INTERNATIONAL AQUATIC ANIMAL HEALTH CODE

fish, molluscs and crustaceans

Fourth edition, 2001
FOREWORD

The principal aim of the International Aquatic Animal Health Code and its companion volume, the Diagnostic Manual for Aquatic Animal Diseases, is to facilitate international trade in aquatic animals and aquatic animal products. The International Aquatic Animal Health Code (referred to hereafter as the Code) attempts to achieve this aim by providing detailed definitions of minimum health guarantees to be required of trading partners in order to avoid the risk of spreading aquatic animal diseases. These guarantees are based on inspection by Competent Authorities, epidemiological surveillance, and standard methods for laboratory examinations and disease diagnosis; the latter are described in the Diagnostic Manual for Aquatic Animal Diseases (referred to hereafter as the Manual).

The Code and Manual are the result of several years’ work by the Fish Diseases Commission, a specialist commission of the Office International des Epizooties (OIE). The contents of the Code and Manual are based on the same principles and definitions as for terrestrial animals, but have been adapted to aquatic animals. The OIE International Animal Health Code Commission and the Standards Commission also contributed to the work, and the opinions of highly qualified persons in different OIE Member Countries were also obtained.

The Code and Manual will be reviewed annually and any proposed amendments made will be presented to the OIE International Committee at the General Session in May each year. The Code will be printed annually and is also available on the Web site. It is envisaged that updated versions of the Manual will be printed once every three years.

The Fish Diseases Commission recommends that users of the Code read the ‘Guide’, which follows the Foreword. Our hope is that this will lead to rational use of the Code and to a consistent world-wide standard for testing for diseases notifiable to the OIE, thus ensuring that the basis for issuing health certificates for aquatic animals and their products is the same the world over.

Acknowledgement is given to the staff of the OIE Central Bureau as well as to former and present Members of the Fish Diseases Commission, who have contributed to producing this book and its companion volume, the Manual. Dr P. de Kinkelin is thanked for his initiating role, as it was under his chairmanship of the Commission that work on the two books was begun. Special thanks is also expressed to those scientific experts in different Member Countries who provided comments and information.

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GUIDE TO THE USE OF THE
INTERNATIONAL AQUATIC ANIMAL
HEALTH CODE

A. Introduction

1. The purpose of this guide is to extend the use of the International Aquatic Animal Health Code (referred to hereafter as the Code) in order to assist Veterinary Administrations and/or other Competent Authorities in Member Countries in the preparation of veterinary health certificates for international trade, based on a uniform approach to health control in aquatic animal populations using standardized methods for the diagnosis of important aquatic animal diseases.

2. Certification is a prerequisite to controlling and preventing the spread of aquatic animal diseases through international trade in aquatic animals and their products. Such certification must be based on standard methods and high ethical standards.

3. Certification is a means of facilitating trade and should not be used to restrict trade by requiring unjustified aquatic animal health conditions. Whenever possible, aquatic animal health conditions as set out in the Code should be used. The various chapters and appendices in the Code that cover disease control measures are under constant review in line with advances in veterinary knowledge.

4. Certification is generally required for diseases that are notifiable to the OIE, if they are relevant in the particular situation. In the case of mammals, birds and bees, notifiable diseases are divided into List A (diseases with the potential for very serious and rapid spread, of serious socio-economic or public health consequence, and of major importance to international trade) and List B (diseases of socio-economic and/or public health importance within countries, and significant to international trade). The nature of aquatic animal diseases and the volume of the aquatic animal trade is such that no aquatic animal diseases are presently categorised as List A diseases. Therefore, in this Code, the term 'diseases notifiable to the OIE' has been used instead of 'List B diseases'.

5. To avoid confusion, key terms and phrases used in the Code are defined in Chapter 1.1.1. These words are in italic in the text when they are used in the context of the definition given in Chapter 1.1.1. It is important when using any of these terms or phrases in a certificate, to check that its use is in accordance with the definition given in the Code.

6. Section 1.3 of the Code details the legal, ethical and moral obligations of Veterinary Administrations and individual personnel of Competent Authorities involved in international trade in aquatic animals and aquatic animal products. It is important therefore that the Veterinary Administrations and/or other Competent Authorities should have a sufficient number of copies of the Code for the personnel directly involved with the trade. In addition, diagnostic laboratories should be fully conversant with the technical recommendations in the Diagnostic Manual for Aquatic Animal Diseases (referred to hereafter as the Manual).

7. Methods for diagnosing the diseases listed in the Code are given in the Manual, which is a companion volume to the Code. At the beginning of each Code chapter on a specific disease, a reference is given to the Manual.

8. Because of the rapid changes in aquaculture and in the world-wide disease situation, the Code and Manual will require frequent updating by the Fish Diseases Commission. Member Countries are encouraged to send to the OIE at any time, via their national Delegate, suggestions for changes to the Code and Manual, including their rationale for such changes. These will be considered by the Commission at its biannual meetings and, if accepted...
by the OIE International Committee, will be included in the next edition of the Code and Manual. In the interim between printed editions, all changes will be available on the Web site.

9. Realising that the Code represents a world-wide standard for the control of the listed aquatic animal diseases, Member Countries may use risk assessment approaches to include other diseases of particular concern in their national regulations. Guidelines for developing a risk assessment for a given aquatic animal disease are included in the Code.

10. The complete text of the Code has been made available on the OIE Web site (address: http://www.oie.int) to ensure wider access.

B. Disease Information, the Bulletin and World Animal Health

These three OIE publications inform Veterinary Administrations and/or other Competent Authorities on the animal health situation world-wide. Importing countries can thus have an overview of the animal health status, disease occurrence and control programmes in exporting countries. If it considers the data available at the international level to be insufficient, the importing country should contact the exporting country directly, or through the OIE Central Bureau, to obtain additional information.

C. International Health Certificates

1. It is important that international aquatic animal health certificates be kept as simple as possible and be clearly worded so as to avoid any misunderstanding of the requirements of importing countries. It is unnecessary and against the principles of facilitating international trade to seek guarantees of freedom from ubiquitous infections that are prevalent in the importing country. There may be exceptions to this general rule, for example, where programmes exist in the importing country for the control or eradication of specific diseases, or where it is considered to be important to avoid the introduction of new strains of pathogens.

2. It is suggested that all international health certificates be given an official stamp and/or serial number by the Competent Authorities of exporting countries. The name and position of the signatory should be clearly legible. Certificates should be printed on officially headed paper and, where appropriate, in the languages of the exporting and importing countries. The draft certificates should be approved by the importing country before being used. Any transit through a third country should also be sanctioned by the country concerned.

3. No Personnel of a Competent Authority should sign an international health certificate for matters that he/she has not carried out directly or supervised, unless supporting documents signed by an authorised person are available to corroborate the facts, e.g. laboratory test results.

D. Notes of Guidance for Importers and Exporters

In order to avoid any misunderstanding of the requirements, it is often advisable to prepare notes of guidance to assist importers and exporters. The notes should set out all the conditions concerning importation measures to be applied before and after importation, as well as during transport and unloading, legal obligations and operational procedures. The attention of exporters should also be drawn to the relevant International Air Transport Association (IATA) rules for the carriage of aquatic animals and aquatic animal products by air.

The notes of guidance should also set out in detail the health certification requirements to be included in the documents accompanying the consignment to its destination.
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GENERAL DEFINITIONS

CHAPTER 1.1.1.
DEFINITIONS

Article 1.1.1.1.

For the purpose of this Code:

Affected establishment
means any aquaculture establishment in which a disease included in this Code has been diagnosed.

Approved laboratory
means a laboratory in a Member Country that is approved by the Competent Authority to carry out diagnostic work on diseases notifiable to the OIE and is responsible for health control work.

Aquacultural activities
means any activity concerning farming, marketing, processing, etc., of aquatic animals.

Aquaculture establishment
means an establishment in which fish, molluscs or crustaceans for breeding, stocking or marketing are raised or kept.

Aquatic animal import unit
means a live aquatic animal or its eggs/gametes, or a specified weight of a product of aquatic animal origin.

Aquatic animal products
means products from aquatic animals (fish, molluscs, crustaceans) whether they are intended for farming (e.g. eggs, gametes, larvae, etc.), for human consumption, for use in animal feeding or for pharmaceutical, biological, or industrial uses.

Aquatic animals
means live fish (including eggs and gametes), molluscs and crustaceans from aquaculture establishments or aquatic animals removed from the wild, for farming purposes or for release into the aquatic environment. The definition does not cover water-living amphibia, reptiles, birds or mammals.

Aquatic animals for slaughter/harvest
means aquatic animals that are destined to be transported or taken following arrival in the importing country under the control of the relevant Competent Authority, to a fish slaughtering premises or other processing plant preparing products for human consumption.
Chapter 1.1.1. Definitions

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

**Biological products**
means:

a) biological reagents for use in the *diagnosis* of certain *diseases*;
b) sera for use in the prevention and treatment of certain *diseases*;
c) inactivated or modified vaccines for use in preventive vaccination against certain *diseases*;
d) genetic material of infectious agents;
e) endocrine tissues from *fish* or used in *fish*.

**Breeding station**
means an *aquaculture establishment* working to improve the genetic standard and production of *aquatic animals*.

**Broodstock**
means sexually mature *fish*, *molluscs* or *crustaceans*.

**Central Bureau**
means the Permanent Secretariat of the Office International des Epizooties, headquarters of which are:

Address: 12 rue de Prony, 75017 Paris, France
Telephone: Int. + 33 - (0)1 44 15 18 88
Fax: Int. + 33 - (0)1 42 67 09 87
E-mail: oie@oie.int
WWW: http://www.oie.int

**Certifying official**
means a person authorised by the *Competent Authority* to sign *health certificates* for *aquatic animals*.

**Code**
means the OIE *International Aquatic Animal Health Code*.

**Commodity**
means *aquatic animals*, *aquatic animal products*, *aquatic animal genetic material*, *feedstuffs*, *biological products* and *pathological material*.

**Competent Authority**
means the National Veterinary Services, or other Authority of a Member Country, having the responsibility and competence for ensuring or supervising the implementation of the aquatic animal health measures recommended in this *Code*.

**Container**
means a transport appliance:

a) of a permanent type and sufficiently strong to enable repeated use;
b) specially constructed to facilitate *transportation of aquatic animals* or *aquatic animal products* by one or several means of transport;
c) provided with fittings that make it easy to manipulate, particularly for trans-shipment from one kind of transport vehicle to another;
d) constructed in a watertight way, easy to load and unload and capable of being cleansed and disinfected;

e) ensuring safe and optimal transport of aquatic animals.

**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.

**Crustacean products**
means fresh crustaceans, processed whole crustaceans or edible products of crustaceans that have been subjected to treatment such as cooking, drying, salting, brining, smoking or freezing.

**Crustaceans**
means 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, prawns, isopods, ostracods and amphipods.

**Diagnosis**
means determination of the nature of a disease.

**Discharge**
means blood or water from the slaughtering or processing of aquatic animals.

**Disease**
means clinical or nonclinical infection with one or more of the aetiological agents of the diseases listed in this Code.

**Disease agent**
means an organism that causes or contributes to the development of a disease listed in this Code.

**Disease outbreak**
see Outbreak of disease.

**Diseases notifiable to the OIE**
means the list of transmissible diseases that are considered to be of socio-economic and/or public health importance within countries and that are significant in the international trade in aquatic animals and aquatic animal products. Reports of these diseases are normally submitted once a year, although more frequent reporting may be necessary in some cases to comply with Articles 1.2.1.2 and 1.2.1.3. The diseases notifiable to the OIE are set out in Part 2, Section 2.1, Part 3, Section 3.1 and Part 4, Section 4.1 of this Code. (‘Diseases notifiable to the OIE’, as used in this Code, were previously known as ‘List B diseases’.)

**Disinfectants**
means chemical compounds capable of destroying pathogenic microorganisms or inhibiting their growth or survival ability.

**Disinfection**
means the application, after thorough cleansing, of procedures intended to destroy the infectious or parasitic agents of diseases of aquatic animals, including zoonoses; this applies to aquaculture establishments (i.e. hatcheries, fish farms, oyster farms, shrimp farms, nurseries, etc.), vehicles, and different equipment/objects that may have been directly or indirectly contaminated.

**Egg**
means a viable fertilised ovum of an aquatic animal. ‘Green eggs’ means newly fertilised ova of fish. ‘Eyed eggs’ means eggs of fish where the eyes of the embryo are visible and that the eggs may be transported.
**Eviscerated fish**
means fish from which internal organs, excluding the brain and gills, have been removed.

**Exporting country**
means a country from which aquatic animals or aquatic animal products, biological products or pathological material are sent to a destination in another country.

**Fallowing**
means a period during which aquatic animal premises are left empty (for disease agents or parasites to die or be killed by disinfection).

**Fish**
means fresh or salt water finfish of any age.

**Fish Diseases Commission**
means the OIE Commission responsible for up-dating this Code in the intervals between General Sessions of the OIE International Committee. The Fish Diseases Commission is concerned with diseases of fish, molluscs and crustaceans.

**Fish products**
means fresh fish, processed whole fish or edible products of fish that have been subjected to treatment such as cooking, drying, salting, brining, smoking or freezing.

**Fish slaughtering premises**
means premises used for the slaughter of fish for human consumption or other purposes and approved by the Competent Authority for export purposes.

These premises must meet recognised approved standards for the structural and other veterinary hygiene requirements.

**Food hygiene**
comprises conditions and measures necessary for the production, processing, storage and distribution of food of aquatic animal origin designed to ensure a safe, sound, wholesome product fit for human or animal consumption.

**Free aquaculture establishment**
means an aquaculture establishment that fulfils the requirements for freedom from diseases notifiable to the OIE according to the relevant Chapter in this Code and approved as such by a Competent Authority.

**Free country**
means a country that fulfils the requirements for freedom from diseases notifiable to the OIE according to the relevant Chapter in this Code and approved as such by a Competent Authority.

**Free zone**
means a zone that fulfils the requirements for freedom from diseases notifiable to the OIE according to the relevant Chapter in this Code and approved as such by a Competent Authority.

**Fresh crustaceans**
means crustaceans that have not been subjected to any treatment or that have been subjected to a treatment that has not irreversibly modified their organoleptic or physicochemical characters; for the purpose of this Code, fresh crustaceans include chilled crustaceans.

**Fresh fish**
means fish that have not been subjected to any treatment or that have been subjected to a treatment that has not irreversibly modified their organoleptic and physicochemical characters; for the purpose of this Code, fresh fish include chilled and frozen fish.
**Fresh molluscs**
means oysters/mussels that have not been subjected to any treatment or that have been subjected to a treatment that has not irreversibly modified their organoleptic and physicochemical characters; for the purpose of this Code, fresh molluscs include chilled molluscs.

**Frontier post**
means any international airport or any port, railway station or road post open to international trade.

**Gametes**
means the sperm or unfertilised eggs of aquatic animals that are held or transported separately prior to fertilisation.

**Hatcheries**
means aquaculture establishments raising aquatic animals from fertilised eggs.

**Imported outbreak**
means a disease outbreak introduced into a territory from another country.

**Importing country**
means a country that is the final destination to which aquatic animals, aquatic animal products, biological products or pathological material are sent.

**Incidence**
means the number of new outbreaks of disease within a specified period of time in a defined aquatic animal population.

**Incubation period**
means the period that elapses between the introduction of a disease agent into an aquatic animal population and the occurrence of the first clinical signs of the disease.

**Infected zone**
means a clearly defined zone in which a disease of aquatic animals included in this Code has been diagnosed. This area must be clearly defined and decreed by the Competent Authority in accordance with the environment, the different ecological and geographical factors, the epidemiological factors and the type of aquacultural activity being practised.

Within and at the border of an infected zone, there must be official veterinary control of aquatic animals and aquatic animal products, their transportation and slaughtering.

The time during which the infected zone designation remains in effect will vary according to the disease and to the sanitary measures and control methods applied.

**Infected period**
means the longest period during which an affected aquatic animal can be a source of infection.

**Inspection**
means the control carried out by the Competent Authority in order to ensure that an aquatic animal is/aquatic animals are free from the diseases/infections considered in this Code; the inspection may call for clinical examination, laboratory tests and, generally, the application of other procedures that could reveal an infection that may be present in an aquatic animal population.

**International aquatic animal health certificate**
means a certificate issued by a member of the personnel of the Competent Authority of the exporting country, certifying the state of health of the aquatic animals, and a declaration that the aquatic animals originate from a source subjected to official health surveillance according to the procedures described in the Manual.
Chapter 1.1.1. Definitions

**International trade**

means import, export or transit of aquatic animals, aquatic animal products, biological products and pathological material.

**Laboratory**

means a laboratory of high technical competence under direct supervision of a veterinarian or other person with competent biological training. Through quality controls and monitoring performance, the Competent Authority approves such a laboratory in regard to testing requirements for export.

**List B diseases**

see Diseases notifiable to the OIE.

**Lot**

means a group of aquatic animals of the same species in one aquaculture establishment originating from the same spawning population that has always shared the same water supply.

**Manual**

means the Diagnostic Manual for Aquatic Animal Diseases.

**Marketing**

means placing aquatic animals and aquatic animal products on the market.

**Mollusc nurseries**

means aquaculture establishments raising young molluscs from metamorphosed larvae to a maximum of 11 months.

**Molluscs**

means aquatic organisms belonging to the phylum Mollusca in the subkingdom Metazoa characterised by soft unsegmented bodies. Most forms are enclosed in a calcareous shell. The different development stages of molluscs are termed larvae, postlarvae, spat, juvenile and adult.

**Notifiable diseases**

see Diseases notifiable to the OIE.

**Notification**

means the procedure by which:

1. the Veterinary Administration informs the Central Bureau,
2. the Central Bureau informs the Veterinary Administrations of Member Countries

of the suspicion or confirmation of a disease outbreak, according to the provisions of Section 1.2 of this Code.

**Offal**

means visceral organs, cut-offs, condemned raw material, organs, etc. of aquatic animals.

**Other significant diseases**

means diseases that are of current or potential international significance in aquaculture, but that have not been included in the list of diseases notifiable to the OIE because they are less important than the notifiable diseases, or because their geographical distribution is limited, or it is too wide for notification to be meaningful, or it is not yet sufficiently defined, or because the aetiology of the diseases is not well enough understood, or approved diagnostic methods are not available.

**Outbreak of disease (or disease outbreak)**

means an occurrence of disease in an aquatic animal population.
Chapter 1.1.1. Definitions

**Ova**

see eggs and gametes.

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**Partial stamping-out**

means the carrying out under the authority of the Competent Authority, on confirmation of a disease, of prophylactic animal health measures consisting of killing selected lots of the aquatic animals within an aquaculture establishment. See also stamping-out policy.

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**Pathological material**

means tissues, organs, fluids, etc., from aquatic animals, or strains of infectious organisms (which could be identified as an isolate or biovar) to be sent to an aquatic animal disease laboratory or to a reference laboratory recognised by the Office International des Epizooties (OIE), the World Health Organization (WHO), the Food and Agriculture Organization of the United Nations (FAO), the European Union (EU), etc.

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**Personnel of the Competent Authority**

means any competent personnel working within the body of, or designated by, the Competent Authority.

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**Place of shipment**

means the place where the aquatic animals, aquatic animal products, biological products and pathological material are loaded into the vehicle/other transporting units or handed to the agency that will transport them.

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**Prevalence**

means the total number of infected aquatic animals expressed as a percentage of the total number of aquatic animals in a given aquatic animal population at one specific time.

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**Processing**

means the subjecting of aquatic animals to actions such as gutting, cleaning, filleting, freezing, thawing or packing.

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**Products of aquatic animal origin destined for human consumption**

means fish, mollusc and crustacean products intended for human consumption.

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**Products of animal origin destined for use in aquatic animal feeding**


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**Risk**

means the probability of an adverse event of aquatic animal health, public health or economic importance, such as a disease outbreak, and the magnitude of that event.

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**Risk assessment**

means the processes of identifying and estimating the risks associated with the importation of a commodity and evaluating the consequences of taking those risks.

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**Risk communication**

means the processes of communicating the risk assessment results to the regulators of the import programmes, and to other interested parties, such as industry and the public.

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**Risk management**

means the identification, documentation and implementation of the measures that can be applied to reduce risks and their consequences.
Sanitary slaughtering
means slaughtering of aquatic animals according to particular procedures providing safety against the spread of specific infectious agents.

Screening method
means the laboratory method in the OIE Manual approved for surveillance for a given disease listed in the Code.

Sealed vehicle
means a vehicle that is properly sealed so that neither water nor aquatic animals can escape during transportation.

Sexual products
means eggs and gametes of sexually mature aquatic animals.

Shellfish
means fresh molluscs or crustaceans or the edible products of these species that have been subjected to treatment by cooking, drying, salting, brining or smoking.

Shipment
means a group of aquatic animals or products thereof destined for transportation. See also place of shipment.

Slaughtering
means the killing and bleeding of fish.

Sperm
means the male gametes of aquatic animals.

Stamping-out policy
means the carrying out under the authority of the Competent Authority, on confirmation of a disease, of prophylactic animal health measures, consisting of killing the aquatic animals that are affected, those suspected of being affected in the population and those in other populations that have been exposed to infection by direct or indirect contact of a kind likely to cause the transmission of the causal pathogen. All these aquatic animals, vaccinated or unvaccinated, on an infected site should be killed and the carcasses destroyed by burning or burial, or by any other method that will eliminate the spread of infection through the carcasses or products of the aquatic animals destroyed.

This policy should be accompanied by cleansing and disinfection procedures as defined in this Code.

Susceptible species
means aquatic animals that are capable of being infected by a given disease agent.

Surveillance
means a systematic series of investigations of a given population of aquatic animals to detect the occurrence of disease for control purposes, and which may involve testing samples of a population.

Surveillance zone
means a zone in which a systematic series of investigations of a given population of aquatic animals takes place.

Territory
means land and water under jurisdiction of a country.
**Transit country**
means a country through which aquatic animals, aquatic animal products, biological products or pathological material destined for an importing country, are transported or in which a stopover is made at a frontier post.

**Transport**
means movement of aquatic animals/aquatic animal products to a destination by means of aircraft, motor vehicle or boat.

**Vehicle**
means any method of transport by land, air or water.

**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, fallowing, 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.)

**Zone**
means a portion of one or more countries comprising an entire catchment area from the source of a waterway to the estuary, more than one catchment area from the source of a waterway to a barrier, or a part of the coastal area, or an estuary with a precise geographical delimitation, that consists of a homogeneous hydrological system.

**Zoning**
means identifying zones for disease control purposes.
CHAPTER 1.1.2.

LIST OF DISEASES NOTIFIABLE TO THE OIE AND OTHER SIGNIFICANT DISEASES

Article 1.1.2.1.

Diseases notifiable to the OIE

1. Diseases of fish
   - Epizootic haematopoietic necrosis
   - Infectious haematopoietic necrosis
   - *Oncorhynchus masou* virus disease
   - Spring viraemia of carp
   - Viral haemorrhagic septicaemia

2. Diseases of molluscs
   - Bonamiosis (*Bonamia ostreae, B. sp.*)
   - Haplosporidiosis (*Haplosporidium costale, H. nelsoni*)
   - Marteiliosis (*Marteilia refringens, M. sydneyi*)
   - Mikrocytosis (*Mikrocytos mackini, M. roughleyi*)
   - Perkinsosis (*Perkinsus marinus, P. olseni*)

3. Diseases of crustaceans
   - Taura syndrome
   - White spot disease
   - Yellowhead disease

Article 1.1.2.2.

Other significant diseases

1. Diseases of fish
   - Channel catfish virus disease
   - Viral encephalopathy and retinopathy
   - Infectious pancreatic necrosis
   - Infectious salmon anaemia
   - Epizootic ulcerative syndrome
   - Bacterial kidney disease (*Renibacterium salmoninarum*)
   - Enteric septicaemia of catfish (*Edwardsiella ictaluri*)
   - Piscirickettsiosis (*Piscirickettsia salmonis*)
   - Gyrodactylosis (*Gyrodactylus salaris*)
   - Red sea bream iridoviral disease
   - White Sturgeon iridoviral disease

2. Diseases of molluscs
   - None at present
3. Diseases of crustaceans
   
   Baculoviral midgut gland necrosis  
   Nuclear polyhedrosis baculoviroses (*Baculovirus penaei* and *Penaeus monodon*-type baculovirus)  
   Infectious hypodermal and haematopoietic necrosis  
   Crayfish plague (*Aphanomyces astaci*)  
   Spawner-isolated mortality virus disease
SECTION 1.2.

NOTIFICATION SYSTEMS

CHAPTER 1.2.1.

NOTIFICATIONS AND EPIDEMIOLOGICAL INFORMATION

Article 1.2.1.1.

For the purposes of this Code and in terms of Articles 5, 9 and 10 of the Statutes, every Member Country of the OIE shall recognise the right of the Central Bureau to communicate directly with the Veterinary Administration of its territory or territories.

All notifications and all information sent by the OIE to the Veterinary Administration shall be regarded as having been sent to the country concerned and all notifications and all information sent to the OIE by the Veterinary Administration shall be regarded as having been sent by the country concerned.

Article 1.2.1.2.

1. Countries shall make available to other countries, through the OIE, whatever information is necessary to minimise the spread of important aquatic animal diseases and their aetiological agents and to assist in achieving better world-wide control of these diseases.

2. To achieve this, countries shall comply with the reporting requirements specified in Article 1.2.1.3.

3. To assist in the clear and concise exchange of information, reports shall conform as closely as possible to the format given in Animal Health Status Reports 1 to 3.

4. Recognising that scientific knowledge concerning the relationship between disease agents and diseases is constantly evolving and that the presence of an infectious agent does not necessarily imply the presence of a disease, countries shall ensure through their reports that they comply with the spirit and intention of paragraph 1 above.

5. In addition to notifying new findings in accordance with Article 1.2.1.3, countries shall also provide information on the measures taken to prevent the spread of diseases, including possible quarantine measures and restrictions on the movement of aquatic animals, aquatic animal products, biological products and other miscellaneous objects that could by their nature be responsible for transmission of disease.
Chapter 1.2.1. Notifications and epidemiological information

Article 1.2.1.3.

Veterinary Administrations shall send to the OIE:

1. Notification by fax, telegram or electronic mail, within 24 hours, of any of the following events:
   a) for diseases notifiable to the OIE, the first occurrence or re-occurrence of a disease, if the country or zone of the country was previously considered to be free of that particular disease;
   b) for diseases notifiable to the OIE, important new findings that are of epidemiological significance to other countries;
   c) for diseases notifiable to the OIE, a provisional diagnosis of the disease if this represents important new information of epidemiological significance to other countries;
   d) for diseases not notifiable to the OIE, if there are new findings that are of exceptional epidemiological significance to other countries.

In deciding whether findings justify immediate notification, countries must ensure that they comply with the obligations of Section 1.3 of this Code (especially Article 1.3.1.1), to report developments that may have implications for international trade.

2. Monthly reports by fax, telegram or electronic mail subsequent to a notification under paragraph 1 above, to provide further information on the evolution of an incident that justified urgent notification. These reports should continue until the disease has been eradicated or the situation has become sufficiently stable that annual reporting under paragraph 3 will satisfy the obligation of the country to the OIE.

3. Annual reports on the absence or presence and evolution of diseases notifiable to the OIE, and findings of epidemiological importance to other countries with respect to diseases that are not listed.

Article 1.2.1.4.

1. The Veterinary Administration or other Competent Authority of a territory in which an infected zone was located shall inform the Central Bureau when this zone is free from the disease.

2. An infected zone of a determined disease shall be considered as such until a period exceeding the known infective period for the disease in question has elapsed after the last reported outbreak and when full prophylactic and appropriate sanitary measures have been applied to prevent possible reappearance or spread of the disease. These measures will be found in detail in the various chapters of Parts 2, 3 or 4 of this Code.

3. A country may be considered to be again free from a specific disease when all the conditions given in the corresponding chapters of Parts 2, 3 or 4 of this Code have been fulfilled.

4. The Veterinary Administration or other Competent Authority of a country that sets up one or several free zones shall inform the OIE, giving necessary particulars and indicating clearly the location of the zones on a map of the country.

Article 1.2.1.5.

Veterinary Administrations shall communicate to the OIE the provisions of their importation and exportation aquatic animal health regulations.

They shall also communicate any amendments to their regulations as soon as they are made and, at the latest, before the annual General Session of the OIE International Committee.
Chapter 1.2.1. Notifications and epidemiological information

Article 1.2.1.6.

1. The Central Bureau shall send by fax, telegram or electronic mail to the Veterinary Administration concerned, all notifications received as provided in Articles 1.2.1.2-1.2.1.4.

2. The Central Bureau shall notify Member Countries through Disease Information of any event of exceptional epidemiological significance reported by a Member Country.

3. The Central Bureau, on the basis of information received and of any official communication, shall prepare an annual report concerning the application of this Code and its effects on international trade.

Article 1.2.1.7.

All faxes, telegrams or electronic mail sent by Veterinary Administrations in pursuance of Articles 1.2.1.3 and 1.2.1.6 shall receive priority in accordance with the circumstances. Communications by fax, telephone, electronic mail or telegram, sent in the case of exceptional urgency when there is danger of spread of a compulsorily notifiable epizootic disease, shall be given the highest priority accorded to these communications by the International Arrangements of Telecommunications.
SECTION 1.3.

VETERINARY ETHICS AND CERTIFICATION FOR INTERNATIONAL TRADE

CHAPTER 1.3.1.

GENERAL REQUIREMENTS

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.

An exporting country should be prepared to supply the following information to importing countries on request:

1. information on the aquatic animal health status and national aquatic animal health information systems to determine whether that country is free or has zones that are free from diseases notifiable to the OIE, including the regulations in force to maintain its free status;

2. regular and prompt information on the occurrence of transmissible diseases;

3. details of the country’s ability to apply measures to control and prevent diseases notifiable to the OIE and, where appropriate, other diseases;

4. information on the structure of the Competent Authority and the authority that it exercises;

5. technical information, particularly on biological tests and vaccines used and applied in all or part of the national territory.
CHAPTER 1.3.2.

PRINCIPLES OF CERTIFICATION

Article 1.3.2.1.

Certification requirements

Because of the likely variations in sanitary situations, various options are offered by the Code to importing countries, and only by considering the sanitary situation in the exporting and transit countries can the importing country precisely state the requirements that are to be met for imports.

These requirements are mentioned in the model certificates approved by the OIE, which form Part 6 of this Code.

Importing countries should observe the following rules when preparing these requirements:

1. Requirements should be restricted to conditions that are justified for aquatic animal health reasons and that are necessary to avoid the risk of transfer of one or several diseases or, at least, to reduce such risk to acceptable limits.

2. Certification requirements should be exact and concise, and should clearly convey the wishes of the importing country. For this purpose, prior consultation between Competent Authorities of importing and exporting countries is useful and may be necessary. This makes it possible to set out the exact requirements so that the signing veterinarian or other certifying official can, if necessary, be given a note of guidance explaining the understanding between the Competent Authorities involved.

3. Certification should be based on the highest possible ethical standards, the most important of which is that the professional integrity of the certifying official must be respected and safeguarded.

   It is essential not to include in the requirements additional specific matters that cannot be accurately and honestly signed by a certifying official. For example, these requirements should not include certification of an area as being free from non-notifiable diseases, the occurrence of which the signing certifying official is not necessarily informed about. Equally, to require certification for events that will take place after the document is signed is unacceptable when these events are not under the direct control and supervision of the certifying official.

   Certification of freedom from diseases based on purely clinical freedom and the aquatic animal population history may be of limited value. This is also true of diseases for which there is no specific diagnostic test, or the value of the test as a diagnostic aid is limited.

   The purpose of the note of guidance referred to in paragraph 2 above is not only to inform the certifying official but also to safeguard his/her professional integrity.

4. If the Competent Authority transmits certificates or communicates import permit requirements to persons other than the Competent Authority of another country, then copies of these documents must also be sent to the Competent Authority of that country.

   This essential requirement avoids delays and difficulties that may arise between traders and Competent Authorities when the authenticity of the certificates or permits is not established.
Chapter 1.3.2. Principles of certification

This information is usually the responsibility of Competent Authorities (i.e. those having authority at a national level). It can be the responsibility of a local competent body directly responsible for the application of aquatic animal health measures at the place of origin of the aquatic animals, when it is agreed that the issue of certificates does not require the approval of the Competent Authority.

Additional responsibilities of exporting and importing countries

1. International trade involves a continuing ethical responsibility. Therefore, if within the normal infective periods of the various diseases subsequent to an export taking place, the Competent Authority becomes aware of the appearance or reappearance of a disease in an aquatic animal population that has been specifically included in the international aquatic animal health certificates, or in bilateral agreements, there is an obligation for this Authority to notify this fact to the importing country, so that the imported aquatic animals may be inspected or tested and appropriate action be taken to limit the spread of the disease should it have been inadvertently introduced.

Equally, if a disease condition appears in imported stocks of aquatic animals, the Competent Authority of the exporting country should be informed so as to enable an investigation to be made, because this may be the first available information on the occurrence of the disease in a previously free aquatic animal population. The Competent Authority of the importing country is entitled to be informed of the result of the investigation because the source of infection may not be in the exporting country.

2. When members of the Competent Authority of a country wish to visit another country for matters of professional interest to the Competent Authority of the other country, the latter should be informed.

Article 1.3.2.2.

Certification procedures

1. Certificates should be drawn up in accordance with the following principles:

   a) Certificates should be pre-printed, if possible on one sheet of paper, serially numbered, and issued by the Competent Authority on officially headed notepaper and, if possible, printed using techniques that prevent forgery.

   b) They should be written in terms that are as simple, unambiguous and easy to understand as possible, without losing their legal meaning.

   c) If so required, they should be written in the language of the importing country. In such circumstances, they should also be written in a language understood by the certifying official.

   d) They should require appropriate identification of shipments of aquatic animals and aquatic animal products except where this is impractical (e.g. eyed eggs).

   e) They should not require a certifying official to certify matters that are outside his/her knowledge or that cannot be ascertained by him/her.

   f) Where appropriate, they should be accompanied, when presented to the certifying official, by notes of guidance indicating the extent of enquiries, tests or examinations expected to be carried out before the certificate is signed.

   g) Their text should not be amended except by deletions, which must be signed and stamped by the certifying official. The signature and stamp must be in a colour different to that of the printing of the certificate(s).

   h) Only original certificates are acceptable.
Chapter 1.3.2. Principles of certification

2. **Certifying officials** should:
   a) be authorised by the *Competent Authority* of the exporting country to sign international aquatic animal health certificates;
   b) sign certificates only at the appropriate time; in particular, they should not sign blank or incomplete certificates, or certificates relating to aquatic animals or aquatic animal products that they have not inspected or that have passed out of their control;
   c) ensure that certificates have been completed fully and correctly before signing; where a certificate is signed on the basis of another support certificate or attestation, the certifying official should be in possession of that document before signing;
   d) have no financial interest in the aquatic animals or aquatic animal products being certified and not be in the direct employment of the owner of the aquatic animals or aquatic animal products.

3. **Competent Authorities** of exporting countries should:
   a) have official procedures for the authorisation of the certifying officials, defining their functions and duties as well as conditions covering possible suspension and termination of their appointment;
   b) ensure that the relevant instructions and training are provided to certifying officials.

**Electronic certification**

1. *International aquatic animal health certificates* may be provided by electronic documentation sent directly from the *Competent Authority* of the exporting country to the *Competent Authority* of the importing country. Normally such systems also provide an interface with the commercial organisation marketing the commodity for provision of information to the certifying authority. The certifying official must have access to all information such as laboratory results and animal identification data.

2. Electronic certificates should carry the same information as conventional certificates.

3. Electronic certificates must be secure against access by unauthorised persons or organisations.

4. The certifying official must be officially responsible for the security of his/her electronic signature. This may be by a personal identification number or a similar secure mechanism.

**Harmonisation of methods**

In as much as the OIE has approved or agreed standards concerning:
   a) tests for the diagnosis of diseases of aquatic animals;
   b) the preparation, production and control of biological products for use in the diagnosis or prevention of diseases;
   c) disinfection;
   d) treatments intended to destroy viruses, bacteria or spores in aquatic animal products coming from countries considered to be infected with certain diseases;
these standards (included in the Manual or in this Code as Appendices) should be adopted by Competent Authorities with respect to international trade in aquatic animals and aquatic animal products.
CHAPTER 1.4.1.

GENERAL CONSIDERATIONS

Introduction

The importation of animals and animal products, whether of aquatic or terrestrial origin, involves a degree of disease risk to the importing country. This risk, which may be to humans or animals, may be represented by one or several diseases not present in the importing country.

The principal aim of import risk analysis is to provide importing countries with an objective and defensible method of assessing the disease risks associated with the importation of animals, animal products, animal genetic material, feedstuffs, biological products and pathological material. The principles and methods are the same whether the commodities are derived from aquatic and/or terrestrial animal sources. The analysis should be transparent. This is necessary so that the exporting country is provided with clear reasons for the imposition of import conditions or refusal to import.

Transparency is also essential because data are often uncertain or incomplete and, without full documentation, the distinction between facts and the analyst’s value judgements may blur.

This Chapter outlines the role of the OIE with respect to the Agreement on the Application of Sanitary and Phytosanitary Measures (the so-called SPS Agreement) of the World Trade Organization (WTO), provides definitions and describes the OIE procedure for settlement of disputes.

Chapter 1.4.2 provides guidelines and principles for conducting transparent, objective and defensible risk analyses for international trade. However, it cannot provide detail on the means by which a risk analysis is carried out as the purpose of the Code is simply to outline the necessary basic steps. The components of risk analysis described in Chapter 1.4.2 are hazard identification, risk assessment, risk management and risk communication (Figure 1).

Fig. 1. The four components of risk analysis.
Chapter 1.4.1. Import risk analysis - General considerations

The risk assessment is the component of the analysis that estimates the likelihood and consequences associated with a hazard. Risk assessments may be qualitative or quantitative. For many diseases, particularly those listed in the Code where there are well developed internationally agreed standards, there is broad agreement concerning the likely risks, although the status of some diseases may differ between countries or even between the Northern and Southern Hemispheres. In many cases it is likely that a qualitative assessment is all that is required. Qualitative assessment does not require mathematical modelling skills to carry out and so is often the type of assessment used for routine decision making. No single method of import risk assessment has proven applicable in all situations, and different methods may be appropriate in different circumstances.

The process of import risk analysis on aquatic animals and aquatic animal products usually needs to take into consideration the results of an evaluation of the Competent Authorities, zoning and regionalisation, and surveillance systems that are in place for monitoring aquatic animal health in the exporting country. These are described in separate chapters in the Code.

Article 1.4.1.2.

The Agreement on the Application of Sanitary and Phytosanitary Measures and role and responsibility of the OIE

The SPS Agreement encourages WTO Members to base their sanitary measures on international standards, guidelines and recommendations, where they exist. Members may choose to adopt a higher level of protection than that provided by international texts if there is a scientific justification or if the level of protection provided by the relevant international texts is considered to be inappropriate. In such circumstances, Members are subject to obligations relating to risk assessment and to a consistent approach to risk management.

The SPS Agreement encourages Governments to make a wider use of risk analysis: WTO Members shall undertake an assessment as appropriate to the circumstances of the actual risk involved.

The SPS Agreement recognises the OIE as the relevant international organisation responsible for the development and promotion of international animal health standards, guidelines, and recommendations affecting trade in live animals and animal products, whether aquatic or terrestrial in origin.

Article 1.4.1.3.

List of terms specific to Section 1.4.

Acceptable risk: Risk level judged by Member Countries to be compatible with the protection of public health, aquatic animal health and terrestrial animal health within their countries.

Consequence assessment: See point 3 of Article 1.4.2.4.

Exposure assessment: See point 2 of Article 1.4.2.4.

Hazard: Any pathogen that could produce adverse consequences on the importation of a commodity.

Hazard identification: The process of identifying the pathogenic agents that could potentially be introduced in the commodity considered for importation.

Implementation: See point 3 of Article 1.4.2.6.

Monitoring: See point 4 of Article 1.4.2.6.

Option evaluation: See point 2 of Article 1.4.2.6.
Qualitative risk assessment: An assessment where the conclusions on the likelihood of the outcome or the magnitude of the consequences are expressed in qualitative terms such as high, medium, low or negligible.

Quantitative risk assessment: An assessment where the outputs of the risk assessment are expressed numerically, as probabilities or distributions of probabilities.

Release assessment: See point 1 of Article 1.4.2.4.

Review: See point 4 of Article 1.4.2.6.

Risk: The likelihood of the occurrence and the likely magnitude of the consequences of an adverse event to public, aquatic animal or terrestrial animal health in the importing country during a specified time period.

Risk analysis: The complete process composed of hazard identification, risk assessment, risk management and risk communication.

Risk assessment: The evaluation of the likelihood and the biological and economic consequences of entry, establishment, or spread of a hazard within the territory of an importing country (see Articles 1.4.2.3 and 1.4.2.4).

Risk communication: Risk communication is the interactive exchange of information on risk among risk assessors, risk managers and other interested parties (see Article 1.4.2.7).

Risk estimation: See point 4 of Article 1.4.2.4.

Risk evaluation: See point 1 of Article 1.4.2.6.

Risk management: The process of identifying, selecting and implementing measures that can be applied to reduce the level of risk (see Articles 1.4.2.5 and 1.4.2.6).

Sanitary measure: Measures such as those described in each chapter of the Code that are used for risk reduction and are appropriate for particular diseases.

Sensitivity analysis: The process of examining the impact of the variation in individual model inputs on the conclusions of a quantitative risk assessment.

Transparency: Comprehensive documentation of all data, information, assumptions, methods, results, discussion and conclusions used in the risk analysis. Conclusions should be supported by an objective and logical discussion and the document should be fully referenced.

Uncertainty: The lack of precise knowledge of the input values, which is due to measurement error or to lack of knowledge of the steps required, and the pathways from hazard to risk, when building the scenario being assessed.

Variability: A real-world complexity in which the value of an input is not the same for each case because of natural diversity in a given population.
Article 1.4.1.4.

The OIE in-house procedure for settlement of disputes

The OIE shall maintain its existing voluntary in-house mechanisms for assisting Member Countries to resolve differences. In-house procedures that will apply are that:

1. Both parties agree to give the OIE a mandate to assist them in resolving their differences.

2. If considered appropriate, the Director General of the OIE recommends an expert, or experts, and a chairman, as requested, agreed by both parties.

3. Both parties agree on the terms of reference and working programme, and to meet all expenses incurred by the OIE.

4. The expert or experts are entitled to seek clarification of any of the information and data provided by either country in the assessment or consultation processes, or to request additional information or data from either country.

5. The expert or experts should submit a confidential report to the Director General, who will transmit it to both parties.
CHAPTER 1.4.2.
GUIDELINES FOR RISK ASSESSMENT

Article 1.4.2.1.

Introduction

An import risk analysis begins with a description of the commodity proposed for import and the likely annual quantity of trade. It must be recognised that whilst an accurate estimate of the anticipated quantity of trade is desirable to incorporate into the risk estimate, it may not be readily available, particularly where such trade is new.

Hazard identification is an essential step that must be conducted before the risk assessment.

The risk assessment process consists of four interrelated steps. These steps clarify the stages of the risk assessment, describing them in terms of the events necessary for the identified potential risk(s) to occur, and facilitate understanding and evaluation of the conclusions (or 'outputs'). The product is the risk assessment report, which is used in risk communication and risk management.

The relationships between risk assessment and risk management processes are outlined in Figure 1.

Fig. 1. The relationship between risk assessment and risk management processes.
Hazard identification

Hazard identification involves identifying the pathogenic agents that could potentially produce adverse consequences associated with the importation of a commodity.

The hazards identified would be those appropriate to the species being imported, or from which the commodity is derived, and which may be present in the exporting country. It is then necessary to identify whether each hazard is already present in the importing country, and whether it is a notifiable disease or is subject to control or eradication in that country and to ensure that import measures are not more trade restrictive than those applied within the country.

Hazard identification is a categorisation step, identifying biological agents dichotomously as hazards or not hazards. The risk assessment should be concluded if hazard identification fails to identify hazards associated with the importation.

The evaluation of the Competent Authorities, surveillance and control programmes, and zoning and regionalisation systems are important inputs for assessing the likelihood of hazards being present in the aquatic animal population of the exporting country.

An importing country may decide to permit the importation using the appropriate sanitary standards recommended in the Code, thus eliminating the need for a risk assessment.

Principles of risk assessment

1. Risk assessment should be flexible in order to deal with the complexity of real-life situations. No single method is applicable in all cases. Risk assessment must be able to accommodate the variety of animal commodities, the multiple hazards that may be identified with an importation and the specificity of each disease, detection and surveillance systems, exposure scenarios and types and amounts of data and information.

2. Both qualitative and quantitative risk assessment methods are valid. Although quantitative analysis is recognised to provide deeper insights into a particular problem, qualitative methods may be more relevant when available data are limited as is often the case with aquatic species.

3. The risk assessment should be based on the best available information that is in accord with current scientific thinking. The assessment should be well documented and supported with references to the scientific literature and other sources, including expert opinion.

4. Consistency in risk assessment methods should be encouraged and transparency is essential in order to ensure fairness and rationality, consistency in decision making and ease of understanding by all the interested parties.

5. Risk assessments should document the uncertainties, the assumptions made, and the effect of these on the final risk estimate.

6. Risk increases with increasing volume of commodity imported.

7. The risk assessment should be amenable to updating when additional information becomes available.
Risk assessment steps

1. Release assessment

Release assessment consists of describing the biological pathway(s) necessary for an importation activity to ‘release’ (that is, introduce) a hazard into a particular environment, and estimating the likelihood of that complete process occurring. The release assessment describes the likelihood of the ‘release’ of each of the hazards under each specified set of conditions with respect to amounts and timing, and how these might change as a result of various actions, events or measures. Examples of the kind of inputs that may be required in the release assessment are:

a) Biological factors
   - Species, strain or genotype, and age of aquatic animal,
   - Strain of agent,
   - Tissue sites of infection and/or contamination,
   - Vaccination, testing, treatment and quarantine.

b) Country factors
   - Incidence/prevalence,
   - Evaluation of Competent Authorities, surveillance and control programmes, and zoning systems of the exporting country.

c) Commodity factors
   - Whether the commodity is alive or dead,
   - Quantity of commodity to be imported,
   - Ease of contamination,
   - Effect of the various processing methods on the pathogenic agent in the commodity,
   - Effect of storage and transport on the pathogenic agent in the commodity.

If the release assessment demonstrates no significant risk, the risk assessment need not continue.

2. Exposure assessment

Exposure assessment consists of describing the biological pathway(s) necessary for exposure of humans and aquatic and terrestrial animals in the importing country to the hazards and estimating the likelihood of these exposure(s) occurring, and of the spread or establishment of the hazard.

The likelihood of exposure to the hazards is estimated for specified exposure conditions with respect to amounts, timing, frequency, duration of exposure, routes of exposure, and the number, species and other characteristics of the human, aquatic animal or terrestrial animal populations exposed. Examples of the kind of inputs that may be required in the exposure assessment are:

a) Biological factors
   - Presence of potential vectors or intermediate hosts,
   - Genotype of host,
   - Properties of the agent (e.g. virulence, pathogenicity and survival parameters).

b) Country factors
   - Aquatic animal demographics (e.g. presence of known susceptible and carrier species, distribution),
   - Human and terrestrial animal demographics (e.g. possibility of scavengers, presence of piscivorous birds),
Chapter 1.4.2. Import risk analysis - Guidelines for risk assessment

- Customs and cultural practices,
- Geographical and environmental characteristics (e.g. hydrographic data, temperature ranges, water courses).

c) Commodity factors
- Whether the commodity is alive or dead,
- Quantity of commodity to be imported,
- Intended use of the imported aquatic animals or products (e.g. domestic consumption, restocking, incorporation in or use as aquaculture feed or bait),
- Waste disposal practices.

If the exposure assessment demonstrates no significant risk, the risk assessment should conclude at this step.

3. Consequence assessment

Consequence assessment consists of identifying the potential biological, environmental and economic consequences. A causal process must exist by which exposures to a hazard result in adverse health, environmental or socio-economic consequences. Examples of consequences include:

a) Direct consequences
- Aquatic animal infection, disease, production losses and facility closures,
- Adverse, and possibly irreversible, consequences to the environment,
- Public health consequences.

b) Indirect consequences
- Surveillance and control costs,
- Compensation costs,
- Potential trade losses,
- Adverse consumer reaction.

4. Risk estimation

Risk estimation consists of integrating the results of the release assessment, exposure assessment, and consequence assessment to produce overall measures of risks associated with the hazards identified at the outset. Thus risk estimation takes into account the whole of the risk pathway from hazard identified to unwanted outcome.

For a quantitative assessment, the final outputs may include:

- The various populations of aquatic animals and/or estimated numbers of aquaculture establishments or people likely to experience health impacts of various degrees of severity over time;
- Probability distributions, confidence intervals, and other means for expressing the uncertainties in these estimates;
- Portrayal of the variance of all model inputs;
- A sensitivity analysis to rank the inputs as to their contribution to the variance of the risk estimation output;
- Analysis of the dependence and correlation between model inputs.
Chapter 1.4.2. Import risk analysis - Guidelines for risk assessment

Article 1.4.2.5.

Principles of risk management

1. Risk management is the process of deciding upon and implementing measures to achieve the Member Country’s appropriate level of protection, whilst at the same time ensuring that negative effects on trade are minimised. The objective is to manage risk appropriately to ensure that a balance is achieved between a country’s desire to minimise the likelihood or frequency of disease incursions and their consequences and its desire to import commodities and fulfil its obligations under international trade agreements.

2. The international standards of the OIE are the preferred choice of sanitary measures for risk management. The application of these sanitary measures should be in accordance with the intentions of the standards or other recommendations of the SPS Agreement.

Article 1.4.2.6.

Risk management components

1. Risk evaluation – the process of comparing the risk estimated in the risk assessment with the Member Country’s appropriate level of protection.

2. Option evaluation – the process of identifying, evaluating the efficacy and feasibility of, and selecting measures to reduce the risk associated with an importation in line with the Member Country’s appropriate level of protection. The efficacy is the degree to which an option reduces the likelihood and/or magnitude of adverse health and economic consequences. Evaluating the efficacy of the options selected is an iterative process that involves their incorporation into the risk assessment and then comparing the resulting level of risk with that considered acceptable. The evaluation for feasibility normally focuses on technical, operational and economic factors affecting the implementation of the risk management options.

3. Implementation – the process of following through with the risk management decision and ensuring that the risk management measures are in place.

4. Monitoring and review – the ongoing process by which the risk management measures are continuously audited to ensure that they are achieving the results intended.

Article 1.4.2.7.

Principles of risk communication

1. Risk communication is the process by which information and opinions regarding hazards and risks are gathered from potentially affected and interested parties during a risk analysis, and by which the results of the risk assessment and proposed risk management measures are communicated to the decision makers and interested parties in the importing and exporting countries. It is a multidimensional and iterative process and should ideally begin at the start of the risk analysis process and continue throughout.

2. A risk communication strategy should be put in place at the start of each risk analysis.

3. The communication of risk should be an open, interactive, iterative and transparent exchange of information that may continue after the decision on importation.

4. The principal participants in risk communication include the authorities in the exporting country and other stakeholders such as domestic aquaculturists, recreational and commercial fishermen, conservation and wildlife groups, consumer groups, and domestic and foreign industry groups.
5. The assumptions and uncertainty in the model, model inputs and the risk estimates of the risk assessment should be communicated.

6. Peer review of risk analyses is an essential component of risk communication for obtaining a scientific critique aimed at ensuring that the data, information, methods and assumptions are the best available.
CHAPTER 1.4.3.

EVALUATION OF COMPETENT AUTHORITIES

Article 1.4.3.1.

For the purposes of the Code, every Member Country shall recognise the right of another Member Country to undertake, or request it to undertake, an evaluation of its Competent Authority where reasons exist concerning international trade in aquatic animals, aquatic animal products, aquatic animal genetic material, biological products and aquatic animal feedstuffs between the two countries.

Reasons are deemed to exist where the initiating Member Country is an actual or a prospective importer or exporter of aquatic animals, aquatic animal products, aquatic animal genetic material, biological products or aquatic animal feedstuffs and where the evaluation is to be a component of a risk assessment process that is to be used to determine or review sanitary/zoo-sanitary measures that apply to such trade.

Any evaluation should be conducted having regard to OIE guidelines.

Article 1.4.3.2.

The evaluation of Competent Authorities shall be conducted by Member Countries on a bilateral basis. The two countries concerned should consult mutually on the evaluation criteria, the information required and on the outcome of the evaluation.

A Member Country that intends to conduct an evaluation of another Member Country’s Competent Authority shall give it notice in writing. This notice should define the purpose of the evaluation and details of the information required.

The choice of criteria on which evaluation is conducted should be appropriate to the circumstances applying to the countries concerned. Criteria should be relevant to the type of trade involved, the aquatic animal production systems in the respective countries, the difference in aquatic animal health status between the countries, and other factors that relate to the overall risk assessment.

On receipt of a formal request for information to enable an evaluation of its Competent Authority by another Member Country, and following bilateral agreement of the evaluation criteria, a Member Country should provide expeditiously to the other country meaningful and accurate information and data of the type requested.

The outcome of the evaluation conducted by a Member Country should be provided in writing as soon as possible, and in any case within four months of receipt of the relevant information, to the Member Country that has undergone the evaluation. The evaluation report should detail any findings that affect trade prospects. The Member Country that conducts the evaluation should clarify in detail any points of the evaluation on request.

Article 1.4.3.3.

A Member Country involved in the international trade in live aquatic animals, aquatic animal products, aquatic animal genetic material, biological products or aquatic animal feedstuffs should generate and maintain current information on its Competent Authority with regard to OIE guidelines.

A Member Country can request the Director General of the OIE to arrange for an expert or experts to assist in the self-evaluation of its Competent Authority.
Article 1.4.3.4.

In the event of a dispute between two Member Countries over the appropriate evaluation criteria or the outcome of the evaluation of the Competent Authority, the matter should be dealt with in accordance to the procedures set out in Article 1.4.1.4.
CHAPTER 1.4.4.

ZONING

Introduction

It has been customary in the past, when evaluating the aquatic animal health situation in a country with a view to exports of aquatic animals and/or aquatic animal products, to judge the country as a whole. If an infectious disease existed somewhere within a country’s borders, or if its presence was suspected, the whole country was considered to be infected. As a policy of risk avoidance rather than risk assessment was usually followed, this frequently resulted in considerable, although not always necessary, restrictions to international trade. Climatological and geographical barriers are more effective in containing diseases of aquatic animals than are frontiers, and factors such as population density, aquatic animal movements and management practices are of paramount importance in determining the distribution of diseases of aquatic animals, both nationally and internationally. Recognition of the biological basis of variations in the presence or extent of disease is a first step in the application of the concept of zoning to aquatic animal health regulations for international trade. Application of the principles of zoning to international trade requires the establishment of internationally accepted standards with regard to terminology and such aspects as zonal boundaries, legal competence, duration of disease free periods, standards of surveillance, use of buffer zones, quarantine procedures, and other aspects of regulatory control.

General requirements for zoning

In a country wishing to set up a system of zoning for controlling an aquatic animal disease, the disease must be compulsorily notifiable.

The requirements for different types of zones vary with the disease for which they are established. Size, location and delineations will depend on the disease, its method of spread and its status in the country. Separate conditions will be developed for each disease for which zoning is considered to be appropriate. The extent of zones and their limits should be established by the Competent Authority and enforced by national legislation. They should be clearly delineated by natural, artificial or legal boundaries, which must be effective.

Constant supervision is essential to prevent live aquatic animals from being transported across borders, unless from a zone of equal or better aquatic animal health status. In addition, it may be necessary to control movement of aquatic animal products, aquatic animal genetic material, biological products, pathological material and aquatic animal feedstuffs within and between zones.

Countries wishing to set up a system of zoning must have an effective organisation and infrastructure for disease control in aquatic animals. There must be adequate administrative structures, provided with legal and financial resources to give adequate cover for the development of the different actions required.

The Competent Authority must have the necessary resources at its disposal and must be able to supervise the boundaries, maintain clinical and epidemiological surveillance and carry out the necessary diagnostic tests. There must be prompt reporting of outbreaks of disease to the OIE, and documented evidence must be provided that an effective system of disease control and surveillance is in operation, at least in the different zones if not in the whole of the country.
Types of zones

The following types of zones are recognised:

1. Free zone

A free zone can be established within a country or countries where the disease is present. In the free zone, there must be knowledge of the location of all aquaculture establishments and populations of wild aquatic animals containing susceptible species. Suspected outbreaks of the disease must be investigated immediately by the Competent Authority. Outbreaks must be reported to the OIE. If necessary, the free zone is separated from the rest of the country and from the infected neighbouring countries by a surveillance zone. Importation of aquatic animals from other parts of the country or from countries where the disease still exists into the free zone must take place under strict controls established by the Competent Authority.

The free zone should not be dependent on importation of aquatic animals or aquatic animal products from infected zones or countries that could introduce the disease agent.

2. Surveillance zone

A surveillance zone must have certain minimum dimensions, with a precise geographical limitation based on hydrological data and the nature of the disease. Aquatic animal movements must be controlled. The surveillance zone must have rigorous disease prevention and control measures.

Suspected outbreaks of the disease must be investigated immediately and, if confirmed, eliminated. A mechanism for immediate reporting to the Competent Authority must be in place. Adequate surveillance activities must follow in order to ascertain the potential spread of such outbreaks. Accordingly, it may be necessary to modify the boundaries of the zone.

Importation of susceptible aquatic animals into the surveillance zone from parts of the country or from other countries where the disease exists can only take place under suitable controls established by the Competent Authority. Freedom from infection should be confirmed by appropriate tests.

3. Infected zone

An infected zone is a zone where the disease is present, in an otherwise disease free country. A surveillance zone will separate the infected zone from the remainder of the country. Movement of susceptible aquatic animals out of the infected zone into the disease free parts of the country must be strictly controlled. Four alternatives can be considered:

a) no live aquatic animals may leave the zone, or

b) aquatic animals can be moved by mechanical transport to special fish slaughtering premises/mollusc and shrimp production facilities located in the surveillance zone for immediate slaughter, or

c) exceptionally, live aquatic animals can enter the surveillance zone under suitable controls established by the Competent Authority. For diseases in which the disease agent constitutes a surface pathogen, appropriately disinfected eggs can enter a surveillance zone. Freedom from infection of these aquatic animals must be confirmed by appropriate tests before they can enter the zone, or

d) live aquatic animals can leave the infected zone if the epidemiological conditions are such that disease transmission cannot occur.

Article 1.4.4.4.

Recognition of disease free zones
Countries wishing to obtain recognition of a disease free zone must demonstrate that they have a reliable system of disease control and surveillance, that the disease is compulsorily notifiable, and that they have an effective organisation for disease control in aquaculture establishments (i.e. generally not possible in wild aquatic animal populations). The Competent Authority must accurately specify the delineations of the zone, describe how the boundaries are controlled, and supply further information about additional measures that have been taken, covering such aspects as control of aquatic animal movements, etc.

Countries that fulfil these conditions can submit the documented evidence of their status to the OIE with a request to be included in the relevant OIE list.
SECTION 1.5.
IMPORT/EXPORT PROCEDURES

CHAPTER 1.5.1.
RECOMMENDATIONS FOR TRANSPORT

Article 1.5.1.1.
General arrangements

1. These arrangements should be compulsory in all countries either by legislative or regulatory texts and methods of application should be described in a manual available to all concerned.

2. Vehicles (or containers) used for the transport of aquatic animals shall be designed, constructed and fitted in such a way as to withstand the weight of the aquatic animals and water and to ensure their safety and welfare during transportation. Vehicles shall be thoroughly cleansed and disinfected before use according to the guidelines given in this Code.

3. Vehicles (or containers) in which aquatic animals are confined during transport by sea or by air shall be secured to maintain optimal conditions for the aquatic animals during transport, and to allow easy access by the attendant.

Article 1.5.1.2.
Particular arrangements for containers

1. The construction of containers intended for transportation of aquatic animals shall be such that the release of water, etc., is prevented during transport.

2. In the case of the transportation of aquatic animals, provision shall be made to enable preliminary observation of the contents of containers.

3. Containers in transit in which there are aquatic animal products shall not be opened unless the Competent Authorities of the transit country consider it necessary. If this is the case, containers shall be subject to precautions taken to avoid any risk of contamination.

4. Containers shall be loaded only with one kind of product or, at least, with products not susceptible to contamination by one another.

5. It rests with each country to decide on the facilities it requires for the transport and importation of aquatic animals and aquatic animal products in containers.
Chapter 1.5.1. Recommendations for transport

Article 1.5.1.3.

Particular arrangements for the transport of aquatic animals by air

1. The stocking densities for the transport of aquatic animals in aircraft or containers should be determined by taking the following into consideration:

   a) the total cubic metres of available space for each type of aquatic animal;

   b) the oxygenation capacity of the equipment attached to the aircraft and containers while on the ground and during all stages of the flight.

   With regard to fish, molluscs and crustaceans, the space reserved for each aquatic animal species in the aircraft or containers that have been fitted for the separate transportation of several aquatic animals or for the transportation of groups of aquatic animals, should comply with acceptable densities specified for the species in question.

2. The International Air Transport Association (IATA) Regulations for live animals (which are approved by the OIE) may be adopted if they do not conflict with national legislative arrangements. (Copies of these Regulations are obtainable from the International Air Transport Association, 2000 Peel Building, Montreal, Quebec H3A 2R4, Canada.)

Article 1.5.1.4.

Disinfection and other sanitary measures

1. Disinfection and all zoo-sanitary work should be carried out in order to:

   a) avoid all unjustified inconvenience and to prevent damage or injury to the health of people and aquatic animals;

   b) avoid damage to the structure of the vehicle or its appliances;

   c) prevent, as far as possible, any damage to aquatic animal products, fish eggs, mollusc and crustacean larvae.

2. On request, the Competent Authority shall issue the transporters with a certificate indicating the measures that have been applied to all vehicles, the parts of the vehicle that have been treated, the methods used and the reasons that led to the application of the measures.

   In the case of aircraft, the certificate may be replaced, on request, by an entry in the General Declaration of the aircraft.

3. Likewise, the Competent Authority shall issue on request:

   a) a certificate showing the date of arrival and departure of the aquatic animals;

   b) a certificate to the shipper or exporter, the consignee and transporter or their representatives, indicating the measures applied.
Chapter 1.5.1. Recommendations for transport

Article 1.5.1.5.

Treatment of transportation water

During transportation of aquatic animals, the transporter should not be permitted to evacuate and replace the water in the transport tanks except on specifically designated sites in the national territory. The waste and rinsing water should not be emptied into a drainage system that is directly connected to an aquatic environment where aquatic animals are present. The water from the tanks should therefore either be disinfected by a recognised process (for example, 50 mg iodine or chlorine/litre for one hour), or sprayed over land that does not drain into waters containing aquatic animals. Each country shall designate the sites in their national territories where these operations can be carried out.

Article 1.5.1.6.

Discharge of infected material

The Competent Authority shall take all practical measures to prevent the discharge of any infective material into internal or territorial waters.
CHAPTER 1.5.2.

AQUATIC ANIMAL HEALTH MEASURES APPLICABLE BEFORE AND AT DEPARTURE

Article 1.5.2.1.

1. Each country should only authorise the exportation from its territory of live aquatic animals and aquatic animal products that are correctly identified, and inspected according to the procedures outlined in the Code and Manual.

2. In certain cases, the above-mentioned aquatic animals could, according to the wish of the importing country, be subjected to certain biological tests or to prophylactic parasitological procedures within limits of a defined period of time before their departure.

3. Observation of the above-mentioned aquatic animals before leaving the country may be carried out in the establishment where they were reared or at the frontier post. When they have been found to be clinically healthy and free from diseases notifiable to the OIE or any other specified infectious disease by a member of the personnel of the Competent Authority or a certifying official approved by the importing country during the period of observation, the aquatic animals should be transported to the place of shipment in specially constructed containers, previously cleansed and disinfected, without delay and without coming into contact with other susceptible aquatic animals, unless these aquatic animals have health guarantees similar to those of the transported aquatic animals.

4. The transportation of aquatic animals for breeding or rearing or slaughter shall be carried out directly from the establishment of origin to the place of shipment or to the processing establishment in conformity with the conditions agreed between the importing and exporting countries.

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 notifiable to 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 notifiable to the OIE, the exporting country should not carry out the export of live aquatic animals or eggs or gametes that may harbour such disease agents unless accepted by the importing country.

Article 1.5.2.3.

Each country exporting aquatic animals at any stage of development or aquatic animal products should inform the country of destination and when necessary the transit countries if, after exportation, diagnosis of a disease notifiable to the OIE occurs in the establishment of origin, or in aquatic animals that were in the aquaculture establishment or natural water body at the same time as the exported animals, within a period of time that indicates that the exported consignment may have been infected.

Article 1.5.2.4.

Before the departure of the aquatic animals and aquatic animal products, a member of the personnel of the Competent Authority or a certifying official approved by the importing country should provide an international aquatic animal health certificate conforming with the models approved by the OIE (as shown in Part 6 of this Code) and worded in the languages agreed upon between the exporting country and the importing country and, when necessary, with the transit countries.

Article 1.5.2.5.
1. Before the departure of a consignment of aquatic animals on an international journey, the Competent Authority of the port, airport or district in which the frontier post is situated may, if it is considered necessary, have a health examination carried out on the consignment. The time and place of the examination shall be fixed taking into account customs and other formalities and in such a way as not to impede or unreasonably delay departure.

2. The Competent Authority referred to in paragraph 1 above shall take necessary measures to:
   a) prevent the shipment of aquatic animals showing clinical signs of any disease notifiable to the OIE or other significant disease;
   b) avoid entry into the container of possible vectors or disease agents.
CHAPTER 1.5.3.

AQUATIC ANIMAL HEALTH MEASURES APPLICABLE DURING TRANSIT FROM THE PLACE OF DEPARTURE IN THE EXPORTING COUNTRY TO THE PLACE OF ARRIVAL IN THE IMPORTING COUNTRY

Article 1.5.3.1.

1. Any country through which the transit of aquatic animals has to be made, and that normally conducts commercial transactions with the exporting country, should not refuse the transit, subject to the reservations mentioned herein and on condition that notification is made of the proposed transit to the Veterinary Administration or Competent Authority in charge of the frontier posts.

This notification shall state the species and quantities of aquatic animals, the methods of transport and the frontier posts of entry and exit in accordance with a previously arranged and authorised itinerary in the transit country.

2. Any country through which transit has to take place may refuse such transit if, in the exporting country or transit country that precedes it on the itinerary, certain diseases exist that have been specifically included in the international aquatic animal health certificates or in bilateral agreements. Alternatively, the Competent Authority of the transit country may impose conditions with regard to the method, including packaging, and route of transport.

3. Any transit country may require the presentation of international aquatic animal health certificates. Such a country may, in addition, cause an examination to be made by a member of the personnel of the Competent Authority on the health status of fish, molluscs or crustaceans in transit, except in cases where transport in sealed vehicles or containers is a condition of transit.

4. Any transit country may refuse passage through its territory of aquatic animals at one of its frontier posts if an examination carried out by a member of the personnel of the Competent Authority shows that the consignment of aquatic animals in transit is affected by or infected with any of the notifiable diseases or other significant diseases and if these diseases are exotic to that country or the zone through which the transportation was to take place, or if there is an enforced control programme for the disease(s) in question, or if the international aquatic animal health certificate is inaccurate and/or unsigned or does not apply to fish, molluscs or crustaceans.

In these circumstances, the Competent Authority of the exporting country shall be informed immediately, thereby providing an opportunity for checking the findings or correcting the certificate.

If the diagnosis of any disease notifiable to the OIE is confirmed or if the certificate cannot be corrected, the consignment of aquatic animals in transit shall either be returned to the exporting country if there is a common frontier with it, or be slaughtered or destroyed.

Article 1.5.3.2.

1. Any transit country may require vehicles used for the transit of aquatic animals through its territory to be constructed to prevent the escape and dispersion of waste water or other contaminated material.

2. Unloading of aquatic animals shall be permitted in the territory of the transit country only if an emergency situation arises. The importing country shall be informed of any unforeseen unloading in the transit country and the reason for it.
Chapter 1.5.3. Health measures applicable during transit

Article 1.5.3.3.

Vessels stopping in a port or passing through a canal or other navigable route situated in the territory of a country, on their way to a port situated in the territory of another country, must comply with the conditions required by the Competent Authority.

Article 1.5.3.4.

1. If, for reasons beyond the control of its captain, a ship or aircraft calls or lands somewhere other than at a port or airport, or at a port or airport other than that at which it should normally call or land, the captain of the ship or aircraft, or his/her deputy, shall immediately notify the nearest Competent Authority or any other public authority of the new port of call or landing.

2. As soon as the Competent Authority is notified of this calling or landing place, it shall take appropriate action.

3. The aquatic animals on board the ship or aircraft shall not be permitted to leave the vicinity of the docking or landing place and the removal from the vicinity of any equipment or packing material accompanying them shall not be permitted.

4. When the measures prescribed by the Competent Authority have been carried out, the ship or aircraft shall be permitted, for aquatic animal health purposes, to proceed to the port or airport at which it would normally have called or landed or, if there are technical reasons for which this cannot be done, to a port or an airport that is more suitable.
CHAPTER 1.5.4.

FRONTIER POSTS IN THE IMPORTING COUNTRY

Article 1.5.4.1.

The Competent Authority shall provide specified frontier posts with an office comprising personnel, equipment and premises as the case may be and, in particular, means for:

1. detecting and isolating aquatic animal populations affected with or suspected of being affected with a disease;
2. carrying out disinfection of vehicles used to transport aquatic animals and aquatic animal products;
3. making clinical examinations and obtaining specimens of material for diagnostic purposes from live aquatic animals or carcasses of aquatic animals affected or suspected of being affected with a disease, and obtaining specimens of aquatic animal products suspected of contamination.

Furthermore, it is preferable that each port and international airport be provided with equipment for the sterilisation or incineration of any material dangerous to aquatic animal health.

Article 1.5.4.2.

When required by international traffic in transit, airports shall be provided, as soon as possible, with areas of direct transit; these must, however, comply with the conditions required by the Veterinary Administrations or other responsible Competent Authorities.

Article 1.5.4.3.

Each Veterinary Administration shall keep at the disposal of the OIE Central Bureau and any interested country on request:

1. a list of specified frontier posts and processing plants for aquatic animals in its territory that are approved for international trade;
2. the period of time required for notice to be given for the application of the arrangements contained in paragraph 2 of Articles 1.5.5.1 and 1.5.5.2;
3. a list of airports in its territory that are provided with an area of direct transit.
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 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.

4. An importing country may prohibit the introduction into its territory of aquatic animals, if these were found, on examination carried out at the frontier post by a member of the personnel of the Competent Authority, to be affected by an OIE listed disease of concern to the importing country.

Refusal of entry may also be applied to aquatic animals that are not accompanied by an international aquatic animal health certificate conforming with the requirements of the importing country.

In these circumstances, the Competent Authority of the exporting country shall be informed immediately, thereby providing an opportunity for checking the findings or correcting the certificate.

However, the importing country may prescribe that the importation be placed immediately in quarantine in order to carry out clinical observation and biological examinations with a view to establishing a formal diagnosis.

If the diagnosis of a disease notifiable to the OIE is confirmed, or if the certificate cannot be corrected, the importing country may take the following measures:

a) return the aquatic animals involved to the exporting country, if this rejection does not involve transit through a third country;

b) slaughter and destroy in cases where re-shipment would be dangerous from a health point of view or impossible from a practical point of view.
Article 1.5.5.2.

1. An importing country should only accept into its territory raw uneviscerated fish of those species susceptible to a disease notifiable to the OIE destined for introduction into an aquatic environment or for human consumption 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 a consignment of products of aquatic animal origin destined for human consumption, together with information on the nature, quantity and packaging of the products, and the name of the frontier post.

Article 1.5.5.3.

On arrival at a frontier post of a vehicle transporting aquatic animals infected with any specified disease notifiable to the OIE, the vehicle shall be considered to be contaminated and the Competent Authority shall apply the following measures:

1. unloading of the vehicle and immediate transportation of any possibly contaminated material, such as water or ice, to an establishment assigned in advance for its destruction and the strict application of the aquatic animal health measures required by the importing country;

2. disinfection of:
   a) outer clothes and boots of the crew on the transporting vehicle;
   b) all parts of the vehicle that were used in the transport, moving and unloading of the aquatic animals.
CHAPTER 1.5.6.

MEASURES CONCERNING INTERNATIONAL TRANSFER OF PATHOLOGICAL MATERIAL AND BIOLOGICAL PRODUCTS

Article 1.5.6.1.

The importation of pathological material and biological products that may contain infectious agents causing the diseases listed in this Code should require specific authorisation by the Competent Authority of the importing country, with the conditions of importation described. Any material that does not satisfy these conditions should be returned or sterilised together with its packing.

Article 1.5.6.2.

1. Every consignment of pathological material or biological products should be notified by the consigner to the consignee, giving the following information:
   a) exact nature of the product and its packaging;
   b) the number of packages sent and the marks and numbers enabling their identification;
   c) date of despatch;
   d) method of transport used for consignment of products (ship, aircraft, railway wagon or road vehicle).

2. The consignee should notify the consigner of the receipt of each consignment of pathological material or biological products on its arrival.

3. When a consignment that has been notified by the consigner fails to arrive by the anticipated date, the consignee should notify the Competent Authority of the receiving country and, at the same time, the consigner in the country of origin, so that any necessary action can be taken for investigation to be made without delay.

Article 1.5.6.3.

For the purposes of this Code, the sending of pathological material and biological products should be subject to the special rules concerning packaging stipulated for perishable biological material by the Universal Postal Convention established by the Universal Postal Union.
Chapter 1.5.6. International transfer of pathological material and biological products

Article 1.5.6.4.

For the purposes of this Code, vaccines containing live attenuated microorganisms, or live attenuated (modified) viruses packaged or in bulk and sent in large quantities that render the conditions described in Article 1.5.6.3 inapplicable in practice, should be packed in such a way that no outside contamination is possible (solid, well-sealed internal containers, solid and securely fastened protective boxes or cases, a sufficient amount of absorbent material, and labels marked: Perishable biological products \(	ext{Dangerous} \) Not to be opened during transportation).

Article 1.5.6.5.

1. Each receiving country should only accept vaccines for veterinary use for which a certificate is provided stating that the vaccines were officially controlled in the exporting country.

2. Vaccines for which the authorisation described in Article 1.5.6.1 has been made and whose identity and conformity with the certificates of origin have been verified, should be permitted entry.

3. However, if inspection of the consignment shows any change in the vaccines for veterinary use that could endanger the health of humans or \textit{aquatic animals}, the \textit{Competent Authority} of the receiving country should cause these vaccines to be seized and destroyed.
SECTION 1.6.

CONTINGENCY PLANS

CHAPTER 1.6.1.

GUIDELINES FOR CONTINGENCY PLANNING

Article 1.6.1.1.

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 1.6.1.2.

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 1.6.1.3.

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 1.6.1.4.

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.
Chapter 1.6.1. Guidelines for contingency planning

Article 1.6.1.5.

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 the 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;

Article 1.6.1.6.

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 1.6.1.7.

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.
PART 2

DISEASES OF FISH
SECTION 2.1.

DISEASES NOTIFIABLE TO THE OIE

CHAPTER 2.1.1.

EPIZOOTIC HAEMATOPOIETIC NECROSIS

Article 2.1.1.1.

For the purposes of this Code, susceptible host species for epizootic haematopoietic necrosis (EHN) are: redfin perch (*Perca fluviatilis*), rainbow trout (*Oncorhynchus mykiss*), Macquarie perch (*Macquaria australasica*), mosquito fish (*Gambusa affinis*), silver perch (*Bidyanus bidyanus*) and mountain galaxias (*Galaxias olidus*).

Standards for diagnostic tests are described in the Manual.

Article 2.1.1.2.

**EHN free country**

A country may be considered free from EHN when:

1. no recorded outbreak of EHN disease has occurred within its territory for at least the previous two years;

2. epizootic haematopoietic necrosis virus (EHNV) has not been detected in any *fish* belonging to the susceptible host species listed in Article 2.1.1.1 tested during operation of an official fish health surveillance scheme 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 2.1.1.6, 2.1.1.7 and 2.1.1.8.

Article 2.1.1.3.

**EHN free zone**

An EHN free zone may be established within the territory of one or more countries if within the zone:

1. *aquaculture establishments* and wild populations containing *fish* belonging to the susceptible host species listed in Article 2.1.1.1 have been tested in an official fish health surveillance scheme for at least the previous two years using the procedures described in the *Manual*;

2. EHNV has not been detected during this two-year period.

Such EHN free zones must comprise:

3. one or more entire water catchment area(s) from the sources of the waterways to the sea, or
Chapter 2.1.1. Epizootic haematopoietic necrosis

4. 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 concerned by the Competent Authority and the conditions referred to in Articles 2.1.1.6, 2.1.1.7 and 2.1.1.8 must be observed.

Article 2.1.1.4.

EHN free aquaculture establishment

An EHN free aquaculture establishment may be located not only within an EHN free country or zone but also within an EHN infected zone provided that:

1. it has been tested in an official fish health surveillance scheme for at least the previous two years using the procedures described in the Manual, without detection of EHNV;
2. it is supplied by water from a spring, well or borehole only and is free from stocks of wild fish;
3. there is 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;
4. it is observing the conditions referred to in Articles 2.1.1.6, 2.1.1.7 and 2.1.1.8.

Article 2.1.1.5.

Restoration of free status

A country, a zone or an aquaculture establishment may be restored to EHN free status if it has been subjected to a stamping-out policy or effective disease eradication measures and if EHNV 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 EHN free status in under two years if it otherwise meets all the requirements for an EHN free aquaculture establishment.

Article 2.1.1.6.

When importing live fish of any susceptible species, or their sexual products (eggs and gametes), 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 fish health surveillance scheme comprising inspection and laboratory tests on susceptible species conducted according to the procedures described in the Manual, whether or not the place of production of the consignment is a country officially declared EHN free.

If the place of production of the consignment is not a country officially declared EHN free, the certificate must state whether the place of production of the consignment is:

1. a zone officially declared EHN free, or
2. an aquaculture establishment officially declared EHN free.
Chapter 2.1.1. Epizootic haematopoietic necrosis

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

Article 2.1.1.7.

Importing countries that are officially declared EHN free should only accept for importation live fish or sexual products of fish from exporting countries declared EHN free, or from clearly defined EHN free zones in countries not declared EHN free.

Importing countries not regarded as EHN free, but that have officially recognised EHN free zones, should only import live fish and sexual products of fish into such zones from other countries or zones that are officially declared EHN free.

For aquaculture establishments officially declared EHN free that exist in infected zones, the Competent Authority of the country concerned should allow importation of live fish or sexual products of fish only from officially declared EHN free countries, zones or aquaculture establishments.

Article 2.1.1.8.

The Competent Authorities in countries officially declared EHN free should demand that dead fish for importation from countries not free from EHN be eviscerated before transit.

In general, the Competent Authority of a country importing uneviscerated dead fish should require that the consignment be accompanied by an international aquatic animal health certificate, conforming to the Model Certificate No. 2, issued by the Competent Authority in the country of origin.

This certificate should declare the health status of the place of production in respect of EHN and the other fish diseases listed in this Code.
CHAPTER 2.1.2.

INFECTIOUS HAEMATOPOIETIC NECROSIS

Article 2.1.2.1.

For the purposes of this Code, susceptible host species for infectious haematopoietic necrosis (IHN) are: rainbow or steelhead trout (Oncorhynchus mykiss), several Pacific salmon including sockeye salmon (O. nerka), chinook salmon (O. tshawytscha), chum salmon (O. keta), yamame salmon (O. masou), amago salmon (O. rhodurus) and coho salmon (O. kisutch), and Atlantic salmon (Salmo salar).

Standards for diagnostic tests are described in the Manual.

Article 2.1.2.2.

IHN free country

A country may be considered free from IHN when:

1. no recorded outbreak of IHN disease has occurred within its territory for at least the previous two years;
2. infectious haematopoietic necrosis virus (IHNV) has not been detected in any fish belonging to the susceptible host species listed in Article 2.1.2.1 tested during operation of an official fish health surveillance scheme 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 2.1.2.6, 2.1.2.7 and 2.1.2.8.

Article 2.1.2.3.

IHN free zone

An IHN free zone may be established within the territory of one or more countries if within the zone:

1. aquaculture establishments and wild populations containing fish belonging to the susceptible host species listed in Article 2.1.2.1 have been tested in an official fish health surveillance scheme for at least the previous two years using the procedures described in the Manual;
2. IHNV has not been detected during this two-year period.

Such IHN free zones must comprise:

3. one or more entire water catchment area(s) from the sources of the waterways to the sea, or
4. 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 concerned by the Competent Authority and the conditions referred to in Articles 2.1.2.6, 2.1.2.7 and 2.1.2.8 must be observed.
Article 2.1.2.4.

IHN free aquaculture establishment

An IHN free aquaculture establishment may be located not only within an IHN free country or zone but also within an IHN infected zone provided that:

1. it has been tested in an official fish health surveillance scheme for at least the previous two years using the procedures described in the Manual, without detection of IHNV;

2. it is supplied by water from a spring, well or borehole only and is free from stocks of wild fish;

3. there is 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;

4. it is observing the conditions referred to in Articles 2.1.2.6, 2.1.2.7 and 2.1.2.8.

Article 2.1.2.5.

Restoration of free status

A country, a zone or an aquaculture establishment may be restored to IHN free status if it has been subjected to a stamping-out policy or effective disease eradication measures and if IHNV 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 IHN free status in under two years if it otherwise meets all the requirements for an IHN free aquaculture establishment.

Article 2.1.2.6.

When importing live fish of any susceptible species, or their sexual products (eggs and gametes), 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 fish health surveillance scheme comprising inspection and laboratory tests on susceptible species conducted according to the procedures described in the Manual, whether or not the place of production of the consignment is a country officially declared IHN free.

If the place of production of the consignment is not a country officially declared IHN free, the certificate must state whether the place of production of the consignment is:

1. a zone officially declared IHN free, or

2. an aquaculture establishment officially declared IHN free.

The certificate shall be in accordance with Model Certificate No. 1 given in Part 6 of this Code.
Article 2.1.2.7.

Importing countries that are officially declared IHN free should only accept for importation live fish or sexual products of fish from exporting countries declared IHN free, or from clearly defined IHN free zones in countries not declared IHN free.

Importing countries not regarded as IHN free, but that have officially recognised IHN free zones, should only import live fish and sexual products of fish into such zones from other countries or zones that are officially declared IHN free.

For aquaculture establishments officially declared IHN free that exist in infected zones, the Competent Authority of the country concerned should allow importation of live fish or sexual products of fish only from officially declared IHN free countries, zones or aquaculture establishments.

Article 2.1.2.8.

The Competent Authorities in countries officially declared IHN free should demand that dead fish for importation from countries not free from IHN be eviscerated before transit.

In general, the Competent Authority of a country importing uneviscerated dead fish should require that the consignment be accompanied by an international aquatic animal health certificate, conforming to the Model Certificate No. 2, issued by the Competent Authority in the country of origin.

This certificate should declare the health status of the place of production in respect of IHN and the other fish diseases listed in this Code.
CHAPTER 2.1.3.

ONCORHYNCHUS MASOU VIRUS DISEASE
(Synonym: salmonid herpesvirus type 2 disease)

Article 2.1.3.1.

For the purposes of this Code, susceptible host species for Onchorhynchus masou virus disease are: kokanee salmon (Oncorhynchus nerka), masou salmon (O. masou), chum salmon (O. keta), coho salmon (O. kisutch) and rainbow trout (O. mykiss).

Standards for diagnostic tests are described in the Manual.

Article 2.1.3.2.

Onchorhynchus masou virus disease free country

A country may be considered free from Onchorhynchus masou virus disease when:

1. no recorded outbreak of Onchorhynchus masou virus disease has occurred within its territory for at least the previous two years;

2. Onchorhynchus masou virus has not been detected in any fish belonging to the susceptible host species listed in Article 2.1.3.1 tested during operation of an official fish health surveillance scheme 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 2.1.3.6, 2.1.3.7 and 2.1.3.8.

Article 2.1.3.3.

Onchorhynchus masou virus disease free zone

An Onchorhynchus masou virus free zone may be established within the territory of one or more countries if within the zone:

1. aquaculture establishments and wild populations containing fish belonging to the susceptible host species listed in Article 2.1.3.1 have been tested in an official fish health surveillance scheme for at least the previous two years using the procedures described in the Manual;

2. Onchorhynchus masou virus has not been detected during this two-year period.

Such Onchorhynchus masou virus disease free zones must comprise:

3. one or more entire water catchment area(s) from the sources of the waterways to the sea, or

4. 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 concerned by the Competent Authority and the conditions referred to in Articles 2.1.3.6, 2.1.3.7 and 2.1.3.8 must be observed.
Chapter 2.1.3. Oncorhynchus masou virus disease

Article 2.1.3.4.

Oncorhynchus masou virus disease free aquaculture establishment

An Oncorhynchus masou virus disease free aquaculture establishment may be located not only within a salmonid herpesvirus free country or zone but also within an Oncorhynchus masou virus disease infected zone provided that:

1. it has been tested in an official fish health surveillance scheme for at least the previous two years using the procedures described in the Manual, without detection of Oncorhynchus masou virus disease;
2. it is supplied by water from a spring, well or borehole only and is free from stocks of wild fish;
3. there is 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;
4. it is observing the conditions referred to in Articles 2.1.3.6, 2.1.3.7 and 2.1.3.8.

Article 2.1.3.5.

Restoration of free status

A country, a zone or an aquaculture establishment may be restored to Oncorhynchus masou virus disease free status if it has been subjected to a stamping-out policy or effective disease eradication measures and if Oncorhynchus masou virus 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 Oncorhynchus masou virus disease free status in under two years if it otherwise meets all the requirements for an Oncorhynchus masou virus disease free aquaculture establishment.

Article 2.1.3.6.

When importing live fish of any susceptible species, or their sexual products (eggs and gametes), 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 fish health surveillance scheme comprising inspection and laboratory tests on susceptible species conducted according to the procedures described in the Manual, whether or not the place of production of the consignment is a country officially declared free from Oncorhynchus masou virus disease.

If the place of production of the consignment is not a country officially declared Oncorhynchus masou virus disease free, the certificate must state whether the place of production of the consignment is:

1. a zone officially declared Oncorhynchus masou virus disease free, or
2. an aquaculture establishment officially declared Oncorhynchus masou virus disease free.

The certificate shall be in accordance with Model Certificate No. 1 given in Part 6 of this Code.
Chapter 2.1.3. *Oncorhynchus masou* virus disease

**Article 2.1.3.7.**

*Importing countries* that are officially declared *Oncorhynchus masou* virus disease free should only accept for importation live fish or sexual products of fish from exporting countries declared *Oncorhynchus masou* virus disease free, or from clearly defined *Oncorhynchus masou* virus disease free zones in countries not declared *Oncorhynchus masou* virus disease free.

*Importing countries* not regarded as *Oncorhynchus masou* virus disease free, but that have officially recognised *Oncorhynchus masou* virus disease free zones, should only import live fish and sexual products of fish into such zones from other countries or zones that are officially declared *Oncorhynchus masou* virus disease free.

For *aquaculture establishments* officially declared *Oncorhynchus masou* virus disease free that exist in infected zones, the *Competent Authority* of the country concerned should allow importation of live fish or sexual products of fish only from officially declared *Oncorhynchus masou* virus disease free countries, zones or *aquaculture establishments*.

**Article 2.1.3.8.**

The *Competent Authorities* in countries officially declared *Oncorhynchus masou* virus disease free should demand that dead fish for importation from countries not free from *Oncorhynchus masou* virus disease be eviscerated before transit.

In general, the *Competent Authority* of a country importing uneviscerated dead fish should require that the consignment be accompanied by an *international aquatic animal health certificate*, conforming to the Model Certificate No. 2, issued by the *Competent Authority* in the country of origin.

This certificate should declare the health status of the place of production in respect of *Oncorhynchus masou* virus disease and the other fish diseases listed in this *Code*.
CHAPTER 2.1.4.
SPRING VIRAEMIA OF CARP

Article 2.1.4.1.

For the purposes of this Code, susceptible host species for spring viraemia of carp (SVC) are: common carp (Cyprinus carpio), grass carp (Ctenopharyngodon idellus), silver carp (Hypophthalmichthys molitrix), bighead carp (Aristichthys nobilis), crucian carp (Carassius carassius), goldfish (Carassius auratus), tench (Tinca tinca) and sheatfish (Silurus glanis).

Standards for diagnostic tests are described in the Manual.

Article 2.1.4.2.

SVC free country

A country may be considered free from SVC when:

1. no recorded outbreak of SVC disease has occurred within its territory for at least the previous two years;

2. spring viraemia of carp virus (SVCV) has not been detected in any fish belonging to the susceptible host species listed in Article 2.1.4.1 tested during operation of an official fish health surveillance scheme 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 2.1.4.6, 2.1.4.7 and 2.1.4.8.

Article 2.1.4.3.

SVC free zone

An SVC free zone may be established within the territory of one or more countries if within the zone:

1. aquaculture establishments and wild populations containing fish belonging to the susceptible host species listed in Article 2.1.4.1 have been tested in an official fish health surveillance scheme for at least the previous two years using the procedures described in the Manual;

2. SVCV has not been detected during this two-year period.

Such SVC free zones must comprise:

3. one or more entire water catchment area(s) from the sources of the waterways to the sea, or

4. 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 concerned by the Competent Authority and the conditions referred to in Articles 2.1.4.6, 2.1.4.7 and 2.1.4.8 must be observed.

Article 2.1.4.4.
SVC free aquaculture establishment

An SVC free aquaculture establishment may be located not only within an SVC free country or zone but also within an SVC infected zone provided that:

1. it has been tested in an official fish health surveillance scheme for at least the previous two years using the procedures described in the Manual, without detection of SVCV;

2. it is supplied by water from a spring, well or borehole only and is free from stocks of wild fish;

3. it is not connected to a watercourse or there is 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;

4. it is observing the conditions referred to in Articles 2.1.4.6, 2.1.4.7 and 2.1.4.8.

Article 2.1.4.5.

Restoration of free status

A country, a zone or an aquaculture establishment may be restored to SVC free status if it has been subjected to a stamping-out policy or effective disease eradication measures and if SVCV 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 SVC free status in under two years if it otherwise meets all the requirements for an SVC free aquaculture establishment.

Article 2.1.4.6.

When importing live fish of any susceptible species, or their sexual products (eggs and gametes), 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 fish health surveillance scheme comprising inspection and laboratory tests on susceptible species conducted according to the procedures described in the Manual, whether or not the place of production of the consignment is a country officially declared SVC free.

If the place of production of the consignment is not a country officially declared SVC free, the certificate must state whether the place of production of the consignment is:

1. a zone officially declared SVC free, or

2. an aquaculture establishment officially declared SVC free.

The certificate shall be in accordance with Model Certificate No. 1 given in Part 6 of this Code.
Article 2.1.4.7.

*Importing countries* that are officially declared SVC free should only accept for importation live *fish* or sexual products of *fish* from *exporting countries* declared SVC free, or from clearly defined SVC free zones in countries not declared SVC free.

*Importing countries* not regarded as SVC free, but that have officially recognised SVC free zones, should only import live *fish* and sexual products of *fish* into such zones from other countries or zones that are officially declared SVC free.

For *aquaculture establishments* officially declared SVC free that exist in infected zones, the *Competent Authority* of the country concerned should allow importation of live *fish* or sexual products of *fish* only from officially declared SVC free countries, zones or *aquaculture establishments*.

Article 2.1.4.8.

The *Competent Authorities* in countries officially declared SVC free should demand that dead *fish* for importation from countries not free from SVC be *eviscerated* before transit.

In general, the *Competent Authority* of a country importing uneviscerated dead *fish* should require that the consignment be accompanied by an *international aquatic animal health certificate*, conforming to the Model Certificate No. 2, issued by the *Competent Authority* in the country of origin.

This certificate should declare the health status of the place of production in respect of SVC and the other *fish diseases* listed in this *Code*.
CHAPTER 2.1.5.

VIRAL HAEMORRHAGIC SEPTICAEMIA
(Synonym: Egtved disease)

Article 2.1.5.1.

For the purposes of this Code, susceptible host species for viral haemorrhagic septicaemia (VHS) are: rainbow trout (Oncorhynchus mykiss), brown trout (Salmo trutta), grayling (Thymallus thymallus), white fish (Coregonus spp.), pike (Esox lucius), turbot (Scophthalmus maximus), herring and sprat (Clupea spp.), Pacific salmon (Oncorhynchus spp.), Atlantic cod (Gadus morhua), Pacific cod (G. macrocephalus), haddock (G. aeglefinus) and rockling (Onos mustelus).

Standards for diagnostic tests are described in the Manual.

Article 2.1.5.2.

VHS free country

A country may be considered free from VHS when:

1. no recorded outbreak of VHS disease has occurred within its territory for at least the previous two years;

2. viral haemorrhagic septicaemia virus (VHSV) has not been detected in any fish belonging to the susceptible host species listed in Article 2.1.5.1 tested during operation of an official fish health surveillance scheme 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 2.1.5.6, 2.1.5.7 and 2.1.5.8.

Article 2.1.5.3.

VHS free zone

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

1. aquaculture establishments and wild populations containing fish belonging to the susceptible host species listed in Article 2.1.5.1 have been tested in an official fish health surveillance scheme for at least the previous two years using the procedures described in the Manual;

2. VHSV has not been detected during this two-year period.

Such VHS free zones must comprise:

3. one or more entire water catchment area(s) from the sources of the waterways to the sea, or

4. 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 concerned by the Competent Authority and the conditions referred to in Articles 2.1.5.6, 2.1.5.7 and 2.1.5.8 must be observed.
Article 2.1.5.4. 

VHS free aquaculture establishment

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

1. it has been tested in an official fish health surveillance scheme for at least the previous two years using the procedures described in the Manual, without detection of VHSV;

2. it is supplied by water from a spring, well or borehole only and is free from stocks of wild fish;

3. there is 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;

4. it is observing the conditions referred to in Articles 2.1.5.6, 2.1.5.7 and 2.1.5.8.

Article 2.1.5.5.

Restoration of free status

A country, a zone or an aquaculture establishment may be restored to VHS free status if it has been subjected to a stamping-out policy or effective disease eradication measures and if VHSV 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 VHS free status in under two years if it otherwise meets all the requirements for a VHS free aquaculture establishment.

Article 2.1.5.6.

When importing live fish of any susceptible species, or their sexual products (eggs and gametes), 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 fish health surveillance scheme comprising inspection and laboratory tests on susceptible species conducted according to the procedures described in the Manual, whether or not the place of production of the consignment is a country officially declared VHS free.

If the place of production of the consignment is not a country officially declared VHS free, the certificate must state whether the place of production of the consignment is:

1. a zone officially declared VHS free, or

2. an aquaculture establishment officially declared VHS free.

The certificate shall be in accordance with Model Certificate No. 1 given in Part 6 of this Code.
Chapter 2.1.5. Viral haemorrhagic septicaemia

Article 2.1.5.7.

Importing countries that are officially declared VHS free should only accept for importation live fish or sexual products of fish from exporting countries declared VHS free, or from clearly defined VHS free zones in countries not declared VHS free.

Importing countries not regarded as VHS free, but that have officially recognised VHS free zones, should only import live fish and sexual products of fish into such zones from other countries or zones that are officially declared VHS free.

For aquaculture establishments officially declared VHS free that exist in infected zones, the Competent Authority of the country concerned should allow importation of live fish or sexual products of fish only from officially declared VHS free countries, zones or aquaculture establishments.

Article 2.1.5.8.

The Competent Authorities in countries officially declared VHS free should demand that dead fish for importation from countries not free from VHS be eviscerated before transit.

In general, the Competent Authority of a country importing uneviscerated dead fish should require that the consignment be accompanied by an international aquatic animal health certificate, conforming to the Model Certificate No. 2, issued by the Competent Authority in the country of origin.

This certificate should declare the health status of the place of production in respect of VHS and the other fish diseases listed in this Code.
SECTION 2.2.

OTHER SIGNIFICANT DISEASES

CHAPTER 2.2.1.

CHANNEL CATFISH VIRUS DISEASE
(Herpesvirus of Ictaluridae type 1)

Article 2.2.1.1.

Standards for diagnostic tests are described in the Manual.

Article 2.2.1.2.

When importing live fish of a susceptible species or their gametes or eggs or dead uneviscerated fish, the Competent Authority of the importing country with an official control policy for channel catfish virus disease may wish to require the presentation of an international aquatic animal health certificate issued by the Competent Authority in the exporting country, attesting that the country, zone or aquaculture establishment of origin has been regularly subjected to appropriate tests for channel catfish virus disease with negative results.
CHAPTER 2.2.2.

VIRAL ENCEPHALOPATHY AND RETINOPATHY

Article 2.2.2.1.

Standards for diagnostic tests are described in the Manual.

Article 2.2.2.2.

When importing live fish of a susceptible species or their gametes or eggs or dead uneviscerated fish, the Competent Authority of the importing country with an official control policy for viral encephalopathy and retinopathy may wish to require the presentation of an international aquatic animal health certificate issued by the Competent Authority in the exporting country attesting that the country, zone or aquaculture establishment of origin has been regularly subjected to appropriate tests for viral encephalopathy and retinopathy with negative results.
CHAPTER 2.2.3.

INFECTIOUS PANCREATIC NECROSIS

Article 2.2.3.1.

Standards for diagnostic tests are described in the *Manual*.

Article 2.2.3.2.

When importing live *fish* of a susceptible *species* or their *gametes* or eggs or dead uneviscerated *fish*, the *Competent Authority* of the *importing country* with an official control policy for infectious pancreatic necrosis may wish to require the presentation of an *international aquatic animal health certificate* issued by the *Competent Authority* in the *exporting country*, attesting that the country, zone or *aquaculture establishment* of origin has been regularly subjected to appropriate tests for infectious pancreatic necrosis with negative results.
CHAPTER 2.2.4.

INFECTIOUS SALMON ANAEMIA

Article 2.2.4.1.

Standards for diagnostic tests are described in the Manual.

Article 2.2.4.2.

When importing live fish of a susceptible species or their gametes or eggs or dead uneviscerated fish, the Competent Authority of the importing country with an official control policy for infectious salmon anaemia may wish to require the presentation of an international aquatic animal health certificate issued by the Competent Authority in the exporting country, attesting that the country, zone or aquaculture establishment of origin has been regularly subjected to appropriate tests for infectious salmon anaemia with negative results.
CHAPTER 2.2.5.

EPIZOOTIC ULCERATIVE SYNDROME

Article 2.2.5.1.

Standards for diagnostic tests are described in the Manual.

Article 2.2.5.2.

When importing live fish of a susceptible species or their gametes or eggs or dead uneviscerated fish, the Competent Authority of the importing country with an official control policy for epizootic ulcerative syndrome may wish to require the presentation of an international aquatic animal health certificate issued by the Competent Authority in the exporting country, attesting that the country, zone or aquaculture establishment of origin has been regularly subjected to appropriate tests for epizootic ulcerative syndrome with negative results.
CHAPTER 2.2.6.

BACTERIAL KIDNEY DISEASE
(Renibacterium salmoninarum)

Article 2.2.6.1.

Standards for diagnostic tests are described in the Manual.

Article 2.2.6.2.

When importing live fish of a susceptible species or their gametes or eggs or dead uneviscerated fish, the Competent Authority of the importing country with an official control policy for bacterial kidney disease may wish to require the presentation of an international aquatic animal health certificate issued by the Competent Authority in the exporting country, attesting that the country, zone or aquaculture establishment of origin has been regularly subjected to appropriate tests for bacterial kidney disease with negative results.
CHAPTER 2.2.7.

ENTERIC SEPTICAEMIA OF CATFISH
(Edwardsiella ictaluri)

Article 2.2.7.1.

Standards for diagnostic tests are described in the Manual.

Article 2.2.7.2.

When importing live fish of a susceptible species or their gametes or eggs or dead uneviscerated fish, the Competent Authority of the importing country with an official control policy for enteric septicaemia of catfish may wish to require the presentation of an international aquatic animal health certificate issued by the Competent Authority in the exporting country, attesting that the country, zone or aquaculture establishment of origin has been regularly subjected to appropriate tests for enteric septicaemia of catfish with negative results.
CHAPTER 2.2.8.

PISCIRICKETTSIOSIS
(Piscirickettsia salmonis)

Article 2.2.8.1.

Standards for diagnostic tests are described in the Manual.

Article 2.2.8.2.

When importing live fish of a susceptible species or their gametes or eggs or dead uneviscerated fish, the Competent Authority of the importing country with an official control policy for piscirickettsiosis may wish to require the presentation of an international aquatic animal health certificate issued by the Competent Authority in the exporting country, attesting that the country, zone or aquaculture establishment of origin has been regularly subjected to appropriate tests for piscirickettsiosis with negative results.
CHAPTER 2.2.9.

GYRODACTYLOSIS
(Gyrodactylus salaris)

Article 2.2.9.1.

Standards for diagnostic tests are described in the Manual.

Article 2.2.9.2.

When importing live salmonids or other fish from sites where salmonids are present, the Competent Authority of the importing country with an official control policy for Gyrodactylus salaris may wish to require the presentation of an international aquatic animal health certificate issued by the Competent Authority in the exporting country, attesting that the site of origin:

1. has been regularly subjected to tests for Gyrodactylus salaris with negative results for at least the previous two years

   and

2. is situated in a water catchment area or part of a water catchment area free from Gyrodactylus salaris;

   or

3. is supplied by water from a water catchment area or part of a water catchment area free from stocks of live salmonids, whether farmed or wild

   and

4. has not introduced live salmonids from aquaculture establishments or sites of a lesser fish health status for at least the previous two years;

OR

5. is supplied with sea water with a salinity of at least 20 parts per thousand and no live salmonids have been introduced for the previous 14 days from a site of a lesser health status.
CHAPTER 2.2.10.

RED SEA BREAM IRIDO VIRAL DISEASE

Article 2.2.10.1.

Standards for diagnostic tests are described in the Manual.

Article 2.2.10.2.

When importing live fish of a susceptible species or their gametes or eggs or dead uneviscerated fish, the Competent Authority of the importing country with an official control policy for red sea bream iridoviral disease may wish to require the presentation of an international aquatic animal health certificate issued by the Competent Authority in the exporting country, attesting that the country, zone or aquaculture establishment of origin has been regularly subjected to appropriate tests for red sea bream iridoviral disease with negative results.
CHAPTER 2.2.11.

WHITE STURGEON IRIDOVIRAL DISEASE

Article 2.2.11.1.

Standards for diagnostic tests are described in the Manual.

Article 2.2.11.2.

When importing live fish of a susceptible species or their gametes or eggs or dead uneviscerated fish, the Competent Authority of the importing country with an official control policy for white sturgeon iridoviral disease may wish to require the presentation of an international aquatic animal health certificate issued by the Competent Authority in the exporting country, attesting that the country, zone or aquaculture establishment of origin has been regularly subjected to appropriate tests for white sturgeon iridoviral disease with negative results.
PART 3

DISEASES OF MOLLUSCS
SECTION 3.1.

DISEASES NOTIFIABLE TO THE OIE

CHAPTER 3.1.1.

BONAMIOSIS

(Bonamia ostreae, B. sp.)

Article 3.1.1.1.

The present chapter relates only to bonamiosis when covered by the disease agents listed below as the susceptible host species indicated for each pathogen.

For the purposes of this Code, susceptible host species for Bonamia ostreae are: Ostrea edulis, O. angasi, O. denselamellusa, O. puelchana, Ostreola conchaphila (= O. lurida) and Tiostrea chilensis (= T. lutaria), and susceptible host species for Bonamia sp. are Tiostrea chilensis and Ostrea angasi.

Standards for diagnostic tests are described in the Manual.

Article 3.1.1.2.

Bonamiosis free country

A country may be considered free from bonamiosis when:

1. no outbreak caused by the disease agents listed in Article 3.1.1.1 has occurred within its territory for at least the previous two years;

2. no disease agent listed in Article 3.1.1.1 has been detected in any mollusc tested during operation of an official mollusc health surveillance scheme for a period of at least two years using the procedures described in the Manual.

Article 3.1.1.3.

Bonamiosis free zone

A zone may be considered free from bonamiosis when:

1. no outbreak caused by the disease agents listed in Article 3.1.1.1 has occurred within its territory for at least the previous two years;

2. no disease agent listed in Article 3.1.1.1 has been detected in any mollusc tested during operation of an official mollusc health surveillance scheme for a period of at least two years using the procedures described in the Manual (where a zone common to several countries is involved, these countries should implement harmonised and co-ordinated national disease surveillance programmes).
Article 3.1.1.4.

**Bonamiosis free aquaculture establishment**

A bonamiosis free aquaculture establishment may be located within a bonamiosis free country or zone or within a bonamiosis infected zone provided that:

1. it has been tested in an official mollusc health surveillance scheme for at least the previous two years using the procedures described in the Manual, without detection of any of the disease agents listed in Article 3.1.1.1, and

2. it is supplied with water by a means that ensures removal or destruction of any of the disease agents listed in Article 3.1.1.1 that may be present.

Article 3.1.1.5.

**Restoration of free status**

A country, a zone or an aquaculture establishment may be restored to bonamiosis free status if no disease agent listed in Article 3.1.1.1 has been detected for the last two years of a surveillance scheme using the procedures described in the Manual.

Article 3.1.1.6.

When importing live molluscs of all age groups of any susceptible host species 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 an official mollusc health surveillance scheme comprising inspection and laboratory tests on susceptible host species conducted according to the procedures described in the Manual, whether or not the place of harvest of the consignment is a country officially declared bonamiosis free.

If the place of harvest of the consignment is not a country officially declared bonamiosis free, the certificate must state whether the place of harvest of the consignment is:

1. a zone officially declared bonamiosis free, or

2. an aquaculture establishment officially declared bonamiosis free.

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

Article 3.1.1.7.

**Importing countries** that are officially declared bonamiosis free should only accept for importation live molluscs from exporting countries declared bonamiosis free, or from clearly defined bonamiosis free zones in countries not declared bonamiosis free.

**Importing countries** not regarded as bonamiosis free, but that have officially recognised bonamiosis free zones, should only import molluscs into such zones from other countries or zones that are officially declared bonamiosis free.
For *aquaculture establishments* officially declared bonamiosis free that exist in infected zones, the *Competent Authority* of the country concerned should only allow importation of *molluscs* from officially declared bonamiosis free countries, zones or *aquaculture establishments*.

**Article 3.1.1.8.**

*Competent Authorities* of importing countries should require:

for *molluscs of commercial size destined for human consumption*

the presentation of an *international aquatic animal health certificate* attesting that the *molluscs* listed as bonamiosis susceptible host species have as their place of harvest a country, a zone or an *aquaculture establishment* free from bonamiosis.

The certificate shall be in accordance with Model Certificate No. 3.

This certificate may not be required for *molluscs* listed as susceptible host species originating from an infected zone if they are destined:

1. directly for human consumption without any re-immersion, or
2. for storage, during a short period before consumption, in a tank located in an infected zone. The tank should be isolated from the local environment (e.g. in quarantine) to avoid the potential introduction of different strains of the pathogen.

**Article 3.1.1.9.**

Certificates are optional for *molluscs* not listed as natural or experimental bonamiosis susceptible host species, even if the *molluscs* originate from an infected country, zone or *aquaculture establishment*. 
CHAPTER 3.1.2.

HAPLOSPORIDIOSIS
(Haplosporidium costale, H. nelsoni)

Article 3.1.2.1.

The present chapter relates only to haplosporidiosis when covered by the disease agents listed below as the susceptible host species indicated for each pathogen.

For the purposes of this Code, susceptible host species for Haplosporidium costale is: Crassostrea virginica, and susceptible host species for Haplosporidium nelsoni are: Crassostrea virginica and C. gigas.

Standards for diagnostic tests are described in the Manual.

Article 3.1.2.2.

Haplosporidiosis free country

A country may be considered free from haplosporidiosis when:

1. no outbreak caused by the disease agents listed in Article 3.1.2.1 has occurred within its territory for at least the previous two years;

2. no disease agent listed in Article 3.1.2.1 has been detected in any mollusc tested during operation of an official mollusc health surveillance scheme for a period of at least two years using the procedures described in the Manual.

Article 3.1.2.3.

Haplosporidiosis free zone

A zone may be considered free from haplosporidiosis when:

1. no outbreak caused by the disease agents listed in Article 3.1.2.1 has occurred within its territory for at least the previous two years;

2. no disease agent listed in Article 3.1.2.1 has been detected in any mollusc tested during operation of an official mollusc health surveillance scheme for a period of at least two years using the procedures described in the Manual (where a zone common to several countries is involved, these countries should implement harmonised and co-ordinated national disease surveillance programmes).

Article 3.1.2.4.

Haplosporidiosis free aquaculture establishment

A haplosporidiosis free aquaculture establishment may be located within a haplosporidiosis free country or zone or within a haplosporidiosis infected zone provided that:

1. it has been tested in an official mollusc health surveillance scheme for at least the previous two years using the procedures described in the Manual, without detection of any of the disease agents listed in Article 3.1.2.1, and
2. it is supplied with water by a means that ensures removal or destruction of any of disease agents listed in Article 3.1.2.1 that may be present.

Article 3.1.2.5.

Restoration of free status

A country, a zone or an aquaculture establishment may be restored to haplosporidiosis free status if no disease agent listed in Article 3.1.2.1 have been detected for the last two years of a surveillance scheme using the procedures described in the Manual.

Article 3.1.2.6.

When importing live molluscs of all age groups of any susceptible host species 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 an official mollusc health surveillance scheme comprising inspection and laboratory tests on susceptible host species conducted according to the procedures described in the Manual, whether or not the place of harvest of the consignment is a country officially declared haplosporidiosis free.

If the place of harvest of the consignment is not a country officially declared haplosporidiosis free, the certificate must state whether the place of harvest of the consignment is:

1. a zone officially declared haplosporidiosis free, or
2. an aquaculture establishment officially declared haplosporidiosis free.

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

Article 3.1.2.7.

Importing countries that are officially declared haplosporidiosis free should only accept for importation live molluscs from exporting countries declared haplosporidiosis free, or from clearly defined haplosporidiosis free zones in countries not declared haplosporidiosis free.

Importing countries not regarded as haplosporidiosis free, but that have officially recognised haplosporidiosis free zones, should only import molluscs into such zones from other countries or zones that are officially declared haplosporidiosis free.

For aquaculture establishments officially declared haplosporidiosis free that exist in infected zones, the Competent Authority of the country concerned should only allow importation of molluscs from officially declared haplosporidiosis free countries, zones or aquaculture establishments.
Article 3.1.2.8.

Competent Authorities of importing countries should require:

for molluscs of commercial size destined for human consumption

the presentation of an international aquatic animal health certificate attesting that the molluscs listed as haplosporidiosis susceptible host species have as their place of harvest a country, a zone or an aquaculture establishment free from haplosporidiosis.

The certificate shall be in accordance with Model Certificate No. 3.

This certificate may not be required for molluscs listed as susceptible host species originating from an infected zone if they are destined:

1. directly for human consumption without any re-immersion, or
2. for storage, during a short period before consumption, in a tank located in an infected zone. The tank should be isolated from the local environment (e.g. in quarantine) to avoid the potential introduction of different strains of the pathogen.

Article 3.1.2.9.

Certificates are optional for molluscs not listed as natural or experimental haplosporidiosis susceptible host species, even if the molluscs originate from an infected country, zone or aquaculture establishment.
CHAPTER 3.1.3.

MARTEILIOSIS

(Marteilia refringens, M. sydneyi)

Article 3.1.3.1.

The present chapter relates only to marteiliosis when covered by the disease agents listed below in the susceptible host species indicated for each pathogen.

For the purposes of this Code, susceptible host species for Marteilia refringens are: Ostrea edulis, O. angasi and Tiostrea chilensis, and susceptible host species for M. sydneyi is: Saccostrea (= Crassostrea) commercialis.

However, the role of other bivalve species as potential vectors is still unclear. The taxonomy of the genus is uncertain and the identification of other Marteilia species is difficult.

Standards for diagnostic tests are described in the Manual.

Article 3.1.3.2.

Marteiliosis free country

A country may be considered free from marteiliosis when:

1. no outbreak caused by the disease agents listed in Article 3.1.3.1 has occurred within its territory for at least the previous two years;

2. no disease agent listed in Article 3.1.3.1 has been detected in any mollusc tested during operation of an official mollusc health surveillance scheme for a period of at least two years using the procedures described in the Manual.

Article 3.1.3.3.

Marteiliosis free zone

A zone may be considered free from marteiliosis when:

1. no outbreak caused by the disease agents listed in Article 3.1.3.1 has occurred within its territory for at least the previous two years;

2. no disease agent listed in Article 3.1.3.1 has been detected in any mollusc tested during operation of an official mollusc health surveillance scheme for a period of at least two years using the procedures described in the Manual (where a zone common to several countries is involved, these countries should implement harmonised and co-ordinated national disease surveillance programmes).
Chapter 3.1.3. Marteiliosis (Marteilia refringens, M. sydneyi)

Article 3.1.3.4.

Marteiliosis free aquaculture establishment

A marteiliosis free aquaculture establishment may be located within a marteiliosis free country or zone or within a marteiliosis infected zone provided that:

1. it has been tested in an official mollusc health surveillance scheme for at least the previous two years using the procedures described in the Manual, without detection of any of the disease agents listed in Article 3.1.3.1, and

2. it is supplied with water by a means that ensures removal or destruction of any of the disease agents listed in Article 3.1.3.1 that may be present.

Article 3.1.3.5.

Restoration of free status

A country, a zone or an aquaculture establishment may be restored to marteiliosis free status if no disease agent listed in Article 3.1.3.1 has been detected for the last two years of a surveillance scheme using the procedures described in the Manual.

Article 3.1.3.6.

When importing live molluscs of all age groups of any susceptible host species 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 an official mollusc health surveillance scheme comprising inspection and laboratory tests on susceptible host species conducted according to the procedures described in the Manual, whether or not the place of harvest of the consignment is a country officially declared marteiliosis free.

If the place of harvest of the consignment is not a country officially declared marteiliosis free, the certificate must state whether the place of harvest of the consignment is:

1. a zone officially declared marteiliosis free, or

2. an aquaculture establishment officially declared marteiliosis free.

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

Article 3.1.3.7.

Importing countries that are officially declared marteiliosis free should only accept for importation live molluscs from exporting countries declared marteiliosis free, or from clearly defined marteiliosis free zones in countries not declared marteiliosis free.

Importing countries not regarded as marteiliosis free, but that have officially recognised marteiliosis free zones, should only import molluscs into such zones from other countries or zones that are officially declared marteiliosis free.
Chapter 3.1.3. Marteiliosis (Marteilia refringens, M. sydneyi)

For aquaculture establishments officially declared marteiliosis free that exist in infected zones, the Competent Authority of the country concerned should only allow importation of molluscs from officially declared marteiliosis free countries, zones or aquaculture establishments.

Article 3.1.3.8.

Competent Authorities of importing countries should require:

for molluscs of commercial size destined for human consumption

the presentation of an international aquatic animal health certificate attesting that the molluscs listed as marteiliosis susceptible host species have as their place of harvest a country, a zone or an aquaculture establishment free from marteiliosis.

The certificate shall be in accordance with Model Certificate No. 3.

This certificate may not be required for molluscs listed as susceptible host species originating from an infected zone if they are destined:

1. directly for human consumption without any re-immersion, or
2. for storage, during a short period before consumption, in a tank located in an infected zone. The tank should be isolated from the local environment (e.g. in quarantine) to avoid the potential introduction of different strains of the pathogen.

Article 3.1.3.9.

Certificates are optional for molluscs not listed as natural or experimental marteiliosis susceptible host species, even if the molluscs originate from an infected country, zone or aquaculture establishment.
CHAPTER 3.1.4.

MIKROCYTOSIS
(Mikrocytos mackini, M. roughleyi)

Article 3.1.4.1.

The present chapter relates only to mikrocytosis when covered by the disease agents listed below in the susceptible host species indicated for each pathogen.

For the purposes of this Code, susceptible host species for Mikrocytos mackini are: Crassostrea gigas, C. virginica, Ostrea edulis and O. conchaphila, and susceptible host species for M. roughleyi is: Saccostrea commercialis.

Standards for diagnostic tests are described in the Manual.

Article 3.1.4.2.

Mikrocytosis free country

A country may be considered free from mikrocytosis when:

1. no outbreak caused by the disease agents listed in Article 3.1.4.1 has occurred within its territory for at least the previous two years;

2. no disease agent listed in Article 3.1.4.1 has been detected in any mollusc tested during operation of an official mollusc health surveillance scheme for a period of at least two years using the procedures described in the Manual.

Article 3.1.4.3.

Mikrocytosis free zone

A zone may be considered free from mikrocytosis when:

1. no outbreak caused by the disease agents listed in Article 3.1.4.1 has occurred within its territory for at least the previous two years;

2. no disease agent listed in Article 3.1.4.1 has been detected in any mollusc tested during operation of an official mollusc health surveillance scheme for a period of at least two years using the procedures described in the Manual (where a zone common to several countries is involved, these countries should implement harmonised and co-ordinated national disease surveillance programmes).

Article 3.1.4.4.

Mikrocytosis free aquaculture establishment

A mikrocytosis free aquaculture establishment may be located within a mikrocytosis free country or zone or within a mikrocytosis infected zone provided that:
Chapter 3.1.4. Mikrocytosis (Mikrocytos mackini, M. roughleyi)

1. it has been tested in an official mollusc health surveillance scheme for at least the previous two years using the procedures described in the Manual, without detection of any of the disease agents listed in Article 3.1.4.1, and

2. it is supplied with water by a means that ensures removal or destruction of any of the disease agents listed in Article 3.1.4.1 that may be present.

Article 3.1.4.5.

Restoration of free status

A country, a zone or an aquaculture establishment may be restored to mikrocytosis free status if no disease agent listed in Article 3.1.4.1 has been detected for the last two years of a surveillance scheme using the procedures described in the Manual.

Article 3.1.4.6.

When importing live molluscs of all age groups of any susceptible host species 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 an official mollusc health surveillance scheme comprising inspection and laboratory tests on susceptible host species conducted according to the procedures described in the Manual, whether or not the place of harvest of the consignment is a country officially declared mikrocytosis free.

If the place of harvest of the consignment is not a country officially declared mikrocytosis free, the certificate must state whether the place of harvest of the consignment is:

1. a zone officially declared mikrocytosis free, or
2. an aquaculture establishment officially declared mikrocytosis free.

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

Article 3.1.4.7.

Importing countries that are officially declared mikrocytosis free should only accept for importation live molluscs from exporting countries declared mikrocytosis free, or from clearly defined mikrocytosis free zones in countries not declared mikrocytosis free.

Importing countries not regarded as mikrocytosis free, but that have officially recognised mikrocytosis free zones, should only import molluscs into such zones from other countries or zones that are officially declared mikrocytosis free.

For aquaculture establishments officially declared mikrocytosis free that exist in infected zones, the Competent Authority of the country concerned should only allow importation of molluscs from officially declared mikrocytosis free countries, zones or aquaculture establishments.
Chapter 3.1.4. Mikrocytosis (Mikrocytos mackini, M. roughleyi)

Article 3.1.4.8.

Competent Authorities of importing countries should require:

for molluscs of commercial size destined for human consumption

the presentation of an international aquatic animal health certificate attesting that the molluscs listed as mikrocytosis susceptible host species have as their place of harvest a country, a zone or an aquaculture establishment free from mikrocytosis.

The certificate shall be in accordance with Model Certificate No. 3.

This certificate may not be required for molluscs listed as susceptible host species originating from an infected zone if they are destined:

1. directly for human consumption without any re-immersion, or
2. for storage, during a short period before consumption, in a tank located in an infected zone. The tank should be isolated from the local environment (e.g. in quarantine) to avoid the potential introduction of different strains of the pathogen.

Article 3.1.4.9.

Certificates are optional for molluscs not listed as natural or experimental mikrocytosis susceptible host species, even if the molluscs originate from an infected country, zone or aquaculture establishment.
CHAPTER 3.1.5.
PERKINSOSIS
(Perkinsus marinus, P. olseni)

Article 3.1.5.1.

The present chapter relates only to perkinsosis when covered by the disease agents listed below in the susceptible host species indicated for each pathogen.

For the purposes of this Code, susceptible host species for Perkinsus marinus are: Crassostrea virginica and C. gigas, and susceptible host species for P. olseni are: Haliotis ruber, H. cyclobates, H. scalaris and H. laevigata.

Some 50 other species of bivalve molluscs may harbour Perkinsus species that are apparently non-pathogenic.

Standards for diagnostic tests are described in the Manual.

Article 3.1.5.2.

Perkinsosis free country

A country may be considered free from perkinsosis when:

1. no outbreak caused by the disease agents listed in Article 3.1.5.1 has occurred within its territory for at least the previous two years;

2. no disease agent listed in Article 3.1.5.1 has been detected in any mollusc tested during operation of an official mollusc health surveillance scheme for a period of at least two years using the procedures described in the Manual.

Article 3.1.5.3.

Perkinsosis free zone

A zone may be considered free from perkinsosis when:

1. no outbreak caused by the disease agents listed in Article 3.1.5.1 has occurred within its territory for at least the previous two years;

2. no disease agent listed in Article 3.1.5.1 has been detected in any mollusc tested during operation of an official mollusc health surveillance scheme for a period of at least two years using the procedures described in the Manual (where a zone common to several countries is involved, these countries should implement harmonised and co-ordinated national disease surveillance programmes).
Article 3.1.5.4.

Perkinsosis free aquaculture establishment

A perkinsosis free aquaculture establishment may be located within a perkinsosis free country or zone or within a perkinsosis infected zone provided that:

1. it has been tested in an official mollusc health surveillance scheme for at least the previous two years using the procedures described in the Manual, without detection of any of the disease agents listed in Article 3.1.5.1, and

2. it is supplied with water by a means that ensures removal or destruction of any of the disease agents listed in Article 3.1.5.1 that may be present.

Article 3.1.5.5.

Restoration of free status

A country, a zone or an aquaculture establishment may be restored to perkinsosis free status if no disease agent listed in Article 3.1.5.1 has been detected for the last two years of a surveillance scheme using the procedures described in the Manual.

Article 3.1.5.6.

When importing live molluscs of all age groups of any susceptible host species 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 an official mollusc health surveillance scheme comprising inspection and laboratory tests on susceptible host species conducted according to the procedures described in the Manual, whether or not the place of harvest of the consignment is a country officially declared perkinsosis free.

If the place of harvest of the consignment is not a country officially declared perkinsosis free, the certificate must state whether the place of harvest of the consignment is:

1. a zone officially declared perkinsosis free, or

2. an aquaculture establishment officially declared perkinsosis free.

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

Article 3.1.5.7.

Importing countries that are officially declared perkinsosis free should only accept for importation live molluscs from exporting countries declared perkinsosis free, or from clearly defined perkinsosis free zones in countries not declared perkinsosis free.

Importing countries not regarded as perkinsosis free, but that have officially recognised perkinsosis free zones, should only import molluscs into such zones from other countries or zones that are officially declared perkinsosis free.
For aquaculture establishments officially declared perkinsosis free that exist in infected zones, the Competent Authority of the country concerned should only allow importation of molluscs from officially declared perkinsosis free countries, zones or aquaculture establishments.

Article 3.1.5.8.

Competent Authorities of importing countries should require:

for molluscs of commercial size destined for human consumption

the presentation of an international aquatic animal health certificate attesting that the molluscs listed as perkinsosis susceptible host species have as their place of harvest a country, a zone or an aquaculture establishment free from perkinsosis.

The certificate shall be in accordance with Model Certificate No. 3.

This certificate may not be required for molluscs listed as susceptible host species originating from an infected zone if they are destined:

1. directly for human consumption without any re-immersion, or
2. for storage, during a short period before consumption, in a tank located in an infected zone. The tank should be isolated from the local environment (e.g. in quarantine) to avoid the potential introduction of different strains of the pathogen.

Article 3.1.5.9.

Certificates are optional for molluscs not listed as natural or experimental perkinsosis susceptible host species, even if the molluscs originate from an infected country, zone or aquaculture establishment.
PART 4

DISEASES OF CRUSTACEANS
SECTION 4.1.

DISEASES NOTIFIABLE TO THE OIE

CHAPTER 4.1.1.

TAURA SYNDROME

Article 4.1.1.1.

For the purposes of this Code, susceptible host species for Taura syndrome are: Pacific white shrimp (Penaeus vannamei), blue shrimp (P. stylirostis) and white shrimp (P. setiferus).

Standards for diagnostic tests are described in the Manual.

Article 4.1.1.2.

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 belonging to the susceptible host species listed in Article 4.1.1.1 tested during operation of an official crustacean health surveillance scheme 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 4.1.1.6, 4.1.1.7 and 4.1.1.8.

Article 4.1.1.3.

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 crustaceans belonging to the susceptible host species listed in Article 4.1.1.1 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 Chapter 1.1.1 Definitions in this Code.
Chapter 4.1.1. Taura syndrome

Such zones must be clearly delineated on a map of the territory of the country concerned by the Competent Authority and the conditions referred to in Articles 4.1.1.6, 4.1.1.7 and 4.1.1.8 must be observed.

Article 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 4.1.1.6, 4.1.1.7 and 4.1.1.8.

Article 4.1.1.5.

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 policy or effective disease eradication measures 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 a Taura syndrome free aquaculture establishment.

Article 4.1.1.6.

When importing live crustaceans (fertilised eggs/nauplii, postlarvae, juveniles and/or broodstock) of any susceptible species, 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 procedures described in the Manual, whether or not the place of harvest of the consignment is a country officially declared Taura syndrome free.

If the place of harvest of the consignment is not a country officially declared Taura syndrome free, the certificate must state whether the place of harvest of the consignment is:

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

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

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Chapter 4.1.1. Taura syndrome

Article 4.1.1.7.

Importing countries that are officially declared Taura syndrome free should only accept for importation live crustaceans belonging to the susceptible host species listed in Article 4.1.1.1 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 that have officially recognised Taura syndrome free zones, should only import live crustaceans belonging to the susceptible host species listed in Article 4.1.1.1 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 only allow importation of live crustaceans belonging to the susceptible host species listed in Article 4.1.1.1 or fertilised eggs/nauplii from officially declared Taura syndrome free countries, zones or aquaculture establishments.

Article 4.1.1.8.

In general, the Competent Authority of a country importing dead crustaceans belonging to the susceptible host species listed in Article 4.1.1.1 and destined for human consumption should require that the consignment be accompanied by an international aquatic animal health certificate, conforming to the Model Certificate No. 5, issued by the Competent Authority in the country of origin if these crustaceans are to be imported head on.

This certificate should declare the health status of the place of harvest of the consignment in respect of Taura syndrome and the other crustacean diseases listed in this Code.
CHAPTER 4.1.2.
WHITE SPOT DISEASE

Article 4.1.2.1.

For the purpose of this Code, susceptible host species for white spot disease are: Tiger shrimp (*Penaeus monodon*), kuruma shrimp (*P. japonicus*), Fleshy prawn (*P. chinensis* [= *orientalis*]), white prawn/Indian prawn (*P. indicus*), banana prawn (*P. merguiensis*) and white shrimp (*P. setiferus*).

Standards for diagnostic tests are described in the *Manual*.

Article 4.1.2.2.

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 belonging to the susceptible host species listed in Article 4.1.2.1 tested during operation of an official crustacean health surveillance scheme 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 4.1.2.6, 4.1.2.7 and 4.1.2.8.

Article 4.1.2.3.

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 crustaceans belonging to the susceptible host species listed in Article 4.1.2.1 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 Chapter 1.1.1 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 the conditions referred to in Articles 4.1.2.6, 4.1.2.7 and 4.1.2.8 must be observed.
Article 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 4.1.2.6, 4.1.2.7 and 4.1.2.8.

Article 4.1.2.5.

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 policy or effective disease eradication measures and if WSBV 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 free status in under two years if it otherwise meets all the requirements for a white spot disease free aquaculture establishment.

Article 4.1.2.6.

When importing live crustaceans (fertilised eggs/nauplii, postlarvae, juveniles and/or broodstock) of any susceptible species, 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 procedures described in the Manual, whether or not the place of harvest of the consignment is a country officially declared white spot disease free.

If the place of harvest of the consignment is not a country officially declared white spot disease free, the certificate must state whether the place of harvest of the consignment is:

1. a zone officially declared white spot disease free, or

2. an aquaculture establishment officially declared white spot disease free

The certificate shall be in accordance with Model Certificate No. 4 given in Part 6 of this Code.
Chapter 4.1.2. White spot disease

Article 4.1.2.7.

Importing countries that are officially declared white spot disease free should only accept for importation live crustaceans belonging to the susceptible host species listed in Article 4.1.2.1 from exporting countries declared white spot disease free, or from clearly defined white spot disease free zones in countries not declared white spot disease free.

Importing countries not regarded as white spot disease free, but that have officially recognised white spot disease free zones, should only import live crustaceans belonging to the susceptible host species listed in Article 4.1.2.1 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 only allow importation of live crustaceans belonging to the susceptible host species listed in Article 4.1.2.1 or fertilised eggs/nauplii from officially declared white spot disease free countries, zones or aquaculture establishments.

Article 4.1.2.8.

In general, the Competent Authority of a country importing dead crustaceans belonging to the susceptible host species listed in Article 4.1.2.1 and destined for human consumption should require that the consignment be accompanied by an international aquatic animal health certificate conforming to the Model Certificate No. 5, issued by the Competent Authority in the country of origin if these crustaceans are to be imported head on.

This certificate should declare the health status of the place of harvest of the consignment in respect to white spot disease and other crustacean diseases listed in this Code.
CHAPTER 4.1.3.

YELLOWHEAD DISEASE

Article 4.1.3.1.

For the purposes of this Code, susceptible host species for yellowhead disease is: Tiger shrimp (*Penaeus monodon*).

Standards for diagnostic tests are described in the Manual.

Article 4.1.3.2.

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 belonging to the susceptible host species listed in Article 4.1.3.1 tested during operation of an official crustacean health surveillance scheme 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 4.1.3.6, 4.1.3.7 and 4.1.3.8.

Article 4.1.3.3.

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 crustaceans belonging to the susceptible host species listed in Article 4.1.3.1 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 Chapter 1.1.1 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 the conditions referred to in Articles 4.1.3.6, 4.1.3.7 and 4.1.3.8 must be observed.
Chapter 4.1.3. Yellowhead disease

Article 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 a 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 4.1.3.6, 4.1.3.7 and 4.1.3.8.

Article 4.1.3.5.

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 policy* or effective disease eradication measures 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 4.1.3.6.

When importing live *crustaceans* (fertilised eggs/nauplii, postlarvae, juveniles and/or broodstock) of any *susceptible species*, 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 conducted according to the procedures described in the *Manual*, whether or not the place of harvest of the consignment is a country officially declared yellowhead disease free.

If the place of harvest of the consignment is not a country officially declared yellowhead disease free, the certificate must state whether the place of harvest of the consignment is:

1. a zone officially declared yellowhead disease free, or
2. an *aquaculture establishment* officially declared yellowhead disease free.

The certificate shall be in accordance with Model Certificate No. 4 given in Part 6 of this *Code*.
Chapter 4.1.3. Yellowhead disease

Article 4.1.3.7.

Importing countries that are officially declared yellowhead disease free should only accept for importation live crustaceans belonging to the susceptible host species listed in Article 4.1.3.1 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 that have officially recognised yellowhead disease free zones, should only import live crustaceans belonging to the susceptible host species listed in Article 4.1.3.1 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 only allow importation of live crustaceans belonging to the susceptible host species listed in Article 4.1.3.1 or fertilised eggs/nauplii from officially declared yellowhead disease free countries, zones, or aquaculture establishments.

Article 4.1.3.8.

In general, the Competent Authority of a country importing dead crustaceans belonging to the susceptible host species listed in Article 4.1.3.1 and destined for human consumption should require that the consignment be accompanied by an international aquatic animal health certificate, conforming to the Model Certificate No. 5, issued by the Competent Authority in the country of origin if these crustaceans are to be imported head on.

This certificate should declare the health status of the place of harvest of the consignment in respect of yellowhead disease and the other crustacean diseases listed in this Code.
SECTION 4.2.

OTHER SIGNIFICANT DISEASES

CHAPTER 4.2.1.

BACULOVIRAL MIDGUT GLAND NECROSIS

Article 4.2.1.1.

Standards for diagnostic tests are described in the Manual.

Article 4.2.1.2.

Competent Authorities of Importing countries may require:

for live postlarvae, juveniles and broodstock

the presentation of an international aquatic animal health certificate attesting that:

1. the shrimps showed no sign of baculoviral midgut gland necrosis (BMN) on the day of shipment;

2. randomly selected shrimps showed no sign of BMN using wet-mount and histopathological techniques.
CHAPTER 4.2.2.

NUCLEAR POLYHEDROSIS BACULOVIROSES
(Baculovirus penaei and
Penaeus monodon-type baculovirus)

Article 4.2.2.1.

Standards for diagnostic tests are described in the Manual.

Article 4.2.2.2.

Competent Authorities of Importing countries may require:

for live postlarvae, juveniles and broodstock

the presentation of an international aquatic animal health certificate attesting that:

1. the shrimps showed no sign of Baculovirus penaei (BP) or Penaeus monodon-type baculovirus infection by the examination of faeces;

2. randomly selected postlarvae or juveniles showed no BP or Penaeus monodon-type baculovirus infection using wet-mount and histopathological techniques.
CHAPTER 4.2.3.

INFECTIOUS HYPODERMAL AND
HAEMATOPOIETIC NECROSIS

Article 4.2.3.1.

Standards for diagnostic tests are described in the Manual.

Article 4.2.3.2.

Competent Authorities of Importing countries may require:

for live postlarvae, juveniles and broodstock

the presentation of an international aquatic animal health certificate attesting that:

1. the shrimps showed no sign of infectious hypodermal and haematopoietic necrosis (IHHN) on the day of shipment;

2. randomly selected shrimps showed no sign of IHHN using wet-mount and histopathological techniques.
CHAPTER 4.2.4.

CRAYFISH PLAGUE
(Aphanomyces astaci)

Article 4.2.4.1.

Standards for diagnostic tests are described in the Manual.

Article 4.2.4.2.

Competent Authorities in countries or zones where crayfish plague has never been reported should prohibit the importation of live crayfish (other than for direct human consumption) from countries or zones where the disease has been reported or where its absence cannot be guaranteed.
CHAPTER 4.2.5.

SPAWNER-ISOLATED MORTALITY VIRUS DISEASE

Article 4.2.5.1.

Standards for diagnostic tests are described in the Manual.

Article 4.2.5.2.

Competent Authorities of Importing countries may require:

for live postlarvae, juveniles and broodstock

the presentation of an international aquatic animal health certificate attesting that:

1. the crustaceans showed no sign of spawner-isolated mortality virus disease on the day of shipment;

2. randomly selected crustaceans showed no sign of spawner-isolated mortality virus disease using electron microscopy (or in situ hybridisation by gene probe or polymerase chain reaction, if available).
PART 5

HEALTH CONTROL AND HYGIENE
SECTION 5.1.

BLOOD SAMPLING AND VACCINATION

APPENDIX 5.1.1.

HYGIENIC PRECAUTIONS

Article 5.1.1.1.

The use of needles and syringes in routine veterinary work in aquaculture establishments for procedures such as blood sampling and vaccination should be carried out in a highly professional manner, ensuring that appropriate hygienic precautions are observed.

The intraperitoneal use of unsterilised needles or syringes in aquatic animals should be professionally unacceptable.

The use of unsterilised or contaminated equipment or products is especially unacceptable between different aquaculture establishments and for live aquatic animals that are to be exported. It is a requirement, particularly applicable to aquatic animals that are to be exported live, that necessary care be taken to ensure the sterility of the equipment and products used.

The range of organisms capable of being transmitted includes viruses, bacteria and protozoa. The list of infectious agents transmissible in the context of this Appendix continues to expand for all species of aquatic animals.
SECTION 5.2.
DESTRUCTION OF PATHOGENS

APPENDIX 5.2.1.
DISINFECTION OF FISH EGGS WITH IODINE

Article 5.2.1.1.

Introduction

Although generally effective for decontamination of egg surfaces, the use of iodophor disinfectants cannot be relied upon to prevent vertical transmission of some bacterial (e.g. Renibacterium salmoninarum) and viral pathogens (e.g. infectious pancreatic necrosis virus) that may be present within the egg.

Article 5.2.1.2.

Conditions of use

The pH of the solutions of the iodophor products must be between 6 and 8. At a pH of 6 or less, the toxicity for eggs increases, and at 8 or more, the antiseptic efficacy decreases. It is therefore essential to control the pH, and 100 mg/litre of NaHCO₃ must be added to water with a low alkalinity value. It is recommended that the eggs be rinsed in fresh water before and after disinfection, or that the iodine be neutralised with sodium thiosulfate, and that water free from organic matter be used to prepare the iodophor solution. Generous amounts of this solution should be used and the solution should be replaced when it turns pale yellow and before the colour disappears. One litre of solution at a concentration of 100 mg/litre disinfectant will disinfect 2000 salmonid eggs.

Finally, in the case of eggs that have been transported, the packaging should also be disinfected or, better still, destroyed in a manner that will not pose a contamination or health risk to water and/or other fish at the end destination.

Certain precautions must be taken prior to the use of iodophors as products on the market contain a variable quantity of detergents that can give rise to toxic effects. It is therefore recommended that preliminary tests be carried out among the products on the market. It is advisable to build up stocks of the most satisfactory product, but expiry dates must be considered.

Disinfection of eggs with iodine can be carried out for the various fish species but it is most commonly used for fish of the Salmonidae family. For the other species, preliminary tests should be conducted to determine when and at what concentration disinfection can be carried out safely.
Appendix 5.2.1. Disinfection of fish eggs

Article 5.2.1.3.

**Efficacy limits**

Disinfection of eggs with iodine is ineffective when trying to avoid vertical transmission of infectious pancreatic necrosis, renibacteriosis and even infectious haematopoietic necrosis, for which this method was recommended initially. The ineffectiveness of iodine has been proved by epidemiological surveys and laboratory tests.

Article 5.2.1.4.

**Neutralisation of halogens**

See Appendix 5.2.2.
Appendix 5.2.2.

Disinfection of Fish Farms

Article 5.2.2.1.

General principles

The choice of disinfection procedures depends on the size, type and nature of the materials and sites to be disinfected. With the exception of the skin of personnel and eggs, which must be disinfected with non-corrosive products, the surfaces to be disinfected consist of fabric or woven material (clothes, nets), hard surfaces (plastic, cement) or permeable materials (earth, gravel). Disinfection is more difficult for permeable surfaces and requires more time. Table 1 indicates the methods to be used on the basis of these criteria.

The use of chemical methods entails the implementation of measures to protect personnel. It is first necessary to protect the skin and eyes from contact with dangerous substances by using impermeable clothing, boots, glasses and a hat. The respiratory tract must be protected by a mask and the operator must not touch any food without having thoroughly washed his/her hands. Finally, the products must be stored in such a way as not to present direct or indirect danger to animal/fish or human life.

The material must be thoroughly cleaned before being disinfected.

Article 5.2.2.2.

Disinfection

See Table 1.

Table 1. Disinfection and method of use

<table>
<thead>
<tr>
<th>Processes</th>
<th>Indications</th>
<th>Method of use *</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desiccation, light</td>
<td>Fish pathogens on earthen bottoms</td>
<td>Dry for 3 months at an average temperature of 18°C</td>
<td>Drying period can be reduced by the use of a chemical disinfectant</td>
</tr>
<tr>
<td>Dry heat</td>
<td>Fish pathogens on concrete, stone, iron, ceramic surfaces</td>
<td>Flame-blower, blow-lamp</td>
<td></td>
</tr>
<tr>
<td>Damp heat</td>
<td>Fish pathogens in transportation vehicle tanks</td>
<td>Steam at 100°C or more for 5 minutes</td>
<td></td>
</tr>
</tbody>
</table>
### Table 1 (continued). Disinfection and method of use

<table>
<thead>
<tr>
<th>Processes</th>
<th>Indications</th>
<th>Method of use *</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultra-violet rays</td>
<td>Viruses and bacteria, <em>M. xanthorhizae</em> spores in water, Infectious</td>
<td>10 mJ/cm², 35 mJ/cm², 125–200 mJ/cm²</td>
<td>Minimum lethal dose</td>
</tr>
<tr>
<td></td>
<td>pancreatic necrosis (IPN) and nodavirus (VNN/VER) in water</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemical</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quartenary</td>
<td>Virus, bacteria, hands, Gill bacteria, plastic surfaces</td>
<td>1 mg/litre for 1 minute, 2 mg/litre for 15</td>
<td>IPN virus resistant</td>
</tr>
<tr>
<td>ammonia</td>
<td></td>
<td>minutes</td>
<td></td>
</tr>
<tr>
<td>Calcium oxide</td>
<td>Fish pathogens on dried earth-base</td>
<td>0.5 kg/m² for 4 weeks</td>
<td>Replace in water and empty disinfected pools keeping the effluents at</td>
</tr>
<tr>
<td>Calcium (hypochlorite)</td>
<td></td>
<td></td>
<td>pH &lt;8.5</td>
</tr>
<tr>
<td>Calcium cyanamide</td>
<td>Spores on earthen bottoms</td>
<td>3000 kg/ha on dry surfaces; leave in contact</td>
<td>Can be neutralised with sodium thiosulfate. See special recommendations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>for 1 month</td>
<td></td>
</tr>
<tr>
<td>Formalin</td>
<td>Fish pathogens in sealed premises</td>
<td>Released from formogenic substances, generally</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>trioxymethylene. Comply with instructions</td>
<td></td>
</tr>
<tr>
<td>Iodine (iodophors)</td>
<td>Bacteria, viruses, Hands, smooth surfaces, Eyed eggs, Gametes during</td>
<td>&gt;200 mg iodine/litre a few seconds, 100 mg</td>
<td>See special recommendations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>iodine/litre for 10 minutes, 25 mg iodine/litre</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>iodine/litre for several hours, 200 mg iodine/litre</td>
<td></td>
</tr>
<tr>
<td>Ozone</td>
<td>Sterilisation of water, fish pathogens,</td>
<td>0.2–1 mg/litre for 3 minutes</td>
<td>Costly</td>
</tr>
</tbody>
</table>

1 Viral nervous necrosis /Viral encephalopathy and retinopathy
Table 1 (continued). Disinfection and method of use

<table>
<thead>
<tr>
<th>Processes</th>
<th>Indications</th>
<th>Method of use *</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sodium(^a) (hydroxide)</td>
<td>Fish pathogens on resistant surfaces with cracks</td>
<td>Mixture: Sodium hydroxide, 100 g Teepol(^\circ), 10 g Calcium hydroxide, 500 g Water, 10 litres Spray, 1 litre/10 m(^2) Leave for 48 hours</td>
<td>The most active disinfectant Ca(OH)(_2) stains the surfaces treated; Teepol(^\circ) is a tensio-active agent. Turn water on, checking pH</td>
</tr>
<tr>
<td>Sodium(^a) (hypochlorite)</td>
<td>Bacteria and viruses on all clean surfaces and in water</td>
<td>30 mg available chlorine/litre. Leave to inactivate for a few days or neutralise with Na thiosulfate after 3 hours</td>
<td></td>
</tr>
<tr>
<td>Sodium(^a) (hypochlorite)</td>
<td>Nets, boots and clothing</td>
<td>200 mg available chlorine/litre for several minutes</td>
<td></td>
</tr>
<tr>
<td>Sodium(^a) (hypochlorite)</td>
<td>Hands</td>
<td>Rinse with clean water or neutralise with thiosulfate</td>
<td></td>
</tr>
</tbody>
</table>

\(^a\) Dangerous \(\Box\). See precautions indicated in general recommendations

* The concentrations indicated are those for the active substance. NB: The chemicals must be approved for the prescribed use and used according to the manufacturer’s specifications.

Article 5.2.2.3.

Neutralisation of halogens

Chlorine and iodine are highly toxic for aquatic animals and, in order to prevent serious accidents that could result from a manipulation error, it is recommended to neutralise these products with sodium thiosulfate \(\Box\) five moles of thiosulfate neutralise four moles of chlorine. The molecular proportions are the same for iodine.

Accordingly, in order to inactivate chlorine, the amount of thiosulfate should be 2.85 times the amount of chlorine (in grams):

\[
\text{Number of grams of thiosulfate} = 2.85 \times \text{number of grams of chlorine.}
\]

For iodine, the amount of thiosulfate should be 0.78 times the amount of iodine in grams:

\[
\text{Number of grams of thiosulfate} = 0.78 \times \text{number of grams of iodine.}
\]
It is also possible to prepare a thiosulfate solution at 1% by weight, in which case the neutralising volumes will be as follows (in ml):

1. for chlorine:

   \[28.5 \times \frac{\text{number of litres of the disinfecting solution} \times \text{concentration mg/litre}}{100}\]

2. for iodine:

   it is necessary to multiply by 7.8 instead of by 28.5.
APPENDIX 5.2.3.

DISINFECTION OF MOLLUSC FARMS

Article 5.2.3.1.

See Appendix 5.2.2 for general information on disinfection.

Article 5.2.3.2.

General principles

The general principles pertaining to disinfection of mollusc farms (hatcheries, holding facilities) involve the application of chemical treatments in sufficient concentrations, and for sufficient periods, to kill all pathogenic organisms that would otherwise gain access to surrounding water systems. As the inherent toxicity of disinfectants prohibits safe use in open water, or open water systems, disinfection can only reasonably be applied to hatcheries and tank holding facilities, and, as a rule, all disinfectants must be neutralised before release into the surrounding environment. In addition, as mollusc farms are generally seawater based, compounds produced during seawater disinfection (residual oxidants) must also be disposed of carefully.

Disinfection of eggs and larval stages is not considered practical for most molluscan systems. In addition, there is little information on specific disinfection procedures for pathogens of molluscs (i.e. Marteilia spp., Haplosporidium spp., Bonamia spp., Perkinsus spp., iridovirus and pathogenic levels of marine microbes) or seawater. Therefore, disinfectants and concentrations are based on related pathogens or seawater sterilisation. Three stages of disinfection can be applied to hatcheries:

1. pretreatment of influent water, e.g. filters (1.0 and 0.22 µm) or chemical disinfection (see Article 5.2.3.3) = protection of stocks of molluscs;
2. treatment within the facilities (especially recycling systems) = protection of stocks of molluscs;
3. treatment of effluent water = protection of the environment.

Article 5.2.3.3.

Disinfectants* Pipelines and tanks

Routine disinfection of pipelines and tanks is highly recommended; the frequency of disinfection will vary according to the turnover of stocks of molluscs. High concentrations of molluscs should be rotated between disinfected tanks as often as practical and/or kept in seawater that has been disinfected with ozone (see point 1 of Article 5.2.3.4) or chlorine (see point 2 of Article 5.2.3.4) and subsequently neutralised. Each new batch of molluscs introduced into a facility should be placed in predisinfected tanks.

* The products specified have proven satisfactory for the purposes indicated; this does not mean that other products may not be equally satisfactory.
Appendix 5.2.3. Disinfection of mollusc farms

As the presence of organic matter will reduce the disinfection capacity of most disinfectants, filtering influent water (see point 1 of Article 5.2.3.2) is recommended. In addition, all surfaces must be thoroughly cleaned prior to disinfection. The detergent used must be compatible with the disinfectant and both must be compatible with the surface being treated (e.g. iodophor solutions are generally acidic so cannot be used on concrete, which is alkaline). Ensure that the waste produced from washing is disinfected before disposal. Complete coverage of the surfaces is required, e.g. using a high pressure spray or soak. Wear appropriate protective clothing when working with any disinfectant (see Article 5.2.2.1).

Regular air- or heat-drying of pipelines (daily), tanks and other equipment (e.g. algal culture carboys), in addition to disinfection of their surfaces, is also recommended (especially for disease outbreaks of unidentified aetiology).

1. Chlorine is usually applied as sodium hypochlorite (Chlorox®, household bleach, etc.). Fill all pipelines with 50 mg chlorine/litre (= 50 parts per million [ppm]). Allow an exposure time of at least 30 minutes before flushing with clean seawater. This solution is effective against most microbial agents as well as labyrinthulid protozoans. Chlorinated seawater must be neutralised prior to release from the holding facility. Optimal neutralisation is achieved by passage through activated charcoal (removes excess chlorine and chloramines). Reducing agents such as sodium thiosulfate or aeration (which do not remove toxic chloramines) may also be used.

2. Iodophors are generally applied as alkaline solutions (Wescodyne®, Betadine®) at 200–250 mg iodine/litre (ppm) with a contact time of at least 10 minutes.

NOTE: Iodophors are not effective against certain protozoans in suspension, e.g. over 1000 mg iodine/litre is tolerated by Labyrinthuloides haliotidis of abalone. Iodophors may be effective against protozoan parasites following air or heat drying of tank surfaces and pipelines.

Disinfectants of effluent water

1. Ozone has been used successfully in controlling the microbial content of effluent water from quarantine facilities. Residual compounds, formed as a result of the interaction of ozone with seawater (residual oxidants), at levels of 0.08–1.0 mg/litre are considered sufficient to significantly reduce live microbes (principally bacteria).

NOTE: The measurement of residual ozone in seawater is problematic due to the rapid and continuous formation of oxidant products in seawater. Residuals formed between ozone and seawater (hypobromite, bromine or hypobromous acid) are toxic to oyster larvae (and possibly other mollusc larvae) and should be removed using a charcoal filter before passing through/out of the mollusc facility. UV treatment of seawater post-ozonation may be required for complete sterilisation, e.g. for quarantine.

2. Chlorine administered as sodium hypochlorite at a concentration of 25 mg chlorine/litre is effective against certain protozoans (L. haliotidis); however, 50 mg chlorine/litre is recommended for complete microbial sterilisation (as for pipelines and tanks – see point 1 of Article 5.2.3.3). Higher concentrations may be used under certain conditions (e.g. quarantine); however, these require proportionately greater neutralisation treatments and exhaust systems to deal with the toxic fumes produced.

3. Iodophors are not as effective as the above two treatments for killing protozoans.
Appendix 5.2.3. Disinfection of mollusc farms

Article 5.2.3.5.

**Disinfectants and clothing and equipment**

Clean surfaces with detergent and disinfectants prior to proper disinfection.

1. Iodophors (e.g. Wescodyne®, Betadine®) at 200±250 mg iodine/litre can be used as a footbath. 
   *NOTE: Iodophors will stain clothing.*

2. Chlorine (household bleach solution at 50 mg chlorine/litre) is also an effective footbath or equipment wash.

3. Sodium hydroxide (1% NaOH + 0.1% Teepol® or other detergent) makes an effective footbath for rubber boots. 
   *NOTE: Do NOT use for dress shoes/boots.*

Article 5.2.3.6.

**Special recommendations**

1. Both chlorine and ozone produce long-lived residual oxidant compounds in seawater. Seawater at 35 parts per thousand (ppt) salinity contains 60 ppm bromide ion, which produces hypobromite in the presence of ozone. Disinfected artificial seawater, at the same salinity, produces bromine and hypobromous acid. As these, along with other residual compounds, are toxic to larval oysters (and possibly other molluscs), treated seawater must be passed through an activated charcoal filter before being used for live mollusc larvae.

   Alternative protocols for halogen neutralisation involve treatment with sodium or potassium thiosulfate (see Article 5.2.2.3).

2. Monitoring of residual oxidants must be carried out regularly, especially where temperature fluctuations occur. As residual ozone cannot be measured accurately in seawater, alternative monitoring protocols must be installed, such as a feedback loop.

   Exhaust systems should also be in place to remove toxic fumes (produced during disinfection) from enclosed work areas. 
   **Ensure compliance with local atmospheric regulations when discharging toxic fumes.**

3. The following management practices can be used to reduce opportunistic pathogen proliferation within a mollusc hatchery or holding facility:
   a) maintain pathogen-free algal stocks and cultures;
   b) use appropriate water filtration, regular disinfection of tanks, pipes and equipment, and footbaths, and water changes;
   c) isolate infected stocks and associated equipment at the first sign of disease;
   d) discard infected stock and sterilise equipment;
   e) identify the source of infection within the holding facility to prevent further infection (algal stocks, seawater influent system, broodstock, larval stock).
APPENDIX 5.2.4.

DISINFECTION OF CRUSTACEAN FARMS

Article 5.2.4.1.

See Appendix 5.2.2 for general information on disinfection.

Article 5.2.4.2.

1. Decontamination of virus in ponds and in material may be achieved by treating the surfaces with 50 parts per million (ppm) sodium or calcium hypochloride.

2. Prevention of monodon baculovirus and *Baculovirus penaei* infections in hatcheries may be achieved by prior washing of nauplii or fertilised eggs with formalin, iodophore and filtered clean seawater as described in the following figure.

| a) Nauplii* | Collection of nauplii using plankton net | Running sea water for 1½ minutes | Iodophore 0.1 ppm iodine for 1 minute | Formalin 400 ppm for 30 seconds to 1 minute | Hatchery ponds |
| b) Fertilised eggs** | Collection of fertilised eggs | Running sea water for 1½ minutes | Iodophore 0.1 ppm iodine for 1 minute | Running sea water for 3½ minutes | Hatchery ponds |

* Nauplii are much easier to collect than are fertilised eggs in hatcheries.

** Fertilised eggs are more sensitive than nauplii to formalin.

3. Prevention of infection by infectious hypodermal and hematopoietic necrosis virus may be achieved by using specific pathogen free crustacean populations. Although this approach has proven to be useful, it is still in the experimental phase.
PART 6

MODEL INTERNATIONAL AQUATIC ANIMAL HEALTH CERTIFICATES
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:............................................................................................................................
   Latin name:..........................................................................................................................
   Common name:.....................................................................................................................

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

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

II. Place of 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 live fish and/or fish larvae, fish gametes, ova and fertilised eggs in the present consignment 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 Diagnostic Manual for Aquatic Animal Diseases 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 Code, as identified in the table below.
<table>
<thead>
<tr>
<th>International aquatic animal health certificate for live fish and gametes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Country</strong></td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>Epizootic haematopoietic necrosis</td>
</tr>
<tr>
<td>Infectious haematopoietic necrosis</td>
</tr>
<tr>
<td><em>Oncorhynchus masou</em> virus disease</td>
</tr>
<tr>
<td>Spring viraemia of carp</td>
</tr>
<tr>
<td>Viral haemorrhagic septicaemia</td>
</tr>
<tr>
<td>And any of the following if required by the importing country</td>
</tr>
<tr>
<td>Channel catfish virus disease</td>
</tr>
<tr>
<td>Viral encephalopathy and retinopathy</td>
</tr>
<tr>
<td>Infectious pancreatic necrosis</td>
</tr>
<tr>
<td>Infectious salmon anaemia</td>
</tr>
<tr>
<td>Epizootic ulcerative syndrome</td>
</tr>
<tr>
<td>Bacterial kidney disease (<em>Renibacterium salmoninarum</em>)</td>
</tr>
<tr>
<td>Enteric septicaemia of catfish (<em>Edwardsiella ictaluri</em>)</td>
</tr>
<tr>
<td>Piscirickettsiosis (<em>Piscirickettsia salmonis</em>)</td>
</tr>
<tr>
<td>Gyrodactylosis (<em>Gyrodactylus salaris</em>)</td>
</tr>
<tr>
<td>Red sea bream iridoviral disease</td>
</tr>
<tr>
<td>White sturgeon iridoviral disease</td>
</tr>
</tbody>
</table>

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 UNEVISCERATED FISH
DEAD UNEVIScerATED FISH

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

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

II. Place of 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 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 Diagnostic Manual for Aquatic Animal Diseases 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 Code, as identified in the table below.
<table>
<thead>
<tr>
<th>Disease/Condition</th>
<th>Country</th>
<th>Zone</th>
<th>Aquaculture establishment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epizootic haematopoietic necrosis</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Infectious haematopoietic necrosis</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td><em>Oncorhynchus masou</em> virus disease</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Spring viraemia of carp</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Viral haemorrhagic septicaemia</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>And any of the following if required by the importing country</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Channel catfish virus disease</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Viral encephalopathy and retinopathy</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Infectious pancreatic necrosis</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Infectious salmon anaemia</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Epizootic ulcerative syndrome</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Bacterial kidney disease <em>(Renibacterium salmoninarum)</em></td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Enteric septicaemia of catfish <em>(Edwardsiella ictaluri)</em></td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Piscirickettsiosis <em>(Piscirickettsia salmonis)</em></td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Gyrodactylosis <em>(Gyrodactylus salaris)</em></td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Red sea bream iridoviral disease</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>White sturgeon iridoviral disease</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

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

Stamp:

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

Signature: ..................................................................................................................
Model Certificate No. 3.

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

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) Age: ☐ Gametes  ☐ Unknown  ☐ >24 months  ☐ 12≤<24 months
   ☐ 0≤<11 months  ☐ larvae

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

II. Origin of consignment

1) Country: ............................................................................................................................

2) Zone: .................................................................................................................................

3) Aquaculture establishment/Zone:
   Name: ...............................................................................................................................
   Location: ............................................................................................................................

III. Place of harvest (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 have as their place of harvest: ☐ Country, ☐ Zone, ☐ Aquaculture establishment that is subjected to an official mollusc health surveillance scheme according to the procedures described in the OIE Diagnostic Manual for Aquatic Animal Diseases, 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 the Code, as identified in the table below.
### International aquatic animal health certificate for live molluscs and gametes

<table>
<thead>
<tr>
<th></th>
<th>Country</th>
<th>Zone</th>
<th>Aquaculture establishment</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td><em>Bonamia ostreae</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Bonamia sp.</em></td>
<td></td>
<td></td>
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</tr>
<tr>
<td><em>Haplosporidium costale</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Haplosporidium nelsoni</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Marteilia refringens</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Marteilia sydneyi</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Mikrocytos mackini</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Mikrocytos roughleyi</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Perkinsus marinus</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Perkinsus olseni</em></td>
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</tr>
</tbody>
</table>

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:
   Latin name:......................................................................................................................
   Common name:..................................................................................................................

2) Age:  ☐ Fertilised eggs or nauplii  ☐ Postlarvae  ☐ Juveniles  ☐ Broodstock

3) Total weight (kg):........................................................................................................
   OR
   Number (\(\times\) 1000):................................................................................................

II. Place of harvest

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 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 Diagnostic Manual for Aquatic Animal Diseases, and that the Country, Zone, or Aquaculture establishment identified in Sections II and III above is/are officially recognised as being free from the diseases identified in the table below.

<table>
<thead>
<tr>
<th>Country</th>
<th>Zone</th>
<th>Aquaculture establishment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

International Aquatic Animal Health Code 2001

148
<table>
<thead>
<tr>
<th>Disease</th>
<th>Exporting country</th>
<th>Competent Authority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taura syndrome</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White spot disease</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yellowhead disease</td>
<td></td>
<td></td>
</tr>
<tr>
<td>And any of the following if required by the importing country</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baculoviral midgut gland necrosis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nuclear polyhedrosis baculovirosis (Baculovirus penaei and Penaeus monodon-type baculovirus)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infectious hypodermal and haematopoietic necrosis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crayfish plague (Aphanomyces astaci)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spawner-isolated mortality virus disease</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

IMPORTANT NOTE: This certificate must be completed no more that 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:
   Latin name:........................................................................................................................
   Common name:..................................................................................................................

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

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

II. Place of harvest

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 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 Diagnostic Manual for Aquatic Animal Diseases, and that the Country, Zone, or Aquaculture establishment identified in Sections II and III above is/are officially recognised as being free from the diseases 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.
**International aquatic animal health certificate for dead crustaceans**

<table>
<thead>
<tr>
<th></th>
<th>Country</th>
<th>Zone</th>
<th>Aquaculture establishment</th>
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<tbody>
<tr>
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</tr>
<tr>
<td>Taura syndrome</td>
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</tr>
<tr>
<td>White spot disease</td>
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<tr>
<td>Yellowhead disease</td>
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<tr>
<td>And any of the following if required by the importing country</td>
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<tr>
<td>Baculoviral midgut gland necrosis</td>
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<tr>
<td>Nuclear polyhedrosis baculoviroses (Baculovirus penaei and Penaeus monodon-type baculovirus)</td>
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</tr>
<tr>
<td>Infectious hypodermal and haematopoietic necrosis</td>
<td></td>
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<tr>
<td>Crayfish plague (Aphanomyces astaci)</td>
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<tr>
<td>Spawner-isolated mortality virus disease</td>
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Exporting country:..................................................................................................................................
Competent Authority:..............................................................................................................................

Stamp:

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

Signature:...........................................................................................

**IMPORTANT NOTE:** This certificate must be completed no more that three days prior to shipment.
**ALPHABETICAL LIST OF DISEASES AND DISEASE AGENTS COVERED IN THIS CODE**

<table>
<thead>
<tr>
<th>Disease/disease agent</th>
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<tbody>
<tr>
<td>Aphanomyces astaci</td>
<td>116</td>
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<tr>
<td>Bacterial kidney disease</td>
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<tr>
<td>Baculoviral midgut gland necrosis</td>
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<td>Baculovirus penaei</td>
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<td>Enteric septicaemia of catfish</td>
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<td>Epizootic haematopoietic necrosis</td>
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<td>Epizootic ulcerative syndrome</td>
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<td>Haplosporidiosis</td>
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<td>Haplosporidium nelsoni</td>
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<td>Infectious haematopoietic necrosis</td>
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<td>Infectious salmon anaemia</td>
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<td>Gyrodactylus salaris</td>
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<td><em>Marteilia refringens</em></td>
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<td><em>Marteilia sydneyi</em></td>
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<tr>
<td><em>Mikrocytos roughleyi</em></td>
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<td><em>Penaeus monodon</em>-type baculovirus</td>
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<td><em>Perkinsus marinus</em></td>
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<td>Spring viraemia of carp</td>
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<td><strong>Taura syndrome</strong></td>
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<tr>
<td><strong>Viral encephalopathy and retinopathy</strong></td>
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<td>Viral haemorrhagic septicaemia</td>
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<tr>
<td>White sturgeon iridoviral disease</td>
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<td><strong>Yellowhead disease</strong></td>
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