

**REPORT OF THE MEETING
OF THE OIE FISH DISEASES COMMISSION
Paris 11–13 February 2000**

The OIE Fish Diseases Commission (FDC) met at the OIE headquarters from 11 to 13 February 2000. The Agenda and the List of Participants are given in Appendices I and II, respectively.

The participants were welcomed by the Director General of the OIE, Dr J. Blancou. The meeting was chaired by the President of the Commission, Prof. T. Håstein, and Prof. B. Hill, Secretary General, acted as rapporteur. Dr R. Subasinghe, FAO¹ was unable to attend the meeting due to other pressing commitments.

1. *International Aquatic Animal Health Code*

1.1. *Amendments to the Code (Appendix III September '99 report)*

1.1.1. *List of Diseases*

Several Member Countries have proposed the following changes to the listed diseases of fish:

- To add pancreas disease to the List of Other Significant Diseases;
- To upgrade viral encephalopathy and retinopathy to the List of Diseases Notifiable to the OIE;
- To add Pasteurellosis and infection due to Gram-positive cocci to the List of Other Significant Diseases;
- To upgrade infectious salmon anaemia and piscirickettsiosis to the List of Diseases Notifiable to the OIE;
- To remove spawner-isolated mortality virus disease from the List of Other Significant Diseases;
- To combine the List of Diseases Notifiable to the OIE and the List of Other Significant Diseases into a single list;
- To consult with experts in Member Countries affected by changes to the Disease Lists.

1 Food and Agriculture Organization of the United Nations

These proposed changes were carefully considered by the FDC. It was decided to retain the present lists of diseases for the 2000 Edition of the Aquatic Animal *Code* and *Manual*. However, all of the listed diseases and the changes proposed by Member Countries would be reviewed following development of a categorisation system (see Agenda Item 3.) that will allow the FDC to make changes to the listed diseases in the future that are both uniform and transparent.

As to uniting the lists, the FDC believes that there is great utility in having both a list of diseases notifiable to the OIE and a second list that may include diseases that are very serious and highly transmissible, but for which important gaps in epidemiological information or lack of a validated screening method prevents from meeting all of the criteria for a notifiable disease. This concept is different from the List A and B diseases of mammals, birds and bees, which involve differences in both severity and in reporting needs.

The Commission also considered the suggestion from a Member Country that experts in affected Member Countries be consulted before changes (especially additions) to the disease lists are proposed. The FDC discussed the procedure by which changes are made to the list of notifiable diseases. While the Commission is developing a system for the categorisation of diseases that will make the procedure more transparent (see Agenda Item 3.), expert opinion will remain critical to decisions made by the FDC on proposed changes to the lists of diseases. The experts in the appropriate Reference Laboratory and other specialists in the disease in question (often in the affected Member Countries) are consulted before any change is proposed. In addition, the FDC Members must reach a consensus before proposing a change. However, the FDC believes that a requirement for consultation with experts in all the affected Member Countries, while providing added input, would be impractical when a large number of countries are involved. All proposed changes to the list of diseases are specified in the reports of the FDC meetings, which are sent to every Member Country for review and comment. These proposed changes also must be approved by the International Committee before they become effective.

1.1.2. Definitions

Two Member Countries sought changes to two of the definitions. The first concerned a problem with the definition of 'Veterinary Administration' for some countries with a federal system. The FDC agreed to amend the definition to include alternative arrangements. The second proposal concerned 'Area of direct transit' and it was agreed to adopt this. Both changes are presented at [Appendix III](#).

1.1.3. Import risk analysis

Although based on the text of a chapter in the *International Animal Health Code*, which has been approved by the International Committee, critical comments on the draft chapter on import risk analysis were received from a number of Member Countries, mostly regarding the inappropriateness of much of the terminology used for aquatic animals. In view of these criticisms and comments made during the OIE International Conference on Risk Analysis in Aquatic Animal Health (see Agenda Item 7.1.), the FDC decided to replace the proposed chapter with the version in the current (1997) edition of the *Manual*. The FDC will await input from the Working Group on Risk Analysis for Aquatic Animal Health that was proposed during the International Conference, before considering the best way to amend this chapter for future editions of the *Code*.

1.1.4. Diseases of Fish

Aside from the proposed changes to the list of diseases discussed above, no further comments on the fish disease chapters in the *Code* were received from Member Countries.

1.1.5. Diseases of crustaceans and certificate for dead crustaceans

In addition to comments surrounding the proposed addition of spawner-isolated mortality virus disease to the List of Other Significant Diseases, comments on the crustacean disease chapters of the *Code* were received from a few Member Countries and were considered by the FDC. The suggestions were generally adopted as useful and are presented at [Appendix III](#). In the case of spawner-isolated mortality virus disease, the comments were referred to experts at OIE Reference Laboratories for advice.

2. *Diagnostic Manual for Aquatic Animal diseases*

2.1. Amendments to the *Manual*

2.1.1. Diseases of fish

Comments on the fish diseases chapters were received from several Member Countries. It was generally agreed that the proposed text for the third edition of the *Manual* was very much improved compared with previous editions, and that the new *Manual* would contribute greatly to the development of internationally recognised standardised diagnostic methods.

During the discussion of chapter I.1. General Information, the FDC agreed to most of the proposed changes.

With regard to the proposed changes to the individual disease chapters, it was decided to send some of the Member Country comments back to the individual chapter's author for advice and consideration; other comments were dealt with by the FDC and changes were made directly to the chapters concerned.

2.1.2. Diseases of crustaceans

Comments on the crustacean diseases chapters were received from several Member Countries. As for the fish disease chapters, it was decided to send some of the Member Country comments back to the individual chapter's author for advice and consideration, while other comments were dealt with by the FDC and changes were made directly to the chapters concerned.

Two proposed amendments were important and require a comment by the FDC:

- One Member Country proposed that the scientific (Latin) names for the shrimp genera be changed to the recently introduced nomenclature. The Commission decided that as most of the scientific literature referred to in the disease chapters does not use the new nomenclature, confusion could be caused to users of the *Manual*. A change to the new nomenclature will be considered when the *Manual* is next updated.
- Another Member Country, which has objected strongly to the inclusion of spawner-isolated mortality disease virus to the List of Other Significant Diseases, saying that this decision was 'premature and not defensible', also disagreed with numerous details about the epidemiology of the disease and methods for its detection. These comments were of such a specialised technical nature that the FDC agreed that they should be forwarded to the author of this chapter for his consideration, along with a request that he consult with another leading authority in shrimp diseases before responding with his opinion. The author's response will be discussed by the FDC before it reaches a final decision, and this decision will be forwarded to the Member Country concerned with a letter explaining the FDC's stand.

2.1.3. Diseases of molluscs

Only one Member Country had commented on the finalised chapters on mollusc diseases, and this comment had already been taken into account. The FDC again reviewed the completed mollusc chapters, and some final small changes were made.

3. Categorisation of diseases

Dr Eva-Maria Bernoth of Australia was invited by the FDC to present information on approaches to development of a system for ranking or classifying aquatic animal diseases. Such a system is needed in order to have a logical and transparent process for deciding whether to add or remove diseases from the List of Diseases Notifiable to the OIE and the List of Other Significant Diseases. Dr Bernoth presented an outline of a draft paper prepared by the Quads Working Group on Aquatic Animal Disease Concepts². This draft will be considered at the next meeting of the Quadrilateral Veterinary Committee in March 2000 and, if adopted, will be presented to the FDC for formal consideration. The draft contained a series of findings and fifteen issues for consideration that were discussed. It did not include a proposal for a new system of categorisation. As the system previously submitted by Australia to the FDC and the system proposed by the OIE International Animal Health Code Commission have been reviewed at previous meetings of the FDC, it was decided that this important issue will need further efforts by the FDC.

4. Contingency planning

At the September 1999 meeting of the FDC, the need for a *Code* chapter on contingency planning was discussed. A draft of the new *Code* chapter on contingency planning and a proposed definition, prepared by Prof. Håstein, were reviewed and edited. The draft is presented at [Appendix III](#) and will be submitted for approval by the International Committee for inclusion in the 2000 Edition of the *Code*.

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

5.1. Representation at international meetings and workshops

Dr K. Nakajima represented the FDC at the meeting of the OIE Regional Commission for Asia, the Far East and Oceania held in Taipei China, 23–26 November 1999, where he presented a report on 'Prevention and Management of Disease of Farmed, Sea-Caught and Recreationally-Caught Fish in Asia, the Far East and Oceania'.

Dr F. Berthe was an instructor at a three-week basic training course on mollusc health that was held at SEAFDEC³, the Philippines, in November 1999. This course was organised by NACA⁴ and FAO in collaboration with OIE, NIWA⁵, IFREMER⁶, DFO⁷ and SEAFDEC. Participants attended from several countries in the region including Indonesia, Japan, Korea, Malaysia, the Philippines and Thailand. This course was the first step of a three-tier training programme on mollusc health management in the region. It was successful and the second phase is expected to be held in November 2000.

A request has been received by the OIE Director General, Dr Blancou, from NACA for the OIE to participate in the third meeting of the FAO/NACA Regional Working Group for development of the Asia Regional Technical Guidelines on Health Considerations for Responsible Movement of Live Aquatic Animals to be held in Beijing, People's Republic of China, in June 2000. The FDC agreed that Dr Nakajima and Professor Hill should represent the Commission as they have done at the two previous meetings.

2 Quadrilateral Countries' Veterinary Committee including Australia, Canada, New Zealand and the United States of America

3 South-East Asia Fisheries Development Centre

4 Network of Aquaculture Centers in Asia-Pacific

5 National Institute of Water and Atmospheric Research (New Zealand)

6 Institut Français de Recherche pour l'Exploitation de la Mer

7 Department of Fisheries and Oceans (Canada)

All the FDC Members participated in the OIE International Conference on Risk Analysis in Aquatic Animal Health (see Agenda Item 7.1.) held at the OIE Headquarters 8–10 February 2000.

5.2. Publications

5.2.1. OIE Disease Cards

The text of the disease cards has been completed for 23 of the 28 listed aquatic animal diseases by the relevant reference experts. Several have been subjected to independent expert review and the authors of the others will be requested by the Central Bureau to have their cards reviewed as well. Those which have been reviewed and finalised will be printed and sent to the Delegates as well as being placed on the FDC page of the OIE Web site, when ready (see Agenda Item 5.5.).

5.2.2. Brochure

A draft of the new FDC brochure entitled 'Protecting Aquatic Animal Health' was presented. The brochure was briefly discussed and some corrections were made to the text. The brochure is due to be presented to the International Committee during the General Session in May 2000.

5.3. Reference Laboratories – Annual reports

Reports had been received from 14/14 Reference Laboratories. The full set of reports will be supplied to Member Countries and to all the Reference Laboratories. The international activities relevant to the work of the OIE are summarised below:

	International activities	Percentage of Laboratories carrying out these activities
(a)	Diagnostic testing	100%
(b)	Production/testing/distribution of diagnostic reagents	64.3%
(c)	Research	85.7%
(d)	International harmonisation/standardisation of methods	57.1%
(e)	Preparation and supply of international reference standards	35.7%
(f)	Collection, analysis and dissemination of epizootiological data	35.7%
(g)	Provision of consultant expertise	71.4%
(h)	Provision of scientific and technical training	78.6%
(i)	Organisation of international scientific meetings	14.3%
(j)	Participation in international collaborative studies	21.4%
(k)	Publications	92.9%

The Commission agreed that the reports from the Reference Laboratories should not be placed on the FDC Web page of the OIE Web site, as the FDC does not have editorial control over their contents. As many of the annual reports contain information on disease occurrence in particular countries, it was agreed that the Reference Expert should, in the future, send details of any material received and the results of diagnostic tests or pathogen identification tests, to the OIE Delegate of the Member Country from which the samples originated to ensure that the Delegate is made aware of the findings. Delegates will be encouraged to promptly inform the OIE Central Bureau of any important findings from an OIE Reference Laboratory, particularly with respect to any Diseases Notifiable to the OIE. The President of the FDC will contact the President of the Standards Commission requesting its input on a proposal to change the Terms of Reference for the Reference Laboratories to include reporting of notifiable diseases to the Delegate of the Member Country from which the samples were submitted.

Approval will be sought at the 68th General Session 2000 for the following Reference Laboratory applications:

Piscirickettsiosis (*Piscirickettsia salmonis*): Oregon State University, United States of America (USA). Name of Expert: Dr John Fryer.

Channel catfish virus: College of Veterinary Medicine, Mississippi State University, USA. Name of Expert: Dr Larry Hanson.

Enteric septicaemia: College of Veterinary Medicine, Mississippi State University, USA. Name of Expert: Dr Larry Hanson.

Bacterial kidney disease: Western Fisheries Research Center, Seattle, USA. Name of Expert: Dr Ronald Pascho.

A proposal for establishing a new Reference Laboratory for the mollusc diseases, Haplosporidiosis and Perkinsiosis was agreed upon. A letter of invitation will be sent.

A reference laboratory for white sturgeon iridoviral disease is currently being sought.

5.4. Collaborating Centre – database

Prof. Hill reported that there had been numerous visits to the International Database on Aquatic Animal Diseases via the Delegates Page of the OIE Web site on the Internet. The visits increased following the letter sent to Delegates from Dr Blancou reminding them of the trial period to allow delegates to make comments on validity of country data. Some Member Countries have queried or refuted some of the data, and the Collaborating Centre has adjusted this where appropriate. One Member Country has queried what constitutes 'OIE data'. After discussion with the Central Bureau, it was agreed that any disease information officially published by the OIE represents 'OIE data' as all such material has been seen and approved by the Delegates of the Member Countries before publication. This includes reports of the FDC meeting, and Quarterly Aquatic Animal Disease Report (Asian and Pacific Region), as well as the *Code* and the *Manual*.

A brief demonstration of the database was given at the OIE International Conference on Risk Analysis in Aquatic Animal Health (see Agenda Item 7.1.). Overall, the database had been well received, with some glowing reports of its value and ease of use.

The FDC agreed to strongly support making the database publicly available via the FDC Web page on the public OIE Web site immediately after the final comments from Delegates at the General Session in May 2000.

5.5. Internet activities

Ms C. Malotaux of the Central Bureau joined the meeting to report on progress with development of the FDC page on the OIE Web site. She explained that there was a fundamental need to redesign the OIE Web site before setting up the FDC page and providing a hyperlink from the OIE front page to the FDC page. It was agreed that the contents of the FDC page will include:

- A list of FDC Members with addresses and e-mail links;
- A list of the Reference Laboratories for aquatic animal diseases with addresses and e-mail links to the designated experts;
- FDC meeting reports from the past two years; additional reports to be added following approval at the General Session;
- A link to the International Database on Aquatic Animal Diseases;
- The Aquatic Animal *Code* and *Manual* in a form that can be down loaded;
- An order form for the FDC Brochure;

- The List of the Diseases Notifiable to the OIE and the List of Other Significant Diseases with a link to the relevant Disease Cards;
- A link to the OIE Disease Information Sheets that contain information on aquatic animal diseases;
- The OIE Aquatic Animal Disease Cards in a form that can be down loaded.

The FDC requested the Central Bureau to make progress on this item as quickly as possible.

5.6. Technical Item of the OIE General Session 2000

The OIE International Committee decided during the General Session in May 1999 that one of the Technical Items for the 68th General Session (in May 2000) would be a presentation entitled 'Principles for Prevention and Control of Aquatic Animal Diseases'. The President of the FDC accepted to be the rapporteur for this Technical Item. A questionnaire had been sent to OIE Member Countries and a paper has been prepared on the topic with inclusion of the information given by the 71 responding Member Countries.

6. Developments in aquatic animal health world-wide

6.1. Epidemiological report

The FDC's annual epidemiological report on developments in the aquatic animal disease situation world-wide has been based on information submitted in the form of 'personal communications' from unofficial rapporteurs to the individual Members of the Commission. The report has been published in previous years in the World Animal Health series after approval of the FDC reports by the International Committee during the General Session, and has therefore been regarded as 'OIE data' and entered as such in the International Database. However, some unsubstantiated information in the report has referred to disease occurrence in individual Member Countries and has led to subsequent rebuttal by the national Delegate. The FDC agreed that until a more formal arrangement for submission of data to the FDC is established, the Commission will not produce an epidemiological report as done in previous years.

7. Any other business

7.1. OIE International Conference on Risk Analysis in Aquatic Animal Health

There were 109 participants from 24 countries at the OIE International Conference on Risk Analysis in Aquatic Animal Health, which was held at the Headquarters of the OIE in Paris, 8–10 February 2000. After methodological aspects, applications, and case studies had been presented in general sessions, working groups dealing with major concerns in applying risk analysis to aquatic animal health stimulated lively discussions. The conclusions of the meeting were very constructive and several proposals were made, including the creation of a working group or expert panel to consider further development of risk analysis methods in aquatic animal health. The FDC was requested to define further ideas for development and it is expected that this will be a special Agenda Item for the next FDC meeting in October 2000. A short report of the ideas developed during the conference is also planned to be published in the OIE *Scientific and Technical Review* in the year 2000. The proceedings of the conference is being prepared with the goal of publication in June 2000.

A proposal was received from Dr Larry Hammell, Associate Professor, University of Prince Edward Island, Charlotte Town, Canada, to initiate a workshop on validation of diagnostic assays. This topic was identified as a need at the OIE International Conference on Risk Analysis in Aquatic Animal Health. The President of the FDC drafted a reply indicating that pending establishment of a proposed Working Group on Risk Assessment in Aquatic Animals, this item would be postponed for consideration by the newly elected Members of the FDC at the October meeting.

7.2. Management and Technical Requirements for Laboratories Conducting Tests for Infectious Animal Diseases

A draft Standard entitled 'Management and Technical Requirements for Laboratories Conducting Tests for Infectious Animal Diseases' has been prepared by the Standards Commission for adoption at the 68th General Session May 2000. If approved, the text will be published in a booklet of OIE guidelines and it will be incorporated as a new chapter in the 2000 edition of the Aquatic Animal *Manual*.

Similarly, the Standards Commission has prepared revised chapters for the OIE *Manual of Standards for Diagnostic Test and Vaccines* on Quality Management in Veterinary Diagnostic Laboratories and on Principles of Validation of Diagnostic Assays for Infectious Diseases. These will be presented for adoption at the 68th General Session. If approved, both chapters will be incorporated as new chapters in the 2000 edition of the Aquatic Animal *Manual*.

7.3. Co-operation with other international organisations

The FDC considered a recent letter received by Dr Blancou from Dr H. Kongkeo, NACA Co-ordinator, requesting continuation of support by OIE in various areas of activity in aquatic animal health in the Asia-Pacific region. The FDC agreed that it was important to continue co-operating with FAO and NACA, particularly by providing expert technical assistance in development of the FAO/NACA Regional Guidelines.

The FDC agreed to continue its overall co-operation with FAO and to seek links with other international organisations, such as SEAFDEC in the Philippines, which announced a new initiative in aquatic animal health at the OIE International Conference on Risk Analysis in Aquatic Animal Health.

7.4. OIE *Scientific and Technical Review* – topics for future editions

The FDC was asked if it has suggestions for topics for future editions of the *Scientific and Technical Review*. The question was raised of whether the FDC would be prepared to take responsibility for an entire issue of the *Review* that would be dedicated to aquatic animal diseases. The FDC agreed to this and possible topics on aquatic animal diseases and health issues were discussed. Some 20–30 potential authors would have to be contacted to prepare selected chapters and also one person would have to be nominated to be co-ordinating editor. This proposal will be submitted to the Administrative Commission for approval. The FDC will wait for further notice from the OIE and then start the process when a decision has been made.

7.5. Letter from the Delegate of Kuwait

The letter to the OIE from the OIE Delegate of Kuwait regarding training of technicians in fish diseases was discussed. It was the opinion of the FDC that Kuwait should seek help from Universities and Institutions that run courses on this topic.

7.6. Date of the next FDC meeting

The FDC agreed to hold its next meeting from 9 to 11 October 2000.

...../Appendices

MEETING OF THE OIE FISH DISEASES COMMISSION

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Agenda

- 1. *International Aquatic Animal Health Code***
 - 1.1. Amendments to the *Code* (Appendix III September '99 report)
 - 1.1.1. List of Diseases
 - 1.1.2. Definitions
 - 1.1.3. Import risk analysis
 - 1.1.4. Diseases of fish
 - 1.1.5. Diseases of crustaceans and certificate for dead crustaceans
 - 2. *Diagnostic Manual for Aquatic Animal diseases***
 - 2.1. Amendments to the *Manual*
 - 2.1.1. Diseases of fish
 - 2.1.2. Diseases of crustaceans
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 - 7.1. OIE International Conference on Risk Analysis in Aquatic Animal Health
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 - 7.4. OIE *Scientific and Technical Review* – topics for future editions
 - 7.5. Letter from the Delegate of Kuwait
 - 7.6. Date of the next FDC meeting
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OF THE OIE FISH DISEASES COMMISSION
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International Aquatic Animal Health Code**Revised texts**

SECTION 1.1.

DEFINITIONS

List of proposed new definitions for the *International Aquatic Animal Health Code*.

Area of direct transit

means a special area established in a transit country approved by the relevant Competent where aquatic animals stay for a very short time, and where water changes [can] may be made, before further transport to their final destination when passing through the transit territory.

Contingency plan

means a documented work plan designed to ensure that all needed actions, requirements and resources are provided in order to eradicate or bring under control outbreaks of specified diseases of aquatic animals.

Veterinary Administration

means the National Veterinary Service (or other official entity) in a country having the authority to implement and carry out aquatic animal health measures (i.e. stamping out, following, disinfection, etc.) and certification as recommended in this *Code*. (If an authority other than the Veterinary Administration acts as the Competent Authority for matters related to aquaculture and protection of the health of farmed and wild populations of fish, molluscs and crustaceans, the Veterinary Administration nonetheless remains the body that is responsible for liaison with the OIE in terms of Section 1.2 of this *Code*.)

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CHAPTER X.X.X.

GUIDELINES FOR CONTINGENCY PLANNING

Article X.X.X.1.

A number of diseases are regarded as posing a potential threat to aquaculture as well as to wild stocks of aquatic animals world-wide. The introduction of such diseases into countries recognised to be free from these diseases or into countries with an established control system and eradication programme for such diseases, may result in significant losses. In order to diminish such losses, the Veterinary Administration or other Competent Authority responsible for aquatic animal health may need to act quickly and should develop contingency plan(s) before such events occur.

Article X.X.X.2.

Legal powers

Countries must establish the necessary legal provisions that are needed for the implementation of contingency plan(s). Such legal powers must include provisions for establishing a list of diseases for which action is needed, definitions of how such diseases should be managed if detected, provisions for access to infected/suspected sites, and other legal provisions, as needed.

Article X.X.X.3.

Crises centre(s)

Countries must establish specified crises centre(s) (disease control centre[s]) that shall have the responsibility for the co-ordination of all control measures to be carried out. Such centres could either be located centrally or locally, depending on the infrastructure in a given country. A list of the crises centre(s) that have the necessary facilities to carry out disease control measures should be made widely available.

The contingency plan(s) should also state that the crises centre(s) have the authority to act rapidly to bring a given disease situation under control by contacting the personnel, organisations, aquaculture establishments, etc., that are involved directly or indirectly in managing an outbreak of a disease.

Article X.X.X.4.

Personnel

The contingency plan(s) should provide information on the staff required to undertake the control measures, their responsibilities, and instructions on the chain of command.

Article X.X.X.5.

Instructions

Countries establishing contingency plan(s) should provide a detailed set of instructions on actions to be taken when a specified aquatic animal disease is suspected or confirmed. These could include:

- 1) Diagnostic procedures in national reference laboratories;
- 2) Confirmation of diagnosis, if necessary, at an OIE Reference Laboratory;
- 3) Standing instructions to aquatic animal health personnel in the field;

- 4) Instructions for handling/disposal of dead aquatic animals at an aquaculture establishment;
- 5) Instructions for sanitary slaughtering;
- 6) Instructions for disease control at local level;
- 7) Instructions for the establishment of quarantine areas and observation (surveillance) zones;
- 8) Provisions for controlling movements of aquatic animals in established zones;
- 9) Disinfection procedures;
- 10) Fallowing procedures;
- 11) Surveillance methods for establishing successful eradication;
- 12) Re-stocking procedures;
- 13) Compensation issues;
- 14) Reporting procedures;
- 15) Provisions for raising public awareness of aquatic animal disease;

Article X.X.X.6.

Diagnostic laboratories

Countries establishing contingency plan(s) should establish national Reference Laboratories having the necessary facilities for diagnostic work on aquatic animal diseases that can be carried out rapidly. The national laboratory(ies) must also have established a set of instructions as regards rapid transportation of samples, and established protocols for quality assurance and diagnostic procedures to be used.

Article X.X.X.7.

Training programmes

Countries establishing contingency plan(s) must establish necessary training programmes to ensure that skills in field, administrative and diagnostic procedures are maintained. Announced and unannounced field exercises for administrators and aquatic animal health personnel should be carried out to maintain the state of readiness.

CHAPTER 4.1.1.

TAURA SYNDROME

Preamble: For diagnostic tests, refer to Chapter 4.1.1. in the *Manual*.

Susceptible hosts: Pacific white shrimp (*Penaeus vannamei*), blue shrimp (*P. stylirostris*) and white shrimp (*P. setiferus*).

Article 4.1.1.1.

For the purposes of this *Code*:

Taura syndrome: free country

A country may be considered free from Taura syndrome when:

- 1) no recorded outbreak of Taura syndrome has occurred within its territory for at least the previous two years;
- 2) Taura syndrome has not been detected in any crustacean of a susceptible species tested during operation of an official [national] crustacean surveillance scheme in aquaculture establishments for a period of at least two years using the procedures described in the *Manual*;
- 3) it is observing the conditions referred to in Articles 4.1.1.2., 4.1.1.3. and 4.1.1.4.

Taura syndrome: free zone

A Taura syndrome free zone may be established within the territory of one or more countries if within the zone:

- 1) aquaculture establishments and wild populations containing susceptible species have been tested in an official crustacean health surveillance scheme for at least the previous two years using the procedures described in the *Manual*;
- 2) Taura syndrome virus (TSV) has not been detected during this two-year period.

Such Taura syndrome free zones must comprise the entire water supply in an area complying with the definition of zone/zoning laid down in Section 1.1. Definitions in this *Code*.

Such zones must be clearly delineated on a map of the territory of the country concerned by the Competent Authority and must be observing the conditions referred to in Articles 4.1.1.2., 4.1.1.3. and 4.1.1.4.

Taura syndrome: free aquaculture establishment

A Taura syndrome free aquaculture establishment may be located not only within a Taura syndrome free country or zone but also within a Taura syndrome infected zone provided that:

- 1) it has been tested in an official crustacean health surveillance scheme for at least the previous two years using the procedures described in the *Manual*, without detection of TSV;
- 2) it is supplied by water disinfected with approved technical devices proven to kill TSV;
- 3) there is a natural or artificial barrier that prevents contamination of the aquaculture establishment or its water supply;
- 4) it is observing the conditions referred to in Articles 4.1.1.2., 4.1.1.3. and 4.1.1.4.

Taura syndrome: restoration of free status

A country, a zone or an aquaculture establishment may be restored to Taura syndrome free status if it has been subjected to a stamping-out or an effective disease eradication policy and if TSV has not been detected for the last two years of a surveillance scheme using the procedures described in the *Manual*.

A newly constructed aquaculture establishment, or one that has undergone a thorough stamping-out policy under supervision of the Competent Authority, may achieve Taura syndrome free status in under two years if it otherwise meets all the requirements for an Taura syndrome free aquaculture establishment.

Article 4.1.1.2.

When importing live crustaceans, juveniles, postlarvae and/or broodstock of any susceptible species, or fertilised eggs, 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 an official crustacean health surveillance scheme in aquaculture establishments comprising inspection and laboratory tests on susceptible species conducted according to the *Manual*, whether or not the consignment originates from a country officially declared Taura syndrome free.

If the country of origin is not officially declared to be Taura syndrome free, the certificate must state whether the consignment originates:

- 1) from a zone officially declared Taura syndrome free, or
- 2) from an aquaculture establishment officially declared Taura syndrome free.

The certificate shall be in accordance with Model Certificate No. 4 given in Part 5 of this *Code*.

Article 4.1.1.3.

Importing countries that are officially declared to be Taura syndrome free should only accept for importation live crustaceans of a susceptible species from exporting countries declared Taura syndrome free, or from clearly defined Taura syndrome free zones in countries not declared Taura syndrome free.

Importing countries not regarded as Taura syndrome free, but which have officially recognised Taura syndrome free zones, should only import live crustaceans of a susceptible species into such zones from other countries or zones that are officially declared Taura syndrome free.

For aquaculture establishments officially declared Taura syndrome free that exist in infected zones, the Competent Authority of the country concerned should allow importation of live crustaceans of a susceptible species or fertilised eggs/nauplii only from officially declared Taura syndrome free aquaculture establishments, zones or countries.

Article 4.1.1.4.

For dead crustaceans

In general, the Competent Authority of a country importing dead crustaceans of a susceptible species for human consumption should require that the consignment be accompanied by an international health certificate, conforming to the Model Certificate No. 5, issued by the Competent Authority in the country of origin if the crustaceans of susceptible species are to be imported head on.

This certificate should declare the health status of the country in respect of Taura syndrome and the other crustacean diseases listed in this *Code*.

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CHAPTER 4.1.2.

WHITE SPOT DISEASE

Preamble: For diagnostic tests, refer to Chapter 4.1.2. in the *Manual*.

Susceptible hosts: Tiger shrimp (*Penaeus monodon*), kuruma shrimp (*P. japonicus*), Fleishy prawn (*P. chinensis* (= *orientalis*), white prawn/Indian prawn (*P. indicus*), banana prawn (*P. merguensis*) and white shrimp (*P. setiferus*).

Article 4.1.2.1.

For the purpose of this Code:

White Spot Disease: free country

A country may be considered free from white spot disease when:

- 1) no recorded outbreak of white spot disease has occurred within its territory for at least the previous two years;
- 2) white spot disease baculovirus (WSBV) has not been detected in any crustacean of a susceptible species tested during operation of an official [national] health surveillance in aquaculture establishments for a period of at least two years using the procedures described in the *Manual*;
- 3) it is observing the conditions referred to in Articles 4.1.2.2., 4.1.2.3. and 4.1.2.4.

White Spot Disease: free zone

A white spot disease free zone may be established within the territory of one or more countries if within the zone:

- 1) aquaculture establishments and wild populations containing susceptible species have been tested in an official crustacean health surveillance scheme for at least the previous two years using the procedures described in the *Manual*;
- 2) WSBV has not been detected during this two-year period.

Such white spot disease free zones must comprise the entire water supply in an area complying with the definition of zone/zoning laid down in Section 1.1. Definitions in this *Code*.

Such zones must be clearly delineated on a map of the territory of the country concerned by the Competent Authority and must be observing the conditions referred to in Articles 4.1.2.2., 4.1.2.3. and 4.1.2.4.

White spot disease: free aquaculture establishment

A white spot disease free aquaculture establishment may be located not only within a white spot disease free country or zone, but also within a white spot disease infected zone provided that:

- 1) it has been tested in an official crustacean health surveillance scheme for at least the previous two years using the procedures described in the *Manual*, without detection of WSBV.
- 2) it is supplied by water disinfected with approved technical devices proven to kill WSBV
- 3) there is a natural or artificial barrier that prevents contamination of the aquaculture establishment or its water supply;
- 4) it is observing the conditions referred to in Articles 4.1.2.2., 4.1.2.3. and 4.1.2.4.

White spot disease: restoration of free status

A country, a zone or an aquaculture establishment may be restored to white spot disease free status if it has been subjected to a stamping-out or an effective disease eradication policy and if WSBV has not been detected for the last two years of a surveillance scheme using the procedures described in the *Manual*.

A new constructed aquaculture establishment or one that has undergone a thorough stamping-out policy under supervision of the Competent Authority, may achieve free status in under two years if it otherwise meets all the requirements for a white spot disease free aquaculture establishment.

Article 4.1.2.2.

When importing live crustaceans, juveniles, postlarvae and/or broodstocks of any susceptible species, or fertilised eggs, 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 an official health surveillance scheme in aquaculture establishments comprising inspection and laboratory tests on susceptible species conducted according to the *Manual*, whether or not the consignment originates from a country officially declared white spot disease free.

If the country of origin is not officially declared to be white spot disease free, the certificate must state whether the consignment originates:

- 1) from a zone officially declared white spot disease free, or
- 2) from an aquaculture establishment officially declared white spot disease free

The certificate shall be in accordance with Model Certificate No. 4 given in Part 5 of this *Code*.

Article 4.1.2.3.

Importing countries that are officially declared to be white spot disease free should only accept for importation live crustaceans of a susceptible species from exporting countries declared white spot disease free, or from clearly defined white spot diseases free zones in countries not declared white spot disease free.

Importing countries not regarded as white spot disease free, but which have officially recognised white spot disease free zones, should only import live crustaceans of a susceptible species into such zones from other countries or zones that are officially declared white spot disease free.

For aquaculture establishments officially declared white spot disease free that exist in infected zones, the Competent Authority of the country concerned should allow importation of live crustaceans of a susceptible species or fertilised eggs/nauplii only from officially declared white spot disease free aquaculture establishments, zones or countries.

For dead crustaceans

In general, the Competent Authority of a country importing dead crustaceans of a susceptible species for human consumption should require that the consignment be accompanied by an international health certificate conforming to the Model Certificate No. 5, issued by the Competent Authority in the country of origin if the crustaceans of a susceptible species are to be imported head on.

This certificate should declare the health status of the country in respect to white spot disease and other crustacean diseases listed in this Code.

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C H A P T E R 4 . 1 . 3 .

YELLOW HEAD DISEASE

Preamble: For diagnostic tests, refer to Chapter 4.1.3. in the *Manual*.

Susceptible hosts: Tiger shrimp (*Penaeus monodon*).

Article 4.1.3.1.

For the purposes of this *Code*:

Yellowhead disease: free country

A country may be considered free from yellowhead disease when:

- 1) no recorded outbreak of yellowhead disease has occurred within its territory for at least the previous two years;
- 2) yellowhead disease virus (YHV) has not been detected in any crustacean of a susceptible species tested during operation of an official [national] crustacean surveillance scheme in aquaculture establishments for a period of at least two years using the procedures described in the *Manual*;
- 3) it is observing the conditions referred to in Articles 4.1.3.2., 4.1.3.3. and 4.1.3.4.

Yellowhead disease: free zone

A yellowhead disease free zone may be established within the territory of one or more countries if within the zone:

- 1) aquaculture establishments and wild populations containing susceptible species have been tested in an official crustacean health surveillance scheme for at least the previous two years using the procedures described in the *Manual*;
- 2) YHV has not been detected during this two-year period.

Such yellowhead disease free zones must comprise the entire water supply in an area complying with the definition of zone/zoning laid down in Section 1.1. Definitions in this *Code*.

Such zones must be clearly delineated on a map of the territory of the country concerned by the Competent Authority and must be observing the conditions referred to in Articles 4.1.3.2., 4.1.3.3. and 4.1.3.4.

Yellowhead disease: free aquaculture establishment

A yellowhead disease free aquaculture establishment may be located not only within a yellowhead disease free country or zone but also within an yellowhead disease infected zone provided that:

- 1) it has been tested in an official crustacean health surveillance scheme for at least the previous two years using the procedures described in the *Manual*, without detection of YHV;
- 2) it is supplied by water disinfected with approved technical devices proven to kill YHV;
- 3) there is a natural or artificial barrier that prevents contamination of the aquaculture establishment or its water supply;
- 4) it is observing the conditions referred to in Articles 4.1.3.2., 4.1.3.3. and 4.1.3.4.

Yellowhead disease: restoration of free status

A country, a zone or an aquaculture establishment may be restored to yellowhead disease free status if it has been subjected to a stamping-out or an effective disease eradication policy and if YHV has not been detected for the last two years of a surveillance scheme using the procedures described in the *Manual*.

A newly constructed aquaculture establishment, or one that has undergone a thorough stamping-out policy under supervision of the Competent Authority, may achieve yellowhead disease free status in under two years if it otherwise meets all the requirements for a yellowhead disease free aquaculture establishment.

Article 4.1.3.2.

When importing live crustaceans, juveniles, postlarvae and/or broodstock of any susceptible species, or fertilised eggs, 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 an official crustacean health surveillance scheme comprising inspection and laboratory tests on susceptible species conducted according to the *Manual*, whether or not the consignment originates from a country officially declared yellowhead disease free.

If the country of origin is not officially declared to be yellowhead disease free, the certificate must state whether the consignment originates:

- 1) from a zone officially declared yellowhead disease free, or
- 2) from an aquaculture establishment officially declared yellowhead disease free.

The certificate shall be in accordance with Model Certificate No. 4 given in Part 5 of this *Code*.

Article 2.3.3.3.

Importing countries that are officially declared to be yellowhead disease free should only accept for importation live crustaceans of a susceptible species from exporting countries declared yellowhead disease free, or from clearly defined yellowhead disease free zones in countries not declared yellowhead disease free.

Importing countries not regarded as yellowhead disease free, but which have officially recognised yellowhead disease free zones, should only import live crustaceans a susceptible species into such zones from other countries or zones that are officially declared yellowhead disease free.

For aquaculture establishments officially declared yellowhead disease free that exist in infected zones, the Competent Authority of the country concerned should allow importation of live crustaceans of a susceptible species or fertilised eggs/nauplii only from officially declared yellowhead disease free aquaculture establishments, zones or countries.

Article 2.3.3.4.

For dead crustaceans

In general, the Competent Authority of a country importing dead crustaceans of a susceptible species for human consumption should require that the consignment be accompanied by an international health certificate, conforming to the Model Certificate No. 5, issued by the Competent Authority in the country of origin if the crustaceans of susceptible species are to be imported head on.

This certificate should declare the health status of the country in respect of yellowhead disease and the other crustacean diseases listed in this *Code*.

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Model Certificate No. 5

**INTERNATIONAL 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:
 Latin name:.....
 Common name:.....
- 2) Quantity (total weight, kg):.....
 OR
 Number (x1000):.....
- 3) Head on animals Head off animals Peeled animals

II. Origin

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

III. Destination

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

IV. National crustacean health status

Based on the official health surveillance scheme employing laboratory tests of susceptible species, is the exporting country, zone or aquaculture establishment considered to be free of:

	Country		Zone		Aquaculture establishment	
	Yes	No	Yes	No	Yes	No
Taura syndrome						
White spot disease						
Yellowhead disease						
Other serious diseases (to be specified)						

V. Declaration

I, the undersigned, certify that the dead crustaceans for human consumption in the present consignment originate from a: Country, Zone, Aquaculture establishment subjected to official health surveillance according to the procedures described in the OIE *Diagnostic Manual for Aquatic Animal Diseases*, and that the Country, Zone, or Aquaculture establishment identified in Section II above is officially recognised as being free from the diseases identified in Part IV above, 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 Part IV above.

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

Stamp:

Date:.....
Issued at:.....
Name and address of Health Inspector:
.....
.....

Signature:

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