**USA COMMENTS IN RED FONT**

CHAPTER 1.3.

**DISEASES LISTED B Y** **THE OIE**

The [*diseases*](#_bookmark45) in this chapter have been assessed in accordance with Chapter [1.2.](#_bookmark149) and constitute the OIE list of [*aquatic*](#_bookmark17)[*animal*](#_bookmark17)[*diseases*](#_bookmark45).

In case of modifications of this list of [*aquatic animal*](#_bookmark17)[*diseases*](#_bookmark45) adopted by the World Assembly of Delegates, the new list comes into force on 1 January of the following year.

Article 1.3.1.

The following [*diseases*](#_bookmark45) of fish are listed by the OIE:

* Infection with *Aphanomyces invadans* (epizootic ulcerative syndrome)
* Infection with epizootic haematopoietic necrosis virus
* Infection with *Gyrodactylus salaris*
* Infection with HPR-deleted or HPR0 infectious salmon anaemia virus
* Infection with infectious haematopoietic necrosis virus
* Infection with koi herpesvirus
* Infection with red sea bream iridovirus
* Infection with salmonid alphavirus
* Infection with spring viraemia of carp virus
* Infection with tilapia lake virus
* Infection with viral haemorrhagic septicaemia virus.

[…]

**Assessment for listing infection with Tilapia lake virus (TiLV)
in the *Aquatic Code***

**Overall assessment**

The OIE Aquatic Animal Health Standards Commission assessed infection with tilapia lake virus (TiLV) against the criteria for listing aquatic animal diseases in Article 1.2.2. of the *Aquatic Code* (see Table 1 below).

**Table 1.** Summary of assessment of infection with TiLV

|  |  |  |
| --- | --- | --- |
|  | Listing criteria  | Conclusion |
| 1 | 2 | 3 | 4a | 4b | 4c |  |
| Infection with TiLV | + | + | + | NA | + | + | The disease meets the criteria for listing |

NA = not applicable.

The criteria for the inclusion of a [disease](https://www.oie.int/index.php?id=171&L=0&htmfile=glossaire.htm#terme_maladie) in the OIE list are as follows:

1. International spread of the [pathogenic agent](https://www.oie.int/index.php?id=171&L=0&htmfile=glossaire.htm#terme_agent_pathogene) (via [aquatic animals](https://www.oie.int/index.php?id=171&L=0&htmfile=glossaire.htm#terme_animaux_aquatiques), [aquatic animal products](https://www.oie.int/index.php?id=171&L=0&htmfile=glossaire.htm#terme_produits_d_animaux_aquatiques), [vectors](https://www.oie.int/index.php?id=171&L=0&htmfile=glossaire.htm#terme_vecteur) or fomites) is likely.

AND

2. At least one country may demonstrate country or [zone](https://www.oie.int/index.php?id=171&L=0&htmfile=glossaire.htm#terme_zone) freedom from the [disease](https://www.oie.int/index.php?id=171&L=0&htmfile=glossaire.htm#terme_maladie) in susceptible [aquatic animals](https://www.oie.int/index.php?id=171&L=0&htmfile=glossaire.htm#terme_animaux_aquatiques), based on provisions of Chapter [1.4.](https://www.oie.int/index.php?id=171&L=0&htmfile=chapitre_aqua_ani_surveillance.htm#chapitre_aqua_ani_surveillance)

AND

3. A precise [case definition](https://www.oie.int/index.php?id=171&L=0&htmfile=glossaire.htm#terme_definition_d_un_cas) is available and a reliable means of detection and [diagnosis](https://www.oie.int/index.php?id=171&L=0&htmfile=glossaire.htm#terme_diagnostic) exists.

AND

4a. Natural transmission to humans has been proven, and human infection is associated with severe consequences.

OR

4b. The [disease](https://www.oie.int/index.php?id=171&L=0&htmfile=glossaire.htm#terme_maladie) has been shown to affect the health of cultured [aquatic animals](https://www.oie.int/index.php?id=171&L=0&htmfile=glossaire.htm#terme_animaux_aquatiques) at the level of a country or a [zone](https://www.oie.int/index.php?id=171&L=0&htmfile=glossaire.htm#terme_zone) resulting in significant consequences e.g. production losses, morbidity or mortality at a [zone](https://www.oie.int/index.php?id=171&L=0&htmfile=glossaire.htm#terme_zone) or country level.

OR

4c. The [disease](https://www.oie.int/index.php?id=171&L=0&htmfile=glossaire.htm#terme_maladie) has been shown to, or scientific evidence indicates that it would affect the health of wild resulting in significant consequences e.g. morbidity or mortality at a population level, reduced productivity or ecological impacts.

**Background**

A novel orthomyxo-like virus, named as tilapia lake virus (TiLV), has been identified as the cause of mass die-offs of tilapia (Eyngor *et al.,* 2014) in both farms and the wild environment. The host range is not well known but a number of tilapines are known to be susceptible (Eyngor *et al.,* 2014). Tilapia is the second most imported group of farmed fish after carps. Global production of tilapia, predominantly *Oreochromis niloticus*, is estimated at 4.5 million metric tonnes (FAO data). Farming occurs primarily in tropical and subtropical countries though some production in recirculation systems has started in other regions. *O. niloticus* was first introduced to developing countries to support subsistence farming. However, larger scale commercial production is now important and frozen fillet and other tilapia products are traded globally.

**Assessment of TiLV using the new criteria for listing aquatic animal diseases in Chapter 1.2. of the *Aquatic* *Code***

**Criterion No. 1 International spread of the pathogenic agent (via aquatic animals, aquatic animal products, vectors or fomites) is likely.**

*Assessment*

TiLV has been reported in Bangladesh, Chinese Taipei, Colombia, Ecuador, Egypt, India, Indonesia, Israel, Malaysia, Mexico, Peru, Philippines, Tanzania, Thailand, Uganda and the United States of America (Ahasan *et al*., 2020, Amal *et* *al*., 2018, Bacharach *et al.*, 2016; Behera *et al*., 2018; Chaput *et al*., 2020; Dong *et al.*, 2017; Fathi *et al.*, 2017, Ferguson *et al.*, 2014; Koesharyani *et al*., 2018, Mugimba., 2018, OIE, 2018a, OIE, 2018b; OIE, 2018c; Tsofack *et al.*, 2016). The Network of Aquaculture Centres in Asia–Pacific (NACA) also have notification requirements for infection with TiLV and this data shows a similar distribution of the disease for that region, as reported to the OIE. Despite geographic separation~~;~~ , strains were highly homologous, suggesting an epidemiological link and international spread. Historically, tilapia has been traded internationally to establish populations for production in new regions, and there is still extensive trade in tilapia. The current driver for international trade is the dissemination of improved genetic strains (though current pattern and volume of trade has not been determined for this assessment). Tilapia products are traded internationally and while a risk of transmission with some product types should be expected, specific risks have not been considered in this assessment.

**RATIONALE:** A common is the appropriate punctuation after this opening phrase, not a semicolon.

Given the evidence of spread and the broad distribution of tilapia (Asia, Africa and South America), international spread is likely.

*Conclusion*

The criterion is met.

**Criterion No. 2 At least one country may demonstrate country or zone freedom from the disease in susceptible aquatic animals, based on provisions of Chapter 1.4.**

TiLV has been reported in Bangladesh, Chinese Taipei, Colombia, Ecuador, Egypt, India, Indonesia, Israel, Malaysia, Mexico, Peru, Philippines, Tanzania, Thailand, Uganda and the United States of America (Ahasan *et al*., 2020; Amal *et al*., 2018; Bacharach *et al*., 2016; Behera *et al*., 2018; Chaput *et al*., 2020; Dong *et al*., 2017; Fathi *et al*., 2017; Ferguson *et al*., 2014; Koesharyani *et al*., 2018; Mugimba *et al*., 2018; OIE, 2018a; OIE, 2018b; OIE, 2018c; Tsofack *et al*., 2016). The Network of Aquaculture Centres in Asia – Pacific (NACA) also have notification requirements for infection with TiLV and this data shows a similar distribution of the disease for that region, as reported to the OIE. Additional countries in Africa have expressed a wish to declare freedom from infection with TiLV, but report that there is a lack of diagnostic capacity to support such self-declarations.

The distribution of the virus may be wider (mortality may not have been investigated in other regions); however, due to the broad distribution of tilapia (Asia, Africa and South America), virulence of the virus and the extensive trade in tilapia, it is likely that many countries are currently free. The information provided to the OIE and NACA on the disease status of Members for infection with TiLV through immediate notifications, six-monthly reports and annual reports provides support that it is likely countries are currently free of the disease.