1.1.11 or 2.1.1.12] point 1) or 2) below. Such EHN free *zones* must comprise: one or more entire water catchment area(s) from the sources of the waterways to the sea, or part of a catchment area from the source(s) to a natural or artificial barrier that prevents the upward migration of *fish* from lower stretches of the waterway. Such *zones* must be clearly delineated on a map of the *territory* of the country(ies) concerned by the *Competent Authority*.

If a *zone* extends over more than one country, it can only be declared an EHN free *zone* if the conditions outlined below apply to all [shared] areas of the *zone*.

[Article 2.1.1.11]

1) In a country of unknown status for EHN, a *zone* where none of the species listed in Article[s] 2.1.1.2 [and 2.1.1.3] is present or where susceptible species are present but there has never been any observed occurrence of the disease for at least the past 25 years despite conditions that are conducive to its clinical expression, as described in Chapter 2.1.1 of the Aquatic Manual, may be officially declared [considered] free from EHN when [prescribed biosecurity] basic disease security conditions have been in place continuously in the *zone* for at least the previous [2] 10 years and infection is not known to be established in wild populations. [as follows:

- a) EHN is compulsorily notifiable to the *Competent Authority*, including notification of suspicion; and
- b) an *early detection system* is in place within the *zone* enabling the *Competent Authority* to undertake effective disease investigation and reporting, including access to laboratories capable of diagnosing and differentiating relevant diseases, and veterinarians or fish health specialists are trained in detecting and reporting unusual disease occurrence; and
- c) infection is not known to be established in wild populations; and
- d) official control measures to prevent the introduction of EHN into the *zone* are in place.]

[Article 2.1.1.12]

OR

2) A *zone* where the last known clinical occurrence was within the previous 25 years or where the infection status prior to targeted surveillance was [previously] unknown, for example because of the absence of conditions conducive to clinical expression, as described in Chapter 2.1.1 of the Aquatic Manual, may be [considered] officially declared free from EHN when:

- a) it meets [the prescribed biosecurity] basic disease security conditions [detailed in Article 2.1.1.11]; and
- b) *targeted surveillance* as described in Chapters 1.4 and 2.1.1 of the *Aquatic Manual* has been in place for at least the past 2 years in *aquaculture establishments* holding any of the susceptible species listed in Article[s] 2.1.1.2 [and 2.1.1.3] without detection of [the disease agents listed in Article 2.1.1.1] EHN. If there are areas of the *zone* in which there are no such *aquaculture establishments* but in which there are wild populations of any of the susceptible species listed in Article[s] 2.1.1.2 [and 2.1.1.3], those populations must be included in the *targeted surveillance*.

These provisions also apply if the zone to be officially declared free lies in an EHN-infected country.

[Article 2.1.1.13.

EHN free aquaculture establishment

An EHN free *aquaculture establishment* may be located within an EHN infected country or zone or within a country or zone of unknown status with respect to EHN if it meets the conditions referred to in Articles 2.1.1.14 or 2.1.1.15. Such EHN free *aquaculture establishments* must be supplied by a contained water source only (e.g. a spring, well, borehole, rain catchment, etc.) and be free from stocks of wild *fish* of the susceptible species listed in Articles 2.1.1.2 and 2.1.1.3, and there must be a natural or artificial barrier that prevents the migration of *fish* from lower stretches of the waterway into the *aquaculture establishment* or its water supply.

Article 2.1.1.14.

An *aquaculture establishment* where none of the species listed in Articles 2.1.1.2 and 2.1.1.3 is present or where there has never been any observed occurrence of the disease despite conditions that are conducive to its clinical expression may be considered free from EHN when *prescribed biosecurity conditions* have been in place continuously in the *aquaculture establishment* for at least the previous 2 years as follows:

- 1) EHN is compulsorily notifiable to the *Competent Authority*, including notification of suspicion; and
- 2) the *aquaculture establishment* complies with an *early detection system* enabling the *Competent Authority* to undertake effective disease investigation and reporting, including access to laboratories capable of diagnosing and differentiating relevant diseases, and the staff are trained in detecting and reporting unusual disease occurrence; and
- 3) official control measures to prevent the introduction of EHN into the *aquaculture establishment* are in place.

Article 2.1.1.15.

An *aquaculture establishment* where the last known occurrence of EHN was within the previous 25 years or the infection status was previously unknown, for example because of the absence of conditions conducive to clinical expression, may be considered free from EHN when:

- 1) it meets the *prescribed biosecurity conditions* detailed in Article 2.1.1.14; and
- 2) *targeted surveillance* as described in chapters 1.4 and 2.1.1 in the *Aquatic Manual* has been in place for at least the past 2 years without detection of the disease agents listed in Article 2.1.1.1.
 - b) *targeted surveillance* as described in chapters 1.4 and 2.1.1 in the *Aquatic Manual* has been in place for at least the past 2 years without detection of the disease agents listed in Article 2.1.1.1.]

Article 2.1.1.[16]Z.

Maintenance of free status

A country or zone [or *aquaculture establishment*] that is [considered] officially declared free from EHN following the provisions of [Articles 2.1.1.8, 2.1.1.11 and 2.1.1.14] point 1) of Articles 2.1.1.5 or 2.1.1.6, respectively, may maintain its official status as EHN free provided that [the prescribed biosecurity] basic disease security conditions are continuously maintained.

A country or zone [or *aquaculture establishment*] that is [considered] officially declared free from EHN following the provisions of [Articles 2.1.1.9, 2.1.1.12 and 2.1.1.15] point 2) of Articles 2.1.1.5 or 2.1.1.6, respectively, may discontinue *targeted surveillance* and maintain its official status as EHN free provided that conditions that are conducive to clinical expression of EHN, as described in Chapter 2.1.1 of the Aquatic Manual, exist and [the prescribed biosecurity] basic disease security conditions are continuously maintained.

However, for officially declared free zones in infected countries and in all cases where conditions are not conducive to clinical expression of EHN, targeted surveillance will need to be continued, but at a level commensurate with the degree of risk assessed by the Competent Authority.

Article 2.1.1.[17]8.

Suspension and restoration of free status

If a *Competent Authority* has reason to believe that any of the conditions for [recognition of] maintaining official status as an EHN free country or zone [or *aquaculture establishment freedom*] has been breached, it should immediately suspend the free status, implement any necessary containment measures and conduct an investigation.

If the investigation confirms that the suspected breach has not taken place, free status may be restored.

If the investigation confirms that the suspected breach has taken place, suspension of free status is continued. The *Competent Authority* should carry out an epizootiological investigation to determine the likelihood of disease entry and establishment [and re-establish the conditions in Articles 2.1.1.7 to 2.1.1.9, 2.1.1.10 to 2.1.1.12, or 2.1.1.13 to 2.1.1.15 if free status is to be restored]. If this investigation concludes that disease entry and establishment have not occurred, free status may be officially restored.

If the investigation confirms a significant likelihood that disease entry and establishment have occurred, the *Competent Authority* must declare that the free status is lost. In order to restore free status, the conditions in Articles 2.1.1.5 or 2.1.1.6 must be complied with again in full. Steps leading to re-establishment of free status may require depopulation, *fallowing*, *disinfection* and other measures, as described in Section 1.6, as well as zoning as described in Section 1.4.

Article 2.1.1.[18]9.

When importing live *fish of the species listed in Article 2.1.1.2*, or their *sexual products*, the *Competent Authority* of the *importing country* should require [that the consignment be accompanied by] an *international aquatic animal health certificate* issued by the *Competent Authority* of the *exporting country* or a *certifying official* approved by the *importing country*.

This *certificate* must certify, on the basis of [a surveillance scheme conducted according to the procedures described above and detailed in the *Aquatic Manual*, whether or not the place of production of the consignment is a country, *zone* or *aquaculture establishment* officially declared EHN free] the procedures described in Articles 2.1.1.5 or 2.1.1.6 (as applicable), whether or not the place of production of the consignment is a country or zone officially declared EHN free.

The certificate shall be in accordance with Model Certificate No. 1 given in Part 6 of this *Aquatic Code*.

Article 2.1.1.[19]10.

If the *Competent Authority* of the *exporting country* does not provide the certificate referred to in Article 2.1.1.9, or cannot certify the place of production of the consignment as being free from EHN, the *importing country* should assess the risk[s] of introduction and establishment of EHN associated with the importation of live fish of the species listed in Article 2.1.1.2, or their sexual products, from the exporting country, or seek assurance from the exporting country that basic disease security conditions are met, prior to a decision on whether to authorise an importation. This assessment should be made available to the exporting country.

Article 2.1.1.11.

When importing live fish of species other than those listed in Article 2.1.1.2, or their sexual products, the Competent Authority of the importing country should assess the risk of introduction and establishment of EHN associated with the importation prior to a decision on whether to authorise the importation, taking into account, for example, whether there is evidence for or against the presence of EHN in the place of origin. This assessment should be made available to the exporting country.

Article 2.1.1.[20]12.

When importing dead fish of the species listed in Article[s] 2.1.1.2, [and 2.1.1.3] the Competent Authority of the importing country should require that the consignment be accompanied by an international aquatic animal health certificate issued by the Competent Authority of the exporting country or a certifying official approved by the importing country.

This certificate must certify, on the basis of [a surveillance scheme conducted according to the procedures described above and detailed in the Aquatic Manual, whether or not the place of production of the consignment is a country, zone or aquaculture establishment officially declared EHN free] the procedures described in Articles 2.1.1.5 or 2.1.1.6 (as applicable), whether or not the place of production of the consignment is a country or zone officially declared EHN free.

The certificate shall be in accordance with Model Certificate No. 2 given in Part 6 of this Aquatic Code.

Article 2.1.1.[21]13.

If the Competent Authority of the exporting country does not provide the certificate referred in Article 2.1.1.12, or cannot certify the place of production of the consignment as being free from EHN, the importing country should assess the risk[s] of introduction and establishment of EHN associated with the importation from the exporting country of dead uneviscerated fish of the [susceptible] species listed in Article[s] 2.1.1.2 [and 2.1.1.3], including consideration of applying risk management measures, prior to a decision on whether to authorise an importation. This assessment should be made available to the exporting country.

Article 2.1.1.[22]14.

The Competent Authorities of exporting countries should not authorise the exportation of live fish or dead uneviscerated fish from areas where there are populations known to be infected with EHN without the [full] prior agreement of the importing country.

[] deleted

CHAPTER 3.1.5.

INFECTION WITH *MARTEILIA REFRINGENS*

Article 3.1.5.1.

The disease agent is *Marteilia refringens*.

Article 3.1.5.2.

Susceptible and vector species

1) Naturally susceptible species in which clinical signs of infection with *Marteilia refringens* are known to develop are: European flat oyster (*Ostrea edulis*), Australian mud oyster (*Ostrea angasi*), Argentinean oyster (*Ostrea puelchana*) and Chilean flat oyster (*Ostrea chilensis*).

Marteilia refringens can cause [asymptomatic] subclinical infection in [the] these susceptible species [listed in Article 3.1.5.2].

2) Experimental infections have not been reported in other species.

3) The Pacific oyster, *Crassostrea gigas*, is not regarded to be a vector of *Marteilia refringens*.

[Article 3.1.5.3.

Marteilia refringens can cause asymptomatic infection in the susceptible species listed in Article 3.1.5.2.

Article 3.1.5.4.

Infections with *Marteilia* spp. of unclear taxonomic affiliation have been described in the following species: common edible cockle (*Cerastoderma* [*Cardium*] *edule*), blue mussel (*Mytilus edulis*), Mediterranean mussel (*Mytilus galloprovincialis*), giant clam (*Tridacna maxima*) and calico scallop (*Argopecten gibbus*.)

Article 3.1.5.[5]3.

Suspect cases of natural infection with *Marteilia refringens* in species other than those listed in Article[s] 3.1.5.2 [and 3.1.5.3] should be referred immediately to the appropriate OIE Reference Laboratory, whether or not clinical signs are associated with the findings.

Article 3.1.5.[6]4.

Methods for surveillance, diagnosis and confirmatory identification of *Marteilia refringens* are provided in the *Aquatic Manual*.

Article 3.1.5.[7]5.

***Marteilia refringens* free country**

A country may be [considered] officially declared free from *Marteilia refringens* if it meets the conditions in [Articles 3.1.5.8 or 3.1.5.9] point 1) or 2) or 3) below.

Appendix X (contd)

If a country shares water bodies of coastal areas with one or more other countries, it can only be declared a *Marteilia refringens* free country if all the shared coastal areas are declared *Marteilia refringens* free zones (see [Articles 3.1.5.10 to 3.1.5.12] Article 3.1.5.6).

[Article 3.1.5.8.]

1) A country where none of the susceptible species listed in Article 3.1.5.2 is present [or where there has never been any observed occurrence of] and where no abnormal mortalities have been caused by infection with *Marteilia refringens* [despite conditions that are conducive to its clinical expression] in other species for at least the past 25 years, according to the methods described in Chapter 3.1.3 of the *Aquatic Manual*, may be officially declared [considered] free from [infection with] *Marteilia refringens* when [prescribed biosecurity] *basic disease security conditions* have been in place continuously in the country for at least the previous [2] 10 years and infection is not known to be established in wild populations; [as follows:

- 1) infection with *Marteilia refringens* is compulsorily notifiable to the *Competent Authority*, including notification of suspicion; and
- 2) an *early detection system* is in place within the country enabling the *Competent Authority* to undertake effective disease investigation and reporting, including access to laboratories capable of diagnosing and differentiating relevant infections, and training of veterinarians or mollusc health specialists in detecting and reporting unusual infection occurrence; and
- 3) infection is not known to be established in wild populations; and
- 4) conditions applied to imports to prevent the introduction of *Marteilia refringens* (e.g. live molluscs introduced for aquaculture purposes or for human consumption) into the country are in place (see Section 1.4).]

OR

2) A country where the susceptible species listed in Article 3.1.5.2 are present and where there has never been any observed occurrence of infection with *Marteilia refringens* for at least the past 25 years despite conditions that are conducive to its clinical expression, including gross signs and abnormal mortality, as described in Chapter 3.1.3 of the *Aquatic Manual*, may be officially declared [considered] free from *Marteilia refringens* when *basic disease security conditions* have been in place continuously in the country for at least the previous 10 years and infection is not known to be established in wild populations;

[Article 3.1.5.9.]

OR

3) A country where the last known occurrence was within the previous 25 years or where the infection status prior to *targeted surveillance* was [previously] unknown, for example because of the absence of conditions conducive to clinical expression of the infection, as described in Chapter 3.1.3 of the *Aquatic Manual*, may be officially declared [considered free] from *Marteilia refringens* when:

- a) it meets [the prescribed biosecurity] *basic disease security conditions* [detailed in Article 3.1.5.8]; and
- b) *targeted surveillance* as described in Chapters 1.4 and 3.1.3 in the *Aquatic Manual* has been in place for at least the past 2 years for susceptible species listed in Article 3.1.5.2 in *aquaculture establishments* or wild populations without detection of [the disease agent listed in Article 3.1.5.1] *Marteilia refringens*.

Article 3.1.5.[10]6.

***Marteilia refringens* free zone**

A *zone* free of infection with *Marteilia refringens* may be established and officially declared within the *territory* of one or more countries of infected or unknown status for *Marteilia refringens* if the *zone* meets the conditions referred to in [Articles 3.1.5.11 or 3.1.5.12] point 1) or 2) or 3) below. Such *Marteilia refringens* free *zones* must comprise: one or more entire water body of coastal area(s) defined on the basis of the distribution of the susceptible species listed in Article 3.1.5.2, geographical and hydrographical criteria. Such *zones* must be clearly delineated on a map of the *territory* of the country(ies) concerned by the *Competent Authority*.

If a *zone* extends over more than one country, it can only be declared a *Marteilia refringens* free *zone* if the conditions outlined below apply to all [shared] areas of the *zone*.

[Article 3.1.5.11.]

1) In a country of unknown status for *Marteilia refringens*, a *zone* where none of the susceptible species listed in Article 3.1.5.2 is present [or where there has never been any observed occurrence of] and where no abnormal mortalities have been caused by infection with *Marteilia refringens* in other species [despite conditions that are conducive to its clinical expression] for at least the past 25 years, according to the methods described in Chapter 3.1.3 of the *Aquatic Manual*, may be officially declared [considered] free from [infection with] *Marteilia refringens* when [prescribed biosecurity] basic disease security conditions have been in place continuously in the *zone* for at least the previous [2] 10 years and infection is not known to be established in wild populations; [as follows:

- 1) infection with *Marteilia refringens* is compulsorily notifiable to the *Competent Authority*, including notification of suspicion; and
- 2) an *early detection system* is in place within the *zone* enabling the *Competent Authority* to undertake effective disease investigation and reporting, including access to laboratories capable of diagnosing and differentiating relevant infections, and veterinarians or molluscs health specialists are trained in detecting and reporting unusual disease occurrence; and
- 3) infection is not known to be established in wild populations; and
- 4) official control measures to prevent the introduction of *Marteilia refringens* (e.g. live molluscs introduced for aquaculture purposes or for human consumption) into the *zone* are in place]

OR

2) In a country of unknown status for *Marteilia refringens*, a *zone* where the susceptible species listed in Article 3.1.5.2 are present and where there has not been any observed occurrence of infection with *Marteilia refringens* for at least the past 25 years despite conditions that are conducive to its clinical expression, including gross signs and abnormal mortality, as described in Chapter 3.1.3 of the *Aquatic Manual*, may be officially declared [considered] free from *Marteilia refringens* when basic disease security conditions have been in place continuously in the *zone* for at least the previous 10 years and infection is not known to be established in wild populations;

[Article 3.1.5.12.]

OR

3) A *zone* where the last known occurrence was within the previous 25 years or where the infection status prior to targeted surveillance was [previously] unknown, for example because of the absence of conditions conducive to clinical expression, including gross signs and abnormal mortality, of the infection as described in Chapter 3.1.3 of the Aquatic Manual, may be officially declared [considered] free from *Marteilia refringens* when:

- a) it meets [the prescribed biosecurity] basic disease security conditions [detailed in Article 3.1.5.11]; and
- b) *targeted surveillance* as described in Chapters 1.4 and 3.1.5 in the *Aquatic Manual* has been in place for at least the past 2 years for the susceptible species listed in Article 3.1.5.2 in *aquaculture establishments* or wild populations without detection of [the disease agent listed in Article 3.1.5.1] *Marteilia refringens*.

These provisions also apply if the *zone* to be officially declared free lies in an *Marteilia refringens*-infected country.

[Article 3.1.5.13.]

***Marteilia refringens* free aquaculture establishment**

An *aquaculture establishment* free of infection with *Marteilia refringens* may be located within an *Marteilia refringens* infected country or zone or within a country or zone of unknown status with respect to *Marteilia refringens* if it meets the conditions referred to in Articles 3.1.5.14 or 3.1.5.15.

Such *aquaculture establishments* free of infection with *Marteilia refringens* must be supplied by a contained water source (e.g. a well, borehole, closed recirculation system, etc.) in which the culture system water cannot be contaminated by the disease agent, and be inaccessible to susceptible species or potential carriers from the natural environment.

Article 3.1.5.14.

An *aquaculture establishment* where none of the susceptible species listed in Article 3.1.5.2 is present or where there has never been any observed occurrence of infection with *Marteilia refringens* despite conditions that are conducive to its clinical expression may be considered free from infection with *Marteilia refringens* when *prescribed biosecurity conditions* have been in place continuously in the *aquaculture establishment* for at least the previous 2 years as follows:

- 1) infection with *Marteilia refringens* is compulsorily notifiable to the *Competent Authority*, including notification of suspicion; and
- 2) the *aquaculture establishment* complies with an *early detection system* enabling the *Competent Authority* to undertake effective disease investigation and reporting, including access to laboratories capable of diagnosing and differentiating relevant infections, and the staff are trained in detecting and reporting unusual disease occurrence; and
- 3) infection is not known to be established in wild populations; and
- 4) official control measures to prevent the introduction of *Marteilia refringens* into the *aquaculture establishment* are in place.

Article 3.1.5.15.

An *aquaculture establishment* where the last known occurrence of infection with *Marteilia refringens* was within the previous 25 years or the infection status was previously unknown, for example because of the absence of conditions conducive to clinical expression, may be considered free from infection with *Marteilia refringens* when:

- 1) it meets the *prescribed biosecurity conditions* detailed in Article 3.1.5.14; and
- 2) *targeted surveillance* as described in chapters 1.4 and 3.1.5 in the *Aquatic Manual* has been in place for at least the past 2 years without detection of the disease agent listed in Article 3.1.5.1.]

Article 3.1.5.[16]Z.

Maintenance of free status

A country or zone [or *aquaculture establishment*] that is [considered] officially declared free from [infection with] *Marteilia refringens* following the provisions of [Articles 3.1.5.8, 3.1.5.11 and 3.1.5.14] point 1) or 2) of Articles 3.1.5.5 or 3.1.5.6, respectively, may maintain its official status [as free from infection with *Marteilia refringens*] provided that [the prescribed biosecurity] basic disease security conditions are continuously maintained.

A country or zone [or *aquaculture establishment*] that is [considered] officially declared free from [infection with] *Marteilia refringens* following the provisions of [Articles 3.1.5.9, 3.1.5.12 and 3.1.5.15] point 3) of Articles 3.1.5.5 or 3.1.5.6, respectively, may discontinue targeted surveillance and maintain its official status as free from [infection with] *Marteilia refringens* provided that [*targeted surveillance* is continued at a level commensurate with the degree of risk assessed by the *Competent Authority*] conditions that are conducive to clinical expression, including gross signs and abnormal mortality, as described in Chapter 3.1.5 of the *Aquatic Manual*, exist and country/zone disease security conditions are continuously maintained.

However, for officially declared free zones in infected countries and in all cases where conditions are not conducive to clinical expression, including gross signs and abnormal mortality, targeted surveillance will need to be continued, but at a level commensurate with the degree of risk assessed by the *Competent Authority*.

Article 3.1.5.[17]8.

Suspension and restoration of free status

If a *Competent Authority* has reason to believe that any of the conditions for [recognition of country, *zone* or *aquaculture establishment* freedom] maintaining official status as a *Marteilia refringens* free country or zone has been breached, it should immediately suspend the free status, implement any necessary containment measures and conduct an investigation.

If the investigation confirms that the suspected breach has not taken place, free status may be restored.

If the investigation confirms that the suspected breach has taken place, suspension of free status is continued. The *Competent Authority* should carry out an epizootiological investigation to determine the likelihood of *Marteilia refringens* entry and establishment [and re-establish the conditions in Articles 3.1.5.7. to 3.1.5.9, 3.1.5.10. to 3.1.5.12, or 3.1.5.13. to 3.1.5.15 if *Marteilia refringens* free status is to be restored]. If this investigation concludes that disease entry and establishment have not occurred, free status may be officially restored.

If the investigation confirms a significant likelihood that disease entry and establishment have occurred, the *Competent Authority* must declare that the free status is lost. In order to restore *Marteilia refringens* free status, the conditions in Articles 3.1.5.5 or 3.1.5.6 must be complied with again in full. Steps leading to re-establishment of free status may require depopulation, *fallowing*, *disinfection* and other measures, as described in Section 1.6, as well as *zoning* as described in Section 1.4.

Article 3.1.5.[18]9.

When importing live molluscs of [any age group] the susceptible species listed in Article 3.1.5.2 for re-immersion, the *Competent Authority* of the *importing country* should require that the consignment be accompanied by an *international aquatic animal health certificate* issued by the *Competent Authority* of the *exporting country* or a *certifying official* approved by the *importing country*.

This *certificate* must certify, on the basis of a surveillance scheme conducted according to the procedures described [above] in Articles 3.1.5.5 or 3.1.5.6 (as applicable), whether or not the place of production of the consignment is a country or zone [or *aquaculture establishment*] *officially declared* free from [infection with] *Marteilia refringens*.

The certificate shall be in accordance with Model Certificate No. 3 given in Part 6 of this *Aquatic Code*.

Article 3.1.5.[19]10.

If the *Competent Authority* of the *exporting country* does not provide the certificate referred to in Article 3.1.5.9, or cannot certify the place of production of the consignment as being free from [infection with] *Marteilia refringens*, the *importing country* should assess the risks of introduction and establishment of *Marteilia refringens* associated with the importation of live molluscs of the species listed in Article 3.1.5.2 from the exporting country, or seek assurance from the exporting country that basic disease security conditions are met, prior to a decision on whether to authorise an importation. This assessment should be made available to the exporting country.

Article 3.1.5.11.

When importing live molluscs of species other than those listed as susceptible in Article 3.1.5.2, the *Competent Authority* of the *importing country* should assess the risk of introduction and establishment of *Marteilia refringens* associated with the importation prior to a decision on whether to authorise the importation, taking into account, for example, whether there is evidence for or against the presence of *Marteilia refringens* in the place of origin. This assessment should be made available to the *exporting country*.

The *international aquatic animal health certificate* may not be required for mollusc species that have been demonstrated not to be vectors of *Marteilia refringens* and listed in Article 3.1.5.2, even if the molluscs originate from an infected country or zone.

Article 3.1. 5.[20]12.

When importing live molluscs of [of commercial size] the species listed as susceptible in Article 3.1.5.2 destined for human consumption, the *Competent Authority* of the *importing country* should require that the consignment be accompanied by an *international aquatic animal health certificate* issued by the *Competent Authority* of the *exporting country* or a *certifying official* approved by the *importing country*.

This *certificate* must certify, on the basis of a surveillance scheme conducted according to the procedures described [above and detailed in the *Aquatic Manual*] in Articles 3.1.5.5 or 3.1.5.6 (as applicable), whether or not the place of production of the consignment is a country or zone [or *aquaculture establishment*] *officially declared* free from *Marteilia refringens*.

The certificate shall be in accordance with Model Certificate No. 3 given in Part 6 of this *Aquatic Code*. This certificate may not be required if the imported molluscs are destined for:

- 1) direct human consumption without any re-immersion, or
- 2) storage, during a short period before consumption, in tanks or holding facilities that ensure isolation from the local environment and avoid the potential introduction of *Marteilia refringens*.

Article 3.1. 5.[21]13.

If the *Competent Authority* of the *exporting country* does not provide the certificate referred to in Article 3.1.5.12, or cannot certify the place of production of the consignment as being free from [infection with] *Marteilia refringens*, the *importing country* should assess the risks of introduction and establishment of *Marteilia refringens* associated with the importation [of molluscs of commercial size destined for human consumption] from the *exporting country* of molluscs of the species listed as susceptible in Article 3.1.5.2, including consideration of applying risk management measures, prior to a decision on whether to authorise an importation. This assessment should be made available to the *exporting country*.

Rather than refusing such imports, the *importing country* may opt to manage these *risks*, if the consignment is destined for:

- 1) direct human consumption without any re-immersion, or
- 2) storage, during a short period before consumption, in tanks or holding facilities that ensure isolation from the local environment and avoid the potential introduction of *Marteilia refringens*.

Article 3.1. 5.14.

When importing live molluscs of species other than those listed in Article 3.1.5.2, the *importing country* should assess the risk of introduction and establishment of *Marteilia refringens* associated with the importation prior to a decision on whether to authorise the importation. This assessment should be made available to the *exporting country*.

Article 3.1. 5.[22]15.

The *Competent Authorities* of *exporting countries* should not authorise the exportation of live *molluscs* from populations known to be infected with *Marteilia refringens* without the [full] prior agreement of the *importing country*.

[] deleted

CHAPTER 4.1.2.

WHITE SPOT DISEASE

Article 4.1.2.1.

For the purposes of this *Aquatic Code*, the disease agent of white spot disease (WSD) is white spot syndrome virus (WSSV) in the genus *Whispovirus*. Synonyms commonly used in the scientific literature and official documents include: white spot virus (WSV), white spot bacilliform virus (WSBV), penaeid rod-shaped DNA virus (PRDV), and other names as listed in Chapter 4.1.2 of the *Aquatic Manual*.

Article 4.1.2.2.

Susceptible species

1) For the purpose of this *Aquatic Code*, all decapod (Order Decapoda) crustaceans, whether from marine, brackish or freshwater sources, are potential hosts for WSD. WSD is potentially lethal to most commercially cultivated penaeid (Family Penaeidae) shrimps and prawns. Transfers of other decapod crustaceans from marine, brackish water or freshwater sources to white spot free zones should be subject to risk analysis when there is evidence from experimental challenge studies that one or more species in the importing country and exporting country is susceptible to white spot disease.

[The disease agent listed in Article 4.1.2.1] WSSV can cause [asymptomatic] *subclinical* infection in these [respective susceptible] species [listed in Article 4.1.2.2].

2) Experimental WSD infections have been reported in many decapod species in which natural infections have not been recorded.

[Article 4.1.2.3.

The disease agent listed in Article 4.1.2.1 can cause asymptomatic infection in their respective susceptible species listed in Article 4.1.2.2.

Article 4.1.2.4.

Experimental WSD infections have been reported in many decapod families where natural infections have not been reported.]

Article 4.1.2.[5]3

Suspect cases of natural infection with [the agent listed in Article 4.1.2.1] WSSV in species other than those [listed] referred to in Article[s] 4.1.2.2 [and Article 4.1.2.3] should be [referred] submitted immediately to the appropriate OIE Reference Laboratory, whether or not clinical signs are associated with the findings.

Article 4.1.2.[6]4.

Methods for surveillance, diagnosis and confirmatory identification of [of the disease agent] WSD are provided in the *Aquatic Manual*.

Article 4.1.2.[7]5.

WSD free country

A country may be [considered] officially declared free from WSD if it meets the conditions in [Articles 4.1.2.8, or 4.1.2.9] point 1) or 2) below.

If a country shares a water resource (coastal zone, gulf, inland farming area, etc.) with one or more other countries, it can only be declared a WSD free country if all the areas covered by the shared water resource are declared free *zones* (see Article[s] 4.1.2.10 to 4.1.2.12] 4.1.2.6).

[Article 4.1.2.8.]

1) A country where none of the species [listed] referred to in Article[s] 4.1.2.2 [and 4.1.2.3] is present or where susceptible species are present but there has never been any observed occurrence of the disease for at least the past 25 years despite conditions that are conducive to its clinical expression, as described in Chapter 4.1.2 of the Aquatic Manual, may be officially declared [considered] free from WSD when [prescribed biosecurity] basic security conditions have been in place continuously in the country for at least the previous 2 years and infection is not known to be established in wild populations. [as follows:

- 1) WSD is compulsorily notifiable to the *Competent Authority*, including notification of suspicion; and
- 2) an *early detection system* is in place within the country enabling the *Competent Authority* to undertake effective disease investigation and reporting, including access to laboratories capable of diagnosing and differentiating relevant diseases, and training of veterinarians or crustacean health specialists in detecting and reporting unusual disease occurrence; and
- 3) infection is not known to be established in wild populations; and
- 4) conditions applied to imports to prevent the introduction of WSD (e.g. with importation of live crustaceans for aquaculture purposes or *commodity* products intended for reprocessing prior to *marketing*, etc.) into the country are in place (see Section 1.4)]

[Article 4.1.2.9.]

OR

2) A country where the last known clinical occurrence was within the previous 25 years or the infection status prior to targeted surveillance was [previously] unknown, for example because of the absence of conditions conducive to clinical expression, as described in Chapter 4.1.2 of the Aquatic Manual, may be officially declared [considered] free from WSD when:

- a) it meets [the prescribed biosecurity] basic disease security conditions [detailed in Article 4.1.2.8]; and
- b) targeted surveillance as described in Chapters 1.4 and 4.1.2 of the *Aquatic Manual* has been in place for at least the past 2 years in *aquaculture establishments* holding any of the [susceptible] species [listed] referred to in Article[s] 4.1.2.2 [and 4.1.2.3] without detection of [the disease agent listed in Article 4.1.2.1] WSSV. If there are areas of the country in which there are no such *aquaculture establishments* but in which there are wild populations of any of the [susceptible] species [listed] referred to in Article[s] 4.1.2.2 [and 4.1.2.3], those populations must be included in the targeted surveillance.

Article 4.1.2.[10]6.

WSD free zone

A WSD free *zone* may be established and officially declared within the *territory* of one or more countries of infected or unknown status for WSD if the *zone* meets the conditions referred to in [Articles 4.1.2.11. or 4.1.2.12] point 1) or 2) below. Such WSD free *zones* must comprise: one or more distinct water resource (coastal zone, gulf, inland farming area, etc.). Such *zones* must be clearly delineated on a map of the *territory* of the country(ies) concerned by the *Competent Authority*.

If a *zone* extends over more than one country, it can only be declared a WSD free *zone* if the conditions outlined below apply to all [shared] areas of the *zone*.

[Article 4.1.2.11.]

1) In a country of unknown status for WSD, a *zone* where none of the species [listed] referred to in Article[s] 4.1.2.2 [and 4.1.2.3] is present or where susceptible species are present but there has not been any observed occurrence of the disease for at least the past 25 years despite conditions that are conducive to its clinical expression, as described in Chapter 4.1.2 of the Aquatic Manual, may be officially declared [considered] free from WSD when [prescribed biosecurity] basic disease security conditions have been in place continuously in the *zone* for at least the previous 2 years [as follows:

- 1) WSD is compulsorily notifiable to the *Competent Authority*, including notification of suspicion; and
- 2) an *early detection system* is in place within the *zone* enabling the *Competent Authority* to undertake effective disease investigation and reporting, including access to laboratories capable of diagnosing and differentiating relevant diseases, and veterinarians or crustacean health specialists are trained in detecting and reporting unusual disease occurrence; and]

and infection is not known to be established in wild populations, and official control measures to prevent the introduction of WSD (e.g. with importation of live crustaceans for aquaculture purposes or *commodity* products intended for reprocessing prior to *marketing*, etc.) into the *zone* are in place.

[Article 4.1.2.12.]

OR

2) A *zone* where the last known clinical occurrence was within the previous 25 years or the infection status prior to targeted surveillance was [previously] unknown, for example because of the absence of conditions conducive to clinical expression, as described in Chapter 4.1.2 of the Aquatic Manual, may be officially declared [considered] free from WSD when:

- a) it meets [the prescribed biosecurity] basic disease security conditions [detailed in Article 4.1.2.11]; and
- b) *targeted surveillance* as described in Chapters 1.4 and 4.1.2 of the *Aquatic Manual* has been in place for at least the past 2 years in *aquaculture establishments* holding any of the [susceptible] species [listed] referred to in Article[s] 4.1.2.2 [and 4.1.2.3] without detection of [the disease agent listed in Article 4.1.2.1] WSSV. If there are areas of the *zone* in which there are no such *aquaculture establishments* but in which there are wild populations of any of the [susceptible] species [listed] referred to in Article[s] 4.1.2.2 [and 4.1.2.3], those populations must be included in the *targeted surveillance*.

These provisions also apply if the zone to be officially declared free lies in a WSD-infected country.

[Article 4.1.2.13.

WSD free aquaculture establishment

A WSD free *aquaculture establishment* may be located within a WSD infected country or zone or within a country or zone of unknown status with respect to WSD if it meets the conditions referred to in Articles 4.1.2.14 or 4.1.2.15. Such WSD free *aquaculture establishments* must be supplied by a contained water source (e.g. a well, borehole, closed recirculation system, etc.) in which the culture system water cannot be contaminated by the disease agent and is inaccessible to susceptible species or potential carriers from the natural environment.

Article 4.1.2.14.

An *aquaculture establishment* where none of the species listed in Articles 4.1.2.2 and 4.1.2.3 is present or where there has never been any observed occurrence of the disease despite conditions that are conducive to its clinical expression may be considered free from WSD when *prescribed biosecurity conditions* have been in place continuously in the *aquaculture establishment* for at least the previous 2 years as follows:

- 1) WSD is compulsorily notifiable to the *Competent Authority*, including notification of suspicion; and
- 2) the *aquaculture establishment* complies with an *early detection system* enabling the *Competent Authority* to undertake effective disease investigation and reporting, including access to laboratories capable of diagnosing and differentiating relevant diseases, and the staff are trained in detecting and reporting unusual disease occurrence; and
- 3) official control measures to prevent the introduction of WSD into the *aquaculture establishment* are in place.

Article 4.1.2.15.

An *aquaculture establishment* where the last known occurrence of WSD was within the previous 25 years or the infection status was previously unknown, for example because of the absence of conditions conducive to clinical expression, may be considered free from WSD when:

- 1) it meets the *prescribed biosecurity conditions* detailed in Article 4.1.2.14; and
- 2) *targeted surveillance* as described in chapters 1.4 and 4.1.2 in the *Aquatic Manual* has been in place for at least the past 2 years without detection of the disease agent listed in Article 4.1.2.1.]

Article 4.1.2.[16]Z.

Maintenance of free status

A country or zone [or aquaculture establishment] that is [considered] *officially declared free* from WSD following the provisions of [Articles 4.1.2.8, 4.1.2.11 and 4.1.2.14] point 1) of Articles 4.1.2.5 or 4.1.2.6, respectively, may maintain its official status as WSD free provided that [the prescribed biosecurity] *basic disease security conditions* are continuously maintained.

A country or zone [or aquaculture establishment] that is [considered] *officially declared free* from WSD following the provisions of [Articles 4.1.2.9, 4.1.2.12 and 4.1.2.15] point 2) of Articles 4.1.2.5 or 4.1.2.6, respectively, may discontinue *targeted surveillance* and maintain its official status as WSD free provided that conditions that are conducive to clinical expression of WSD, as described in Chapter 4.1.2 of the Aquatic Manual, exist and [the prescribed biosecurity] *basic disease security conditions* are continuously maintained.

However, for officially declared free zones in infected countries and in all cases where conditions are not conducive to clinical expression of WSD, targeted surveillance will need to be continued, but at a level commensurate with the degree of risk assessed by the Competent Authority.

Article 4.1.2.[17]8.

Suspension and restoration of free status

If a *Competent Authority* has reason to believe that any of the conditions for [recognition of country, zone or aquaculture establishment freedom] maintaining official status as WSD free country or zone freedom has been breached, it should immediately suspend the free status, implement any necessary containment measures and conduct an investigation.

If the investigation confirms that the suspected breach has not taken place, free status may be restored.

If the investigation confirms that the suspected breach has taken place, suspension of free status is continued. The *Competent Authority* should carry out an epizootiological investigation to determine the likelihood of disease entry and establishment [and re-establish the conditions in Articles 4.1.2.7. to 4.1.2.9, 4.1.2.10. to 4.1.2.12, or 4.1.2.13. to 4.1.2.15 if free status is to be restored. Steps leading to re-establishment of free status may require depopulation, fallowing, disinfection and other measures as described in Section 1.6]. If this investigation concludes that disease entry and establishment have not occurred, free status may be officially restored.

If the investigation confirms a significant likelihood that disease entry and establishment have occurred, the *Competent Authority* must declare that the free status is lost. In order to restore free status, the conditions in Article 4.1.2.5 or 4.1.2.6 must be complied with again in full. Steps leading to re-establishment of free status may require depopulation, fallowing, disinfection and other measures as described in Section 1.6, as well as zoning as described in Section 1.4.

Article 4.1.2.[18]9.

When importing live *crustaceans* of [any life stage] the [susceptible] species referred to in Article 4.1.2.1, the *Competent Authority* of the *importing country* should require that the consignment be accompanied by an *international aquatic animal health certificate* issued by the *Competent Authority* of the *exporting country* or a *certifying official* approved by the *importing country*.

This *certificate* must certify, on the basis of [a surveillance scheme conducted according to the procedures described above and detailed in the Aquatic Manual] the procedures described in Articles 4.1.2.5 or 4.1.2.6 (as applicable), whether or not the place of production of the consignment is a country or *zone* [or aquaculture establishment] *officially declared* WSD free.

The certificate shall be in accordance with Model Certificate No. 4 given in Part 6 of this *Aquatic Code*.

Article 4.1.2.[19]10.

If the *Competent Authority* of the *exporting country* does not provide the certificate referred to in Article 4.1.2.9, or cannot certify the place of production of the consignment as being free from WSD, the *importing country* should assess the risk[s] of introduction and establishment of WSSV associated with the importation of live crustaceans of [any life stage] the species referred in Article 4.1.2.2, from the exporting country or seek assurance from the exporting country that basic disease security conditions are met prior to a decision on whether to authorise an importation. This assessment should be made available to the exporting country.

Article 4.1.2.11.

When importing live crustaceans of species other than those referred to in Article 4.1.2.2, the Competent Authority of the importing country should assess the risk of introduction and establishment of WSD associated with the importation prior to a decision on whether to authorise the importation, taking into account, for example, whether there is evidence for or against the presence of WSSV in the place of origin. This assessment should be made available to the exporting country.

Article 4.1.2.[20]12.

When importing dead *crustaceans of the species referred to in Article 4.1.2.2*, the *Competent Authority* of the *importing country* should require that the consignment be accompanied by an *international aquatic animal health certificate* issued by the *Competent Authority* of the *exporting country* or a *certifying official* approved by the *importing country*.

This *certificate* must certify, on the basis of [a surveillance scheme conducted according to the procedures described above and detailed in the Aquatic Manual] the procedures described in Articles 4.1.2.5 or 4.1.2.6 (as applicable), whether or not the place of production is a *country* or *zone* [or aquaculture establishment] *officially declared* WSD free.

The certificate shall be in accordance with Model Certificate No. 5 given in Part 6 of this *Aquatic Code*.

Article 4.1.2.[21]13.

If the *Competent Authority* of the *exporting country* does not provide the certificate referred to in Article 4.1.2.12, or cannot certify the place of production of the consignment as being free from WSD, the *importing country* should assess the risk[s] of introduction and establishment of WSSV associated with the importation from the exporting country of whole, or parts of, dead crustaceans of the species referred to in Article 4.1.2.2, including consideration of applying risk management measures, prior to a decision on whether to authorise an importation. This assessment should be made available to the exporting country.

Rather than refusing such imports, the *importing country* may opt to manage these risks, if the consignment is:

- 1) destined directly for human consumption without further processing, or
- 2) destined for processing in establishments with safe disposal of processing waste in a manner that ensures isolation from the local environment to avoid the potential introduction of [WSD] WSSV, or
- 3) has been treated, e.g. cooked, such that [white spot virus] WSSV is inactivated.

Article 4.1.2.[22]14.

The *Competent Authorities* of *exporting countries* should not authorise the exportation of live or dead *crustaceans* [of any life stage] from populations known to be infected with [WSD] WSSV without the [full] prior agreement of the *importing country*.

[] deleted

PROTOCOL FOR THE PROPOSED NEW CONFIRMATORY TEST FOR SPRING VIRAEemia OF CARP

1.2.2 Confirmatory identification methods

Polymerase chain reaction

The genome of spring viraemia of carp virus (SVCV) consists of a single strand of RNA of approximately 11 kb, with negative polarity. Amplification of a 714 bp fragment of SVCV cDNA is performed using primers derived from sequences of the region coding for the glycoprotein gene: 5'-TCT-TGG-AGC-CAA-ATA-GCT-CAR*-R*TC-3' (SVCVF1) and 5'-AGA-TGG-TAT-GGA-CCC-CAA-TAC-ATH*-ACN*-CAY*-3' (SVC R2), according to the method of Stone *et al.* (2003).

Total RNA is extracted from 100 µl of viral supernatant from infected EPC-cells using the Trizol Reagent™ and dissolved in 40 µl molecular biology grade water according to the method of Strømme & Stone (1997).

For cDNA synthesis, a reverse transcription reaction is performed at 37°C for 1 hour in a 20 µl volume consisting of 1 x M-MLV RT reaction buffer (50 mM Tris, pH 8.3, 75 mM KCl, 10 mM DTT, 3 mM MgCl₂) containing 1 mM dNTP, 100 pmol SVCV R2 primer, 20 units M-MLV reverse transcriptase (Promega, Southampton UK) and 1/10 of the total RNA extracted above. Polymerase chain reaction (PCR) is performed in a 50 µl reaction volume 1 x PCR buffer (50 mM KCl, 10 mM Tris/HCl, pH 9.0, and 0.1% Triton X-100) containing 2.5 mM MgCl₂, 200 µM dNTPs, 50 pmol each of the SVCV R4 and SVCV F1 primers, 1.25 units of Taq DNA polymerase, and 2.5 µl reverse transcription reaction mix. The reaction mix was overlaid with mineral oil and subjected to 35 temperature cycles of: 1 minute at 95°C, 1 minute at 55°C and 1 minute at 72°C followed by a final extension step of 10 minutes at 72°C. Amplified DNA (714 bp) is analysed by agarose gel electrophoresis

If the cytopathic effects in culture are not extensive it is possible that a product will not be generated using a single round of amplification. To avoid such problems use the semi-nested assay using primers:

5'-TCT-TGG-AGC-CAA-ATA-GCT-CAR*-R*TC-3' (SVCVF1) and

5'-CTG-GGG-TTT-CCN*-CCT-CAA-AGY*-TGY*-3' (SVC R4) according to Stone *et al.* (2003). The second round of PCR is performed in a 50 µl reaction volume 1 x PCR buffer (50 mM KCl, 10 mM Tris/HCl, pH 9.0, and 0.1% Triton X-100) containing 2.5 mM MgCl₂, 200 µM dNTPs, 50 pmol each of the SVCV R2 and SVCV F1 primers, 1.25 units of Taq DNA polymerase, and 2.5 µl of the first round product. The reaction mix is overlaid with mineral oil and subjected to 35 temperature cycles of: 1 minute at 95°C, 1 minute at 55°C and 1 minute at 72°C followed by a final extension step of 10 minutes at 72°C. Amplified DNA (606 bp) is analysed by agarose gel electrophoresis

All amplified products are confirmed as SVCV in origin by sequencing, and the SVCV subtype (Ia-Id) is identified using a BLAST search (<http://www.ebi.ac.uk/blastall/index.html>).

*SVCV primer annealing sites were identified by the alignment of the published amino acid sequences for the glycoprotein of SVCV (Bjorklund *et al.* 1996; Genbank accession no. U18101), and the vesicular stomatitis virus (VSV) New Jersey (Gallione & Rose 1983; Genbank accession no. V01214), and Piry strains (Genbank accession no. D26175). Primers were then designed to anneal to the regions encoding the conserved amino acids using the published sequence for SVCV (Bjorklund *et al.* 1996) as a skeleton, and introducing degenerate bases at the 3' termini to allow for potential differences in codon usage. The appropriate IUB codes have been used where appropriate.

REFERENCES

BJORKLUND H.V., HIGMAN K.H. & KURATH G. (1996). The glycoprotein genes and gene junctions of the fish rhabdoviruses, spring viremia of carp virus and hirame rhabdovirus: analysis of relationships with other rhabdoviruses *Virus Res.*, **42**, 65–80.

GALLIONE C.J. & ROSE J.K. (1983). Nucleotide sequence of a clone encoding the entire glycoprotein from the New Jersey serotype of vesicular stomatitis virus. *J. Virol.*, **46**, 162–169.

STROMMEN H.K. & STONE D.M. (1998). Detection of viral haemorrhagic septicaemia (VHS) virus in fish tissues by semi-nested polymerase chain reaction. *In: Proceedings of the Symposium on Methodology in Fish Diseases Research*, Barnes A.C., Davidson G.A., Hiney M.P. & McIntosh D., eds. Fisheries Research Services, Aberdeen, Scotland, UK, 203–209.

STONE D.M., AHNE W., SHEPPARD A.M., TSIN-YEE LIU C.T-Y., TAYLOR G.R., DENHAM K.D., DIXON P.F. & WAY K. (2002). Nucleotide sequence analysis of the glycoprotein gene of putative spring viraemia of carp viruses and pike fry rhabdovirus isolates reveals four distinct piscine vesiculovirus genogroups. *Dis Aquat. Org.*, **53**, 203–210.

Model Certificate No. 1.

**INTERNATIONAL AQUATIC ANIMAL
HEALTH CERTIFICATE FOR
LIVE FISH AND GAMETES**

LIVE FISH AND GAMETES

NOTE: Mark all the relevant items with a cross in the appropriate space.

I. Identification

- Cultured stocks Wild stocks
 Fish Sperm Unfertilised eggs Fertilised eggs Larvae

1) Species
Scientific [Latin] name:.....
Common name:.....

2) Age (years): Unknown 0+ 1+ 2+ >2+

3) Total weight (kg):.....
OR
Number (×1000):.....

II. Place of harvest/production

1) Country:.....
2) Zone:.....
3) Aquaculture establishment/Zone:
Name:.....
Location:.....

III. Origin of consignment (if different from II)

1) Country:.....
2) Zone:.....
3) Aquaculture establishment/Zone:
Name:.....
Location:.....

IV. Destination

1) Country:.....
2) Zone:.....
3) Aquaculture establishment/Zone:
Name:.....
Location:.....
4) Nature and identification of means of transport:.....
.....

V. Declaration

I, the undersigned, certify that the live fish and/or fish larvae, fish gametes, ova and fertilised eggs in the present consignment satisfy the following conditions (delete where not applicable):

1) Originate from a country officially declared free of NAME OF DISEASE* based on the provisions of the pertinent Articles in the Aquatic Code to indicate which provisions for declaration of freedom apply.

OR

2) Originate from a zone officially declared free of NAME OF DISEASE* based on the provisions of the pertinent Articles in the Aquatic Code to indicate which provisions for declaration of freedom apply.

OR

3) Originate from a country or zone of unknown status for NAME OF DISEASE*.

OR

4) Originate from a country or zone known to be infected with NAME OF DISEASE*.

AND

5) The following requirements that have been previously agreed between the Competent Authorities of the importing and exporting countries:

*This refers to diseases listed in the Aquatic Code. Importing countries seeking assurance from the exporting country on the status of other diseases should be prepared to provide justification to the exporting country for their request (see Guide to the use of the Aquatic Animal Health Code, Part C and Section 1.3 of the Aquatic Code).

[have as their place of production a: Country, Zone, Aquaculture establishment that has been subjected to an official fish health surveillance scheme according to the procedures described in the OIE *Manual of Diagnostic Tests for Aquatic Animals* and that the Country, Zone or Aquaculture establishment identified in Section II is officially recognised as being free from the pathogens causing the diseases listed in the *Aquatic Code*, as identified in the table below

	Country		Zone		Aquaculture establishment	
	Yes	No	Yes	No	Yes	No
Epizootic haematopoietic necrosis						
Infectious haematopoietic necrosis						
<i>Oncorhynchus masou</i> virus disease						
Spring viraemia of carp						
Viral haemorrhagic septicaemia						
And any of the following if required by the importing country						
Channel catfish virus disease						
Viral encephalopathy and retinopathy						
Infectious pancreatic necrosis						
Infectious salmon anaemia						
Epizootic ulcerative syndrome						
Bacterial kidney disease (<i>Renibacterium salmoninarum</i>)						
Enteric septicaemia of catfish (<i>Edwardsiella ictaluri</i>)						
Piscirickettsiosis (<i>Piscirickettsia salmonis</i>)						
Gyrodactylosis (<i>Gyrodactylus salaris</i>)						
Red sea bream iridoviral disease						
White sturgeon iridoviral disease]						

]

Appendix XIII (contd)

Exporting country:.....
Competent Authority:.....

Stamp:

Date:.....
Issued at:.....
Name and address of Certifying Official:
.....
.....
.....

Signature:.....

IMPORTANT NOTE: This certificate must be completed no more than three days prior to shipment.

Model Certificate No. 2.

**INTERNATIONAL AQUATIC ANIMAL
HEALTH CERTIFICATE FOR
DEAD FISH**

DEAD FISH

NOTE: Mark all the relevant items with a cross in the appropriate space.

I. Identification

- Cultured stocks Wild stocks
- Eviscerated Uneviscerated
- 1) Species:
Scientific [Latin] name:.....
Common name:.....
- 2) Age (years): Unknown 0+ 1+ 2+ >2+
- 3) Total weight (kg):.....
OR
Number (×1000):.....

II. Place of harvest/production

- 1) Country:.....
- 2) Zone:.....
- 3) Aquaculture establishment/Zone:
Name:.....
Location:.....

III. Destination

- 1) Country:.....
- 2) Zone:.....
- 3) Aquaculture establishment/Zone:
Name:.....
Location:.....
- 4) Nature and identification of means of transport:.....
.....

IV. Declaration

I, the undersigned, certify that the dead fish and/or fish products in the present consignment satisfy the following conditions (delete where not applicable):

1) Originate from a country *officially declared free of NAME OF DISEASE** based on the provisions of the pertinent Articles in the *Aquatic Code* to indicate which provisions for declaration of freedom apply.

OR

2) Originate from a *zone officially declared free of NAME OF DISEASE** based on the provisions of the pertinent Articles in the *Aquatic Code* to indicate which provisions for declaration of freedom apply.

OR3) Originate from a country or zone of unknown status for NAME OF DISEASE*OR4) Originate from a country or zone known to be infected with NAME OF DISEASE*AND5) The following requirements that have been previously agreed between the Competent Authorities of the importing and exporting countries:

*This refers to diseases listed in the Aquatic Code. Importing countries seeking assurance from the exporting country on the status of other diseases should be prepared to provide justification to the exporting country for their request (see Guide to the use of the Aquatic Animal Health Code, Part C and Section 1.3. of the Aquatic Code).

[have as their place of production a: Country, Zone, Aquaculture establishment that has been subjected to an official fish health surveillance scheme according to the procedures described in the OIE *Manual of Diagnostic Tests for Aquatic Animals*, and that the Country, Zone or Aquaculture establishment identified in Section II is officially recognised as being free from the pathogens causing the diseases listed in this *Aquatic Code*, as identified in the table below.

	Country		Zone		Aquaculture establishment	
	Yes	No	Yes	No	Yes	No
Epizootic haematopoietic necrosis						
Infectious haematopoietic necrosis						
<i>Oncorhynchus masou</i> virus disease						
Spring viraemia of carp						
Viral haemorrhagic septicaemia						
And any of the following if required by the importing country						
Channel catfish virus disease						
Viral encephalopathy and retinopathy						
Infectious pancreatic necrosis						
Infectious salmon anaemia						
Epizootic ulcerative syndrome						
Bacterial kidney disease (<i>Renibacterium salmoninarum</i>)						
Enteric septicaemia of catfish (<i>Edwardsiella ictaluri</i>)						
Piscirickettsiosis (<i>Piscirickettsia salmonis</i>)						
Gyrodactylosis (<i>Gyrodactylus salaris</i>)						
Red sea bream iridoviral disease						
White sturgeon iridoviral disease]						

]

Appendix XIII (contd)

Exporting country:.....
Competent Authority:.....

Stamp:

Date:.....
Issued at:.....
Name and address of Certifying Official:
.....
.....
.....

Signature:.....

IMPORTANT NOTE: This certificate must be completed no more than three days prior to shipment.

Model Certificate No. 3.

**INTERNATIONAL AQUATIC ANIMAL
HEALTH CERTIFICATE FOR
LIVE MOLLUSCS AND GAMETES**

LIVE MOLLUSCS AND GAMETES

NOTE: Mark all the relevant items with a cross in the appropriate space.

I. Identification

Cultured stocks Wild stocks

1) Species:
Scientific [Latin] name:.....
Common name:.....

2) Age: Gametes Unknown >24 months 12–24 months
 0–11 months larvae

3) Total weight (kg):.....
OR
Number (×1000):.....

II. Place of harvest/production

1) Country:.....
2) Zone:.....
3) Aquaculture establishment/Zone:
Name:.....
Location:.....

III. Origin of consignment (if different from II)

1) Country:.....
2) Zone:.....
3) Aquaculture establishment/Zone:
Name:.....
Location:.....

IV. Destination

1) Country:.....
2) Zone:.....
3) Aquaculture establishment/Zone:
Name:.....
Location:.....
4) Nature and identification of means of transport:.....
.....

V. Declaration

I, the undersigned, certify that the live molluscs and/or gametes in the present consignment satisfy the following conditions (delete where not applicable):

1) Originate from a country officially declared free of NAME OF DISEASE* based on the provisions of the pertinent Articles in the Aquatic Code to indicate which provisions for declaration of freedom apply.

OR

2) Originate from a zone officially declared free of NAME OF DISEASE* based on the provisions of the pertinent Articles in the Aquatic Code to indicate which provisions for declaration of freedom apply.

OR

3) Originate from a country or zone of unknown status for NAME OF DISEASE*.

OR

4) Originate from a country or zone known to be infected with NAME OF DISEASE*.

AND

5) The following requirements that have been previously agreed between the Competent Authorities of the importing and exporting countries:

*This refers to diseases listed in the Aquatic Code. Importing countries seeking assurance from the exporting country on the status of other diseases should be prepared to provide justification to the exporting country for their request (see Guide to the use of the Aquatic Animal Health Code, part C and Section 1.3. of the Aquatic Code).

[have as their place of harvest a: Country, Zone, Aquaculture establishment that is subjected to an official mollusc health surveillance scheme according to the procedures described in the OIE Manual of Diagnostic Tests for Aquatic Animals, and that the Country, Zone or Aquaculture establishment identified in Sections II and III above is/are officially recognised as being free from the pathogens causing the diseases listed in this Aquatic Code, as identified in the table below.

	Country		Zone		Aquaculture establishment	
	Yes	No	Yes	No	Yes	No
Infection with <i>Bonamia exitiosus</i>						
Infection with <i>Bonamia ostreae</i>						
Infection with <i>Haplosporidium nelsoni</i>						
Infection with <i>Marteilia refringens</i>						
Infection with <i>Marteilia sydneyi</i>						
Infection with <i>Mikrocytos mackini</i>						
Infection with <i>Mikrocytos roughleyi</i>						
Infection with <i>Perkinsus marinus</i>						
Infection with <i>Perkinsus olseniatlanticus</i>						
And any of the following if required by the importing country						
Infection with <i>Candidatus Xenohaliotis californiensis</i>						
Infection with <i>Haplosporidium costale</i>						

]

Appendix XIII (contd)

Exporting country:.....
Competent Authority:.....

Stamp:

Date:.....
Issued at:.....
Name and address of Certifying Official:
.....
.....
.....

Signature:.....

IMPORTANT NOTE: This certificate must be completed no more than three days prior to shipment.

Model Certificate No. 4.

**INTERNATIONAL AQUATIC ANIMAL
HEALTH CERTIFICATE FOR
LIVE CRUSTACEANS**

LIVE CRUSTACEANS

NOTE: Mark all the relevant items with a cross in the appropriate space.

I. Identification

Cultured stocks Wild stocks

- 1) Species:
 Scientific [Latin] name:.....
 Common name:.....
- 2) Age: Fertilised eggs or nauplii Postlarvae Juveniles Broodstock
- 3) Total weight (kg):.....
 OR
 Number (×1000):.....

II. Place of harvest/production

- 1) Country:.....
- 2) Zone:.....
- 3) Aquaculture establishment/Zone:
 Name:.....
 Location:.....

III. Origin of consignment (if different from II)

- 1) Country:.....
- 2) Zone:.....
- 3) Aquaculture establishment/Zone:
 Name:.....
 Location:.....

IV. Destination

- 1) Country:.....
- 2) Zone:.....
- 3) Aquaculture establishment/Zone:
 Name:.....
 Location:.....
- 4) Nature and identification of means of transport:.....

V. Declaration

I, the undersigned, certify that the live crustaceans in the present consignment satisfy the following conditions (delete where not applicable):

- 1) Originate from a country officially declared free of NAME OF DISEASE* based on the provisions of the pertinent Articles in the Aquatic Code to indicate which provisions for declaration of freedom apply.

OR

2) Originate from a zone officially declared free of NAME OF DISEASE* based on the provisions of the pertinent Articles in the Aquatic Code to indicate which provisions for declaration of freedom apply.

OR

3) Originate from a country or zone of unknown status for NAME OF DISEASE*.

OR

4) Originate from a country or zone known to be infected with NAME OF DISEASE*

AND

5) The following requirements that have been previously agreed between the Competent Authorities of the importing and exporting countries:

*This refers to diseases listed in the Aquatic Code. Importing countries seeking assurance from the exporting country on the status of other diseases should be prepared to provide justification to the exporting country for their request (see Guide to the use of the Aquatic Animal Health Code, part C and Section 1.3. of the Aquatic Code).

[have as their place of harvest a: Country, Zone, Aquaculture establishment that is subjected to an official crustacean health surveillance scheme according to the procedures described in the OIE *Manual of Diagnostic Tests for Aquatic Animals*, and that the Country, Zone, or Aquaculture establishment identified in Sections II and III above is/are officially recognised as being free from the pathogens causing the diseases listed in this *Aquatic Code*, as identified in the table below.

	Country		Zone		Aquaculture establishment	
	Yes	No	Yes	No	Yes	No
Taura syndrome						
White spot disease						
Yellowhead disease						
And any of the following if required by the importing country						
Tetrahedral baculovirus (<i>Baculovirus penaei</i>)						
Spherical baculovirus (<i>Penaeus monodon</i> -type baculovirus)						
Infectious hypodermal and haematopoietic necrosis						
Crayfish plague (<i>Aphanomyces astaci</i>)						
Spawner-isolated mortality virus disease]						

]

Appendix XIII (contd)

Exporting country:.....
Competent Authority:.....

Stamp:

Date:.....
Issued at:.....
Name and address of Certifying Official:
.....
.....
.....

Signature:.....

IMPORTANT NOTE: This certificate must be completed no more than three days prior to shipment.

Model Certificate No. 5.

**INTERNATIONAL AQUATIC ANIMAL
HEALTH CERTIFICATE FOR
DEAD CRUSTACEANS**

DEAD CRUSTACEANS

NOTE: Mark all the relevant items with a cross in the appropriate space.

I. Identification

Cultured stocks Wild stocks

1) Species:
Scientific [Latin] name:.....
Common name:.....

2) Quantity (total weight, kg):.....
OR
Number (×1000):.....

3) Head on animals Head off animals Peeled animals
 Block frozen Individually quick frozen Other processing method

II. Place of harvest/production

1) Country:.....
2) Zone:.....
3) Aquaculture establishment/Zone:
Name:.....
Location:.....

III. Origin of consignment (if different from II)

1) Country:.....
2) Zone:.....
3) Aquaculture establishment/Zone:
Name:.....
Location:.....

IV. Destination

1) Country:.....
2) Zone:.....
3) Company:.....
4) Nature and identification of means of transport:.....
.....

V. Declaration

I, the undersigned, certify that the dead crustaceans in the present consignment satisfy the following conditions (delete where not applicable):

1) Originate from a country officially declared free of NAME OF DISEASE* based on the provisions of the pertinent Articles in the Aquatic Code to indicate which provisions for declaration of freedom apply.

OR

2) Originate from a zone officially declared free of NAME OF DISEASE* based on the provisions of the pertinent Articles in the Aquatic Code to indicate which provisions for declaration of freedom apply.

OR

3) Originate from a country or zone of unknown status for NAME OF DISEASE*.

OR

4) Originate from a country or zone known to be infected with NAME OF DISEASE*.

AND

5) The following requirements that have been previously agreed between the Competent Authorities of the importing and exporting countries:

*This refers to diseases listed in the Aquatic Code. Importing countries seeking assurance from the exporting country on the status of other diseases should be prepared to provide justification to the exporting country for their request (see Guide to the use of the Aquatic Animal Health Code, part C and Section 1.3. of the Aquatic Code).

[have as their place of harvest a: Country, Zone, Aquaculture establishment that is subjected to an official crustacean health surveillance scheme according to the procedures described in the OIE *Manual of Diagnostic Tests for Aquatic Animals*, and that the Country, Zone, or Aquaculture establishment identified in Sections II and III above is/are officially recognised as being free from the pathogens causing the diseases listed in this *Aquatic Code*, as identified in the table below, and that the crustaceans have not been subjected to emergency harvest due to the suspicion or the confirmation of the presence of the diseases identified in the table below.

	Country		Zone		Aquaculture establishment	
	Yes	No	Yes	No	Yes	No
Taura syndrome						
White spot disease						
Yellowhead disease						
And any of the following if required by the importing country						
Tetrahedral baculovirus (<i>Baculovirus penaei</i>)						
Spherical baculovirus (<i>Penaeus monodon</i> -type baculovirus)						
Infectious hypodermal and haematopoietic necrosis						
Crayfish plague (<i>Aphanomyces astaci</i>)						
Spawner-isolated mortality virus disease]						

]

Appendix XIII (contd)

Exporting country:.....
Competent Authority:.....

Stamp:

Date:.....
Issued at:.....
Name and address of Certifying Official:
.....
.....
.....

Signature:.....

IMPORTANT NOTE: This certificate must be completed no more than three days prior to shipment.

Aquatic Animals Commission Work Plan for 2003–2004
Update <i>Aquatic Animal Health Code</i>
<ul style="list-style-type: none"> • Revise the list of diseases in the <i>Aquatic Code</i>
<ul style="list-style-type: none"> • Revise all disease chapters in the <i>Aquatic Code</i>, in line with requirements for surveillance for recognition of freedom from infection
<ul style="list-style-type: none"> • Re-draft <i>Aquatic Code</i> Chapter on Evaluation of Competent Authorities on the basis of the new chapter in the <i>Terrestrial Code</i> on Evaluation of Veterinary Services
<ul style="list-style-type: none"> • Draft a general <i>Aquatic Code</i> Chapter on the principles of disinfection of aquaculture establishments
<ul style="list-style-type: none"> • Draft a new <i>Aquatic Code</i> Chapter on disposal of aquatic animal waste
<ul style="list-style-type: none"> • Revise <i>Aquatic Code</i> Chapter 1.5.6 (Measures concerning international transport of aquatic animal disease agents and pathological material)
<ul style="list-style-type: none"> • Develop guiding principles for the listing of closely related disease agents
<ul style="list-style-type: none"> • Harmonise the naming principles for diseases of fish, molluscs and crustaceans
<ul style="list-style-type: none"> • Develop a procedure for OIE recognition of freedom from listed aquatic animal diseases
Update <i>Manual of Diagnostic Tests for Aquatic Animals</i>
<ul style="list-style-type: none"> • Revise the specific <i>Aquatic Manual</i> chapters on disinfection of fish and mollusc aquaculture establishments
<ul style="list-style-type: none"> • Revise <i>Aquatic Manual</i> Chapter 1.1.4 (Requirements for surveillance for international recognition of freedom from infection) in line with changes made to the <i>Aquatic Code</i>
<ul style="list-style-type: none"> • Develop a new template for disease chapters for future editions of the <i>Aquatic Manual</i> to be used by authors, including specific requirements for monitoring and surveillance
<ul style="list-style-type: none"> • Ask authors for preparation of updates of disease chapters for the fifth edition of the <i>Aquatic Manual</i>
Meetings
<ul style="list-style-type: none"> • Second annual meeting of the Asia Regional Advisory Group for Aquatic Animal Health, Bangkok, Thailand, 10–12 November 2003
<ul style="list-style-type: none"> • International Symposium on Veterinary Epidemiology and Economics (ISVEE 10, Viña del Mar, Chile, 17–21 November 2003)
<ul style="list-style-type: none"> • 23rd Conference of the OIE Regional Commission for Asia, the Far East and Oceania, Noumea, New Caledonia, 25–28 November 2003
<ul style="list-style-type: none"> • Aquaculture Biosecurity: Approaches to the Prevention, Control, and Eradication of Aquatic Animal Disease (Special Session of World Aquaculture Society Triennial Conference, ‘Aquaculture 2004’), Hawaii, 1–5 March 2004
<ul style="list-style-type: none"> • Meetings of OIE Regional Commissions

Other issues
<ul style="list-style-type: none">• Evaluate Member Countries' comments on proposed changes to the <i>Aquatic Code</i> and <i>Aquatic Manual</i> and make appropriate changes in time for submission to the OIE International Committee for adoption
<ul style="list-style-type: none">• Enhance the Commission's web pages
<ul style="list-style-type: none">• Consider new candidates for OIE Reference Laboratories for listed diseases
<ul style="list-style-type: none">• Evaluate annual reports (2003) of OIE Reference Laboratories and Collaborating Centre for aquatic animal diseases
<ul style="list-style-type: none">• Ask diagnostic chapter authors to update disease cards for listed diseases

© **Office International des Epizooties (OIE), 2003**

This document has been prepared by specialists convened by the OIE. Pending adoption by the International Committee of the OIE, the views expressed herein can only be construed as those of these specialists.

All OIE (World Organisation for Animal Health) publications are protected by international copyright law. Extracts may be copied, reproduced, translated, adapted or published in journals, documents, books, electronic media and any other medium destined for the public, for information, educational or commercial purposes, provided prior written permission has been granted by the OIE.

The designations and denominations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the OIE concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers and boundaries.

The views expressed in signed articles are solely the responsibility of the authors. The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by the OIE in preference to others of a similar nature that are not mentioned.