

CHAPTER 10.2.

EPIZOOTIC ULCERATIVE SYNDROME

Article 10.2.1.

For the purposes of the *Aquatic Code*, epizootic ulcerative syndrome (EUS) means *infection* with the Oomycete fungus *Aphanomyces invadans*.

Information on methods for *diagnosis* are provided in the *Aquatic Manual*.

Article 10.2.2.

Scope

The recommendations in this Chapter apply to: yellowfin seabream (*Acanthopagrus australis*), climbing perch (*Anabas testudineus*), eels (Anguillidae), bagrid catfishes (Bagridae), silver perch (*Bidyanus bidyanus*), Atlantic menhaden (*Brevoortia tyrannus*), jacks (*Caranx* spp.), catla (*Catla catla*), striped snakehead (*Channa striatus*), mrigal (*Cirrhinus mrigala*), torpedo-shaped catfishes (*Clarius* spp.), halfbeaks flying fishes (*Exocoetidae*), tank goby (*Glossogobius giuris*), marble goby (*Oxyeleotris marmoratus*), gobies (Gobiidae), rohu (*Labeo rohita*), rhinofishes (*Labeo* spp.), barramundi and giant sea perch (*Lates calcarifer*), striped mullet (*Mugil cephalus*), mullets [Mugilidae] (*Mugil* spp. and *Liza* spp.), ayu (*Plecoglossus altivelis*), pool barb (*Puntius sophore*), barcoo grunter (*Scortum barcoo*), sand whiting (*Sillago ciliata*), wells catfishes (Siluridae), snakeskin gourami (*Trichogaster pectoralis*), common archer fish (*Toxotes chatareus*), silver barb (*Puntius gonionotus*), spotted scat (*Scatophagus argus*), giant gourami (*Osphronemus goramy*), dusky flathead (*Platycephalus fuscus*), spiny turbot (*Psetto des* sp.), Tairiku-baratanago (*Rhodeus ocellatus*), Keti-Bangladeshi (*Rohtee* sp.), rudd (*Scaridinius erythrophthalmus*), theraon (*Therapon* sp.) and three-spot gouramy (*Trichogaster trichopterus*). These recommendations also apply to any other *susceptible species* referred to in the *Aquatic Manual* when traded internationally.

Article 10.2.3.

Commodities

1. When authorising the importation or transit of the following *commodities*, the *Competent Authorities* should not require any EUS related conditions, regardless of the EUS status of the *exporting country, zone or compartment*:
 - a) From the species referred to in Article 10.2.2. intended for any purpose:
 - i) *commodities* treated in a manner that inactivates the *disease agent* e.g. leather made from fish skin, pasteurised products and some ready-to-eat meals; and fish oil and fish *meal* intended for use in *feed*;
 - ii) biological samples preserved for diagnostic applications in such a manner as to inactivate the *disease agent*.

- b) The following *commodities* destined for human consumption from the species referred to in Article 10.2.2. which have been prepared and packaged for direct retail trade:
- i) *eviscerated fish* (chilled or frozen);
 - ii) fillets or cutlets (chilled or frozen);
 - iii) dried *eviscerated fish* (including air dried, flame dried and sun dried).

For the *commodities* referred to in point 1b), OIE Members 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 authorising the importation or transit of *commodities* of a species referred to in Article 10.2.2., other than those referred to in point 1 of Article 10.2.3., the *Competent Authorities* should require the conditions prescribed in Articles 10.2.7. to 10.2.12. relevant to the EUS status of the *exporting country, zone or compartment*.
3. When considering the importation/transit from an *exporting country, zone or compartment* not declared free of EUS of a live *commodity* from a species not covered in Article 10.2.2. but which could reasonably be expected to be a potential mechanical vector for EUS, the *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 10.2.4.

Epizootic ulcerative syndrome free country

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

If a country shares a *zone* with one or more other countries, it can only make a *self-declaration of freedom* from EUS if all the areas covered by the shared water are declared EUS free countries or *zones* (see Article 10.2.5.).

1. A country where the species referred to in Article 10.2.2. are present but there has been no observed occurrence of the *disease* for at least the past 10 years despite conditions that are conducive to its clinical expression, as described in the corresponding chapter of the *Aquatic Manual*, may make a *self-declaration of freedom* from EUS when *basic biosecurity conditions* have been continuously met in the country for at least the past 10 years.

OR

2. A country where the last observed occurrence of the *disease* was within the past 10 years or where the *infection* status prior to *targeted surveillance* was unknown (e.g. because of the absence of conditions conducive to clinical expression as described in the corresponding chapter of the *Aquatic Manual*) may make a *self-declaration of freedom* from EUS when:
 - a) *basic biosecurity conditions* have been continuously met for at least the past 2 years; and
 - b) *targeted surveillance*, as described in Chapter 1.4. of the *Aquatic Code*, has been in place for at least the last 2 years without detection of *A. invadans*.

OR

3. A country that has made a *self-declaration of freedom* from EUS but in which the *disease* is subsequently detected may make a *self-declaration of freedom* from EUS again when the following conditions have been met:
 - a) on detection of the *disease*, the affected area was declared an *infected zone* and a *buffer 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. of the *Aquatic Code*, has been in place for at least the last 2 years without detection of *A. invadans*; and
 - d) previously existing *basic biosecurity conditions* have been reviewed and modified as necessary and have continuously been in place for at least the past 2 years.

In the meantime, part of the non-affected area may be declared a free *zone* provided that such part meets the conditions in point 2 of Article 10.2.5.

Article 10.2.5.

Epizootic ulcerative syndrome free zone or free compartment

A *zone* or *compartment* within the *territory* of one or more countries not declared free from EUS 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 or 3 below.

If a *zone* or *compartment* extends over more than one country, it can only be declared an EUS free *zone* or *compartment* if all the *Competent Authorities* confirm that the conditions have been met.

1. A *zone* or *compartment* where the species referred to in Article 10.2.2. are present but there has been no observed occurrence of the *disease* for at least the past 10 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 EUS when *basic biosecurity conditions* have been continuously met in the *zone* or *compartment* for at least the past 10 years.

OR

2. A *zone* or *compartment* where the last observed occurrence of the *disease* was within the past 10 years or where the *infection* status prior to *targeted surveillance* was unknown (e.g. because of the absence of conditions conducive to clinical expression as described in the corresponding chapter of the *Aquatic Manual*) may be declared free from EUS when:
 - a) *basic biosecurity conditions* have been continuously met for at least the past 2 years; and
 - b) *targeted surveillance*, as described in Chapter 1.4. of the *Aquatic Code*, has been in place for at least the last 2 years without detection of *A. invadans*.

OR

3. A *zone* previously declared free from EUS but in which the *disease* is detected may be declared free from EUS again when the following conditions have been met:
 - a) on detection of the *disease*, the affected area was declared an *infected zone* and a *buffer 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. of the *Aquatic Code*, has been in place for at least the last 2 years without detection of *A. invadans*; and
- d) previously existing *basic biosecurity conditions* have been reviewed and modified as necessary and have continuously been in place for at least the past 2 years.

Article 10.2.6.

Maintenance of free status

A country, *zone* or *compartment* that is declared free from EUS following the provisions of point 1 of Articles 10.2.4. or 10.2.5. (as relevant) may maintain its status as EUS free provided that *basic biosecurity conditions* are continuously maintained.

A country, *zone* or *compartment* that is declared free from EUS following the provisions of point 2 of Articles 10.2.4. or 10.2.5. (as relevant) may discontinue *targeted surveillance* and maintain its status as EUS free provided that conditions that are conducive to clinical expression of EUS, 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 infected countries and in all cases where conditions are not conducive to clinical expression of EUS, *targeted surveillance* needs to be continued at a level determined by the *Competent Authority* on the basis of the likelihood of *infection*.

Article 10.2.7.

Importation of live aquatic animals from a country, zone or compartment declared free from epizootic ulcerative syndrome

When importing live *aquatic animals* of the species referred to in Article 10.2.2. from a country, *zone* or *compartment* declared free from EUS, 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 10.2.4. or 10.2.5. (as applicable), the place of production of the *aquatic animal* is a country, *zone* or *compartment* declared free from EUS.

The *certificate* should be in accordance with the Model Certificate in Chapter 5.10.

This Article does not apply to *commodities* referred to in point 1 of Article 10.2.3.

Article 10.2.8.

Importation of live aquatic animals for aquaculture from a country, zone or compartment not declared free from epizootic ulcerative syndrome

1. When importing, for *aquaculture*, live *aquatic animals* of the species referred to in Article 10.2.2. from a country, *zone* or *compartment* not declared free from EUS, 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 material in a manner that ensures inactivation of EUSV.
2. If the intention of the introduction is the establishment of a new stock, 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 followed.
3. For the purposes of the *Aquatic Code*, the ICES Code (full version see: <http://www.ices.dk/indexfla.asp>) may be summarised to the following main 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 EUSV, 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 EUSV and perform general examinations for pests and general health/disease status;
 - g) if EUSV 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 EUS free or specific pathogen free (SPF) for EUSV;
 - h) release SPF F-1 stock from *quarantine* for *aquaculture* or stocking purposes in the country, *zone or compartment*.

This Article does not apply to *commodities* referred to in point 1 of Article 10.2.3.

Article 10.2.9.

Importation of live aquatic animals for processing for human consumption from a country, zone or compartment not declared free from epizootic ulcerative syndrome

When importing, for processing for human consumption, live *aquatic animals* of the species referred to in Article 10.2.2. from a country, *zone or compartment* not declared free from EUS, 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* facilities for slaughter and processing to one of the products referred to in point 1 of Article 10.2.3. or other products authorised by the *Competent Authority*; and
2. all effluent and waste material from the processing are treated in a manner that ensures inactivation of *A. invadans*.

OIE Members may wish to consider introducing internal measures to prevent such *commodities* being used for any purpose other than for human consumption.

This Article does not apply to *commodities* referred to in point 1 of Article 10.2.3.

Article 10.2.10.

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 epizootic ulcerative syndrome

When importing, for use in animal *feed*, or for agricultural, industrial or pharmaceutical use, live *aquatic animals* of the species referred to in Article 10.2.2. from a country, *zone* or *compartment* not declared free from EUS, the *Competent Authority* of the *importing country* should require that:

1. the consignment is delivered directly to and held in *quarantine* facilities for slaughter and processing to products authorised by the *Competent Authority*; and
2. all effluent and waste material from the processing are treated in a manner that ensures inactivation of *A. invadans*.

This Article does not apply to *commodities* referred to in point 1 of Article 10.2.3.

Article 10.2.11.

Importation of aquatic animal products from a country, zone or compartment declared free from epizootic ulcerative syndrome

When importing *aquatic animal products* of the species referred to in Article 10.2.2. from a country, *zone* or *compartment* declared free from EUS, 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 10.2.4. or 10.2.5. (as applicable), the place of production of the *commodity* is a country, *zone* or *compartment* declared free from EUS.

The *certificate* should be in accordance with the Model Certificate in Chapter 5.10.

This Article does not apply to *commodities* referred to in point 1 of Article 10.2.3.

Article 10.2.12.

Importation of aquatic animal products from a country, zone or compartment not declared free from epizootic ulcerative syndrome

When importing *aquatic animal products* of the species referred to in Article 10.2.2. from a country, *zone* or *compartment* not declared free from EUS, the *Competent Authority* of the *importing country* should assess the *risk* and apply appropriate *risk mitigation* measures.

In the case of dead fish, whether *eviscerated* or *uneviscerated*, such *risk mitigation* measures may include:

1. the direct delivery into and holding of the consignment in biosecure/*quarantine* facilities for processing to one of the products referred to in point 1 of Article 10.2.3. or other products authorised by the *Competent Authority*;
2. the treatment of all effluent and waste material in a manner that ensures inactivation of *A. invadans*.

This Article does not apply to *commodities* referred to in point 1 of Article 10.2.3.
