

CHAPTER 10.X.

INFECTION WITH SALMONID ALPHAVIRUS

Article 10.X.1.

General provisions

For the purposes of the *Aquatic Code*, infection with *Salmonid alphavirus* (SAV) means *infection* with any subtype of SAV of the genus *Alphavirus* of the family *Togaviridae*.

Information on methods for diagnostic tests is provided in the *Aquatic Manual*.

Article 10.X.2.

Scope

The recommendations in this chapter apply to: Atlantic salmon (*Salmo salar*), brown trout (*S. trutta*) and rainbow trout (*Onchorynchus mykiss*). These recommendations also apply to any other *susceptible species* referred to in the *Aquatic Manual* when traded internationally.

Article 10.X.3.

Importation or transit of aquatic animals and aquatic animal products for any purpose from a country, zone or compartment not declared free from infection with salmonid alphavirus

- 1) *Competent Authorities* should not require any conditions related to infection with SAV, regardless of the SAV status of the *exporting country, zone or compartment* when authorising the importation or transit of the following *aquatic animals* and *aquatic animal products* from the species referred to in Article 10.X.2. intended for any purpose and complying with Article 5.4.1.:
 - [a] heat sterilised, hermetically sealed fish products (i.e. a heat treatment at 121°C for at least 3.6 minutes or any time/temperature equivalent);
 - b) pasteurised fish products that have been subjected to a heat treatment at 90°C for at least 10 minutes (or to any time/temperature equivalent which has been demonstrated to inactivate SAV);
 - c) mechanically dried, eviscerated fish (i.e. a heat treatment at 100°C for 30 minutes or any time/temperature equivalent which has been demonstrated to inactivate SAV);
 - d) fish oil;
 - e) fish *meal*; and
 - f) fish skin leather] under study
- 2) When authorising the importation or transit of *aquatic animals* and *aquatic animal products* of a species referred to in Article 10.X.2., other than those referred to in point 1 of Article 10.X.3., *Competent Authorities* should require the conditions prescribed in Articles 10.X.7. to 10.X.12. relevant to the SAV status of the *exporting country, zone or compartment*.
- 3) When considering the importation or transit of *aquatic animals* and *aquatic animal products* from an *exporting country, zone or compartment* not declared free from infection with SAV of a species not covered in Article 10.X.2. but which could reasonably be expected to pose a *risk* of transmission for SAV, *Competent Authorities* should conduct a *risk analysis* in accordance with the recommendations in the *Aquatic Code*. The *exporting country* should be informed of the outcome of this assessment.

Article 10.X.4.

Country free from infection with Salmonid alphavirus

A country may make a *self-declaration of freedom* from infection with SAV if it meets the conditions in points 1, 2, 3 or 4 below.

If a country shares a *zone* with one or more other countries, it can only make a *self-declaration of freedom* from infection with SAV if all the areas covered by the shared water are declared countries or *zones* free from infection SAV (see Article 10.X.5.).

- 1) A country where none of the *susceptible species* is present may make a *self-declaration of freedom* from infection with SAV when *basic biosecurity conditions* have been continuously met in the country for at least the past two years.

OR

- 2) A country where the species referred to in Article 10.X.2. are present but there has been no observed occurrence of infection SAV for at least the past ten years despite conditions that are conducive to clinical expression, as described in the corresponding chapter of the *Aquatic Manual*, may make a *self-declaration of freedom* from infection with SAV when *basic biosecurity conditions* have been continuously met in the country for at least the past ten years.

OR

- 3) A country where the disease status prior to *targeted surveillance* was unknown may make a *self-declaration of freedom* from infection with SAV when:
 - a) *basic biosecurity conditions* have been continuously met for at least the past two years; and
 - b) *targeted surveillance*, as described in Chapter 1.4., has been in place for at least the last two years without detection of infection with SAV.

OR

- 4) A country that has made a *self-declaration of freedom* from infection with SAV but in which the disease is subsequently detected may make a *self-declaration of freedom* from infection with SAV again when the following conditions have been met:
 - a) on detection of SAV, the affected area was declared an *infected zone* and a *protection zone* was established; and
 - b) infected populations have been destroyed or removed from the *infected zone* by means that minimise the *risk* of further spread of the disease, and the appropriate *disinfection* procedures (see *Aquatic Manual*) have been completed; and
 - c) *targeted surveillance*, as described in Chapter 1.4., has been in place for at least the last two years without detection of SAV; and
 - d) previously existing *basic biosecurity conditions* have been reviewed and modified as necessary and have continuously been in place since eradication of the *disease*.

In the meantime, part of the non-affected area may be declared a free *zone* provided that such part meets the conditions in point 3 of Article 10.X.7.

Article 10.X.5.

Zone or compartment free from infection with salmonid alphavirus

In this article, all statements refer to a *zone* or *compartment* free from infection with SAV.

A *zone* or *compartment* within the *territory* of one or more countries not declared free from infection with SAV may be declared free by the *Competent Authority(ies)* of the country(ies) concerned if the *zone* or *compartment* meets the conditions referred to in points 1, 2, 3 or 4 below.

- 1) A *zone* or *compartment* where none of the *susceptible species* is present may be declared free from infection with SAV when *basic biosecurity conditions* have been continuously met in the *zone* or *compartment* for at least the past two years.

OR

- 2) A *zone* or *compartment* where the species referred to in Article 10.X.2. are present but there has been no observed occurrence of infection with SAV for at least the past ten years despite conditions that are conducive to its clinical expression, as described in the corresponding chapter of the *Aquatic Manual*, may be declared free from infection with SAV when *basic biosecurity conditions* have been continuously met in the *zone* or *compartment* for at least the past ten years.

OR

- 3) A *zone* or *compartment* where the disease status prior to *targeted surveillance* was unknown may be declared free from infection with SAV when:
 - a) *basic biosecurity conditions* have been continuously met for at least the past two years; and
 - b) *targeted surveillance*, as described in Chapter 1.4., has been in place for at least the last two years without detection of infection with SAV.

OR

- 4) A *zone* previously declared free from infection with SAV but in which infection with SAV is detected may be declared free from infection with SAV again when the following conditions have been met:
 - a) on detection of infection with SAV, the affected area was declared an *infected zone* and a *protection zone* was established; and
 - b) infected populations have been destroyed or removed from the *infected zone* by means that minimise the *risk* of further spread of SAV, and the appropriate *disinfection* procedures (see *Aquatic Manual*) have been completed; and
 - c) *targeted surveillance*, as described in Chapter 1.4., has been in place for at least the last two years without detection of infection with SAV; and
 - d) previously existing *basic biosecurity conditions* have been reviewed and modified as necessary and have continuously been in place since eradication of the *disease*.

Article 10.X.6.

Maintenance of free status for infection with salmonid alphavirus

A country, *zone* or *compartment* that is declared free from infection with SAV following the provisions of points 1 or 2 of Articles 10.X.4. or 10.X.5. (as relevant) may maintain its status as free from infection with SAV provided that *basic biosecurity conditions* are continuously maintained.

A country, *zone* or *compartment* that is declared free from infection with SAV following the provisions of point 3 of Articles 10.X.4. or 10.X.5. (as relevant) may discontinue *targeted surveillance* and maintain its free status provided that conditions that are conducive to clinical expression, as described in the corresponding chapter of the *Aquatic Manual*, exist and *basic biosecurity conditions* are continuously maintained.

However, for declared free *zones* or *compartments* in an infected country and in all cases where conditions are not conducive to clinical expression, *targeted surveillance* needs to be continued at a level determined by the *Aquatic Animal Health Service* on the basis of the likelihood of *infection*.

Article 10.X.7.

Importation of live aquatic animals from a country, zone or compartment declared free from infection with salmonid alphavirus

When importing live *aquatic animals* of the species referred to in Article 10.X.2. from a country, zone or compartment declared free from infection with SAV, the *Competent Authority* of the *importing country* should require an *international aquatic animal health certificate* issued by the *Competent Authority* of the *exporting country* or a *certifying official* approved by the *importing country* certifying that, on the basis of the procedures described in Articles 10.X.4. or 10.X.5. (as applicable) and 10.X.6., the place of production of the *aquatic animal* is a country, zone or compartment declared free from infection with SAV.

The *certificate* should be in accordance with the Model Certificate in Chapter 5.11. This Article does not apply to *commodities* referred to in point 1 of Article 10.X.3.

Article 10.X.8.

Importation of live aquatic animals for aquaculture from a country, zone or compartment not declared free from infection with salmonid alphavirus

- 1) When importing, for *aquaculture*, live *aquatic animals* of the species referred to in Article 10.X.2. from a country, zone or compartment not declared free from infection with SAV, the *Competent Authority* of the *importing country* should assess the *risk* and, if justified, apply the following *risk* mitigation measures:
 - a) the direct delivery to and lifelong holding of the consignment in biosecure facilities for continuous isolation from the local environment; and
 - b) the treatment of all effluent and waste materials in a manner that ensures inactivation of SAV.
- 2) If the intention of the introduction is the establishment of a new stock, relevant aspects of the Code of Practice on the Introductions and Transfers of Marine Organisms of the International Council for the Exploration of the Seas (ICES) should be considered.
- 3) For the purposes of the *Aquatic Code*, relevant aspects of the ICES Code (full version see: <http://www.ices.dk/publications/our-publications/Pages/Miscellaneous.aspx>) may be summarised to the following points:
 - a) identify stock of interest (cultured or wild) in its current location;
 - b) evaluate stock health/disease history;
 - c) take and test samples for SAV, pests and general health/disease status;
 - d) import and quarantine in a secure facility a founder (F-0) population;
 - e) produce F-1 generation from the F-0 stock in *quarantine*;
 - f) culture F-1 stock and at critical times in its development (life cycle) sample and test for SAV and perform general examinations for pests and general health/disease status;
 - g) if SAV is not detected, pests are not present, and the general health/disease status of the stock is considered to meet the *basic biosecurity conditions* of the *importing country, zone or compartment*, the F-1 stock may be defined as free from infections with SAV or specific pathogen free (SPF) for SAV;
 - h) release SPF F-1 stock from *quarantine* for *aquaculture* or stocking purposes in the country, zone or compartment.
- 4) With respect to point 3e), *quarantine* conditions should be conducive to multiplication of the pathogen and eventually to clinical expression. If *quarantine* conditions are not suitable for pathogen multiplication and development, the recommended diagnostic approach might not be sensitive enough to detect a low *infection* level.

This Article does not apply to *aquatic animals* referred to in point 1 of Article 10.X.3.

Article 10.X.9.

Importation of aquatic animals and aquatic animal products for processing for human consumption from a country, zone or compartment not declared free from infection with salmonid alphavirus

When importing, for processing for human consumption, *aquatic animals* or *aquatic animal products* of species referred to in Article 10.X.2. from a country, *zone* or *compartment* not declared free from infection with SAV, the *Competent Authority* of the *importing country* should assess the *risk* and, if justified, require that:

- 1) the consignment is delivered directly to and held in *quarantine* or containment facilities until processing into one of the products referred to in point 1 of Article 10.X.3., or products described in point 1 of Article 10.X.12., or other products authorised by the *Competent Authority*; and
- 2) water used in transport and all effluent and waste materials from the processing are treated in a manner that ensures inactivation of SAV or is disposed in a manner that prevents contact of waste with *susceptible species*. For these *commodities* Member Countries may wish to consider introducing internal measures to address the *risks* associated with the *commodity* being used for any purpose other than for human consumption.

Article 10.X.10.

Importation of live aquatic animals intended for use in animal feed, or for agricultural, industrial or pharmaceutical use from a country, zone or compartment not declared free from infection with salmonid alphavirus

When importing, for use in animal *feed*, or for agricultural, industrial or pharmaceutical use, live *aquatic animals* of the species referred to in Article 10.X.2. from a country, *zone* or *compartment* not declared free from infection with SAV, the *Competent Authority* of the *importing country* should require that:

- 1) the consignment is delivered directly to and held in *quarantine* for slaughter and processing to products authorised by the *Competent Authority*; and
- 2) water used in transport and all effluent and waste materials from the processing are treated in a manner that ensures inactivation of SAV.

This Article does not apply to *commodities* referred to in point 1 of Article 10.X.3.

Article 10.X.11.

Importation of aquatic animal products from a country, zone or compartment declared free from infection with salmonid alphavirus

When importing *aquatic animal products* of the species referred to in Article 10.X.2. from a country, *zone* or *compartment* declared free from infection with SAV, the *Competent Authority* of the *importing country* should require an *international aquatic animal health certificate* issued by the *Competent Authority* of the *exporting country* or a *certifying official* approved by the *importing country* certifying that, on the basis of the procedures described in Articles 10.X.4. or 10.X.5, (as applicable) and 10.X.6., the place of production of the *commodity* is a country, *zone* or *compartment* declared free from infection with SAV.

The *certificate* should be in accordance with the Model Certificate in Chapter 5.11.

This Article does not apply to *commodities* referred to in point 1 of Article 10.X.3.

Article 10.X.12.

Importation of aquatic animals and aquatic animal products for retail trade for human consumption from a country, zone or compartment not declared free from infection with salmonid alphavirus

- 1) *Competent Authorities* should not require any conditions related to infection with SAV, regardless of the SAV status of the *exporting country, zone or compartment* when authorising the importation or transit of the following *commodities* which have been prepared and packaged for retail trade and complying with Article 5.4.2.:

[a) fish fillets or steaks (frozen or chilled)] under study.

Certain assumptions have been made in assessing the safety of *aquatic animals* and *aquatic animal products* listed above. Member Countries should refer to these assumptions at Article 5.4.2. and consider whether the assumptions apply to their conditions.

For these *commodities Member Countries* may wish to consider introducing internal measures to address the *risks* associated with the *commodity* being used for any purpose other than for human consumption.

- 2) When importing *aquatic animals* or *aquatic animal products*, other than those referred to in point 1 above, of the species referred to in Article 10.X.2. from a country, *zone or compartment* not declared free from infection with SAV, the *Competent Authority* of the *importing country* should assess the *risk* and apply appropriate *risk* mitigation measures.

Article 10.X.13.

[Importation of disinfected eggs for aquaculture from a country, zone or compartment not declared free from infection with infectious salmonid alphavirus

- 1) When importing disinfected eggs of the species referred to in Article 10.X.2. for *aquaculture*, from a country, *zone or compartment* not declared free from infection with SAV, the *Competent Authority* of the *importing country* should assess the *risk* associated with at least:
 - a) the SAV status of the water to be used during the *disinfection* of the eggs;
 - b) the level of *infection* with SAV in broodstock (ovarian fluid and milt); and
 - c) the temperature and pH of the water to be used for *disinfection*.
- 2) If the *Competent Authority* of the *importing country* concludes that the importation is acceptable, it should apply the following *risk* mitigation measures including:
 - a) the eggs should be disinfected prior to importing, according to the methods described in Chapter 1.1.3. of the *Aquatic Manual* (under study) or those specified by the *Competent Authority* of the *importing country*; and
 - b) between *disinfection* and the import, eggs should not come into contact with anything which may affect their health status.

Member Countries may wish to consider internal measures, such as renewed *disinfection* of the eggs upon arrival in the *importing country*.

- 3) When importing disinfected eggs of the species referred to in Article 10.X.2. for *aquaculture*, from a country, *zone or compartment* not declared free from infection with SAV, the *Competent Authority* of the *importing country* should require an *international aquatic animal health certificate* issued by the *Competent Authority* of the *exporting country* or a *certifying official* approved by the *importing country* attesting that the procedures described in point 2 of this article have been fulfilled.] under study.
