

# SITUATION REPORT ON AQUATIC

## ANIMAL HEALTH – FISH



# 2ND QUARTER 2024

WOAH publishes regularly an aquatic animal health situation report highlighting information on 1) disease events reported by countries and territories through the [World Animal Health Information System \(WAHIS\)](#); 2) [Self-declared Disease Status](#) and 3) [antimicrobial agents intended for use in aquatic animals reported by countries and territories through the global database for ANimal antiMicrobial USE \(ANIMUSE\)](#).

## Key messages

Aquatic animal health and welfare are of great importance to the World Organisation for Animal Health (WOAH), particularly in the context of our [Aquatic Animal Health Strategy](#) launched in May 2021. This report is intended to be used as scientific communication material published on our website. Each edition covers one or several of the four species categories of aquatic animals within the scope of WOAH's work: amphibians, crustaceans, fish and molluscs. This report provides information on WOAH-listed diseases of fish as well as data on antimicrobial use.

The maps of the 11 listed fish diseases (in domestic and wild fish) show a variable global disease distribution.

Infection with koi herpesvirus is the most extensively reported, with 23 countries and territories, on 4 continents, reporting its presence/suspicion in the last five years.

Infection with infectious haematopoietic necrosis virus and infection with *Aphanomyces invadans* (epizootic ulcerative syndrome) is also reported present or suspected by more than 10 countries and territories in the last five years.

Infection with spring viraemia of carp virus, infection with viral haemorrhagic septicaemia virus, infection with tilapia lake virus, infection with HPR-deleted or HPRO infectious salmon anaemia virus, infection with *Gyrodactylus salaris*, infection with Red Sea bream iridovirus, and infection with salmonid alphavirus are each reported present or suspected by 4 to 9 countries and territories in the last five years.

Infection with epizootic haematopoietic necrosis virus is reported in Australia.

Between 5 July 2023 and 5 July 2024, a total of 25 new outbreaks were reported by seven countries and territories (Belgium, Faeroe Islands, Italy, Mozambique, Singapore, South Africa, United Kingdom) for 6 diseases (Infection with *Aphanomyces invadans* [Epizootic ulcerative

syndrome], infection with infectious haematopoietic necrosis virus, infection with infectious salmon anaemia virus, , infection with koi herpesvirus, infection with tilapia lake virus, infection with viral haemorrhagic septicaemia virus).

The implementation of surveillance is essential for the detection of animal disease events, allowing for information sharing and response to the outbreak. However, not all countries and territories have the capacity to implement surveillance for all diseases listed by WOAAH and therefore resources need to be prioritised. It is worth highlighting that 12% of countries and territories that share information via WAHIS declare no surveillance for listed diseases of fish (neither in domestic nor in wild species) and a significant number of countries and territories report no detection for several diseases, without declaring any surveillance in place.

Furthermore, for several diseases of fish, a large number of countries/territories report that they have "no information" on the diseases, or, in alternative, they have not submitted any report to WAHIS in the last five years. This indicates an important gap in knowledge of disease occurrence, including for certain countries with substantial fish production.

To support Members in their surveillance efforts, WOAAH standards and guidelines are regularly updated, and training courses are organised for the WOAAH network of National Focal Points for aquatic animals.

Three self-declarations were published between 5 July 2023 and 5 July 2024 for fish diseases and were still active as of 5 July 2024. All were submitted by the Delegate of Korea (Rep. of), and they covered infection with salmonid alphavirus, infection with HPR-deleted or HPRO infectious salmon anaemia virus and infection with *Gyrodactylus salaris*.

Finally, WOAAH is working to raise awareness among its Members of the importance of collecting and sharing antimicrobial use data, and to understand the barriers to collecting and reporting this information. A total of 94 Members contributed to the 2021 data collection efforts for WOAAH's eighth annual report on antimicrobial agents intended for use in animals. Aquatic animals accounted for 9% of the total coverage of quantities normalised by estimated animal biomass. This topic is of critical importance to animal health, including fish health.

**Members are encouraged to continue their surveillance efforts and timely reporting to WOAAH.**

Visit our [website](#) for more information.

For any press inquiry on aquatic animal diseases, email us at [media@woah.org](mailto:media@woah.org).

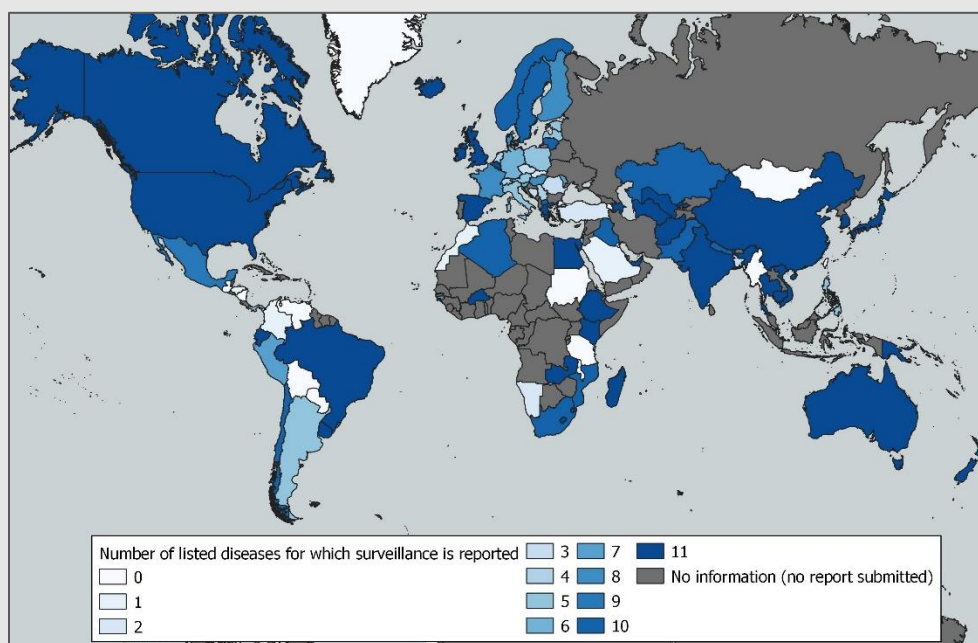
## Contextual data

By becoming a Member of WOAAH, countries accept the legal obligation to share animal health data on listed and emerging diseases in accordance with our standards. Diseases included in this list meet the following criteria: 1) freedom at the level of country or zone by at least one country, and potential for international spread, 2) significant morbidity or mortality in animals (farmed or wild) or humans (for zoonotic diseases), and 3) reliable means for diagnosis and case definition is

available. The list is revised annually and in 2024 comprises 31 aquatic animal diseases. Two other diseases of crustaceans (*Infection with *Enterocytozoon hepatopenaei** and *Infection with Covert mortality nodavirus*) are considered emerging and fall under the legal obligation of reporting.

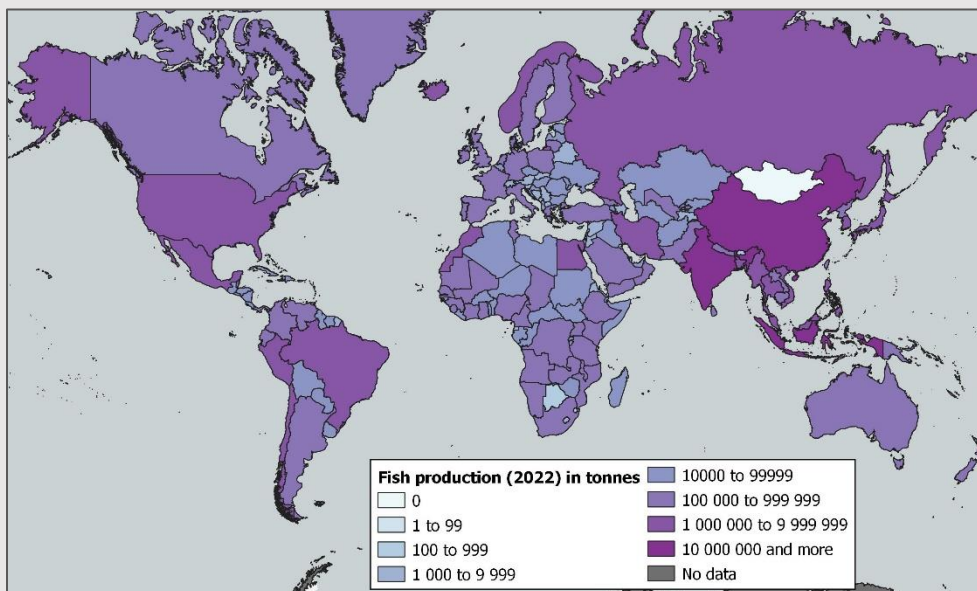
The implementation of surveillance is essential for the detection of animal disease events, allowing for information sharing and response to the outbreak. However, not all countries and territories have the capacity to implement surveillance for all diseases listed by WOAAH and therefore resources need to be prioritised. **Figure 1** provides an overview of the number of listed diseases of fish (N=11) for which surveillance activities have been reported by countries and territories via WAHIS in 2023 (the most recent semester with information, with 116 reporting countries and territories).

This figure shows that of the 116 countries and territories that shared information via WAHIS, 12% reported no surveillance for any of the 11 diseases of fish, 50% reported surveillance for some of the listed diseases of fish, and 38% reported surveillance for all listed diseases of fish. In some regions of the world, such as western Africa, middle Africa, central Asia, and southeast Asia, many reports were missing. This context, which highlights significant gaps in surveillance, must be considered when interpreting animal disease events reported to WOAAH.



**Figure 1.** Number of listed diseases of fish (N=11) for which surveillance activities have been reported by countries and territories via WAHIS in 2023.

Disparities in production must be considered when interpreting animal disease events reported to WOAAH. FAO figures for fish production in 2022 were available for over 220 countries and territories. Based on available data, China (People's Rep. of), India and Indonesia are the largest producers (over 10 million tonnes), followed by Bangladesh, Brazil, Chile, Egypt, Iceland, Iran, Japan, Korea (Rep. of), Malaysia, Mexico, Morocco, Myanmar, Norway, Peru, Philippines, Russia, Thailand, United States of America and Vietnam (over 1 million tonnes) (see **Figure 2**). Generally, almost all countries and territories produce fish and are therefore concerned by the health issues relating to this category of animal.



**Figure 2.** Production. Based on FAO figures for 2022 for fish (Source: [https://www.fao.org/fishery/statistics-query/en/global\\_production/global\\_production\\_quantity](https://www.fao.org/fishery/statistics-query/en/global_production/global_production_quantity)).

## Disease situation in the past 5 years (2020-2024 up to 5 July)

This section presents disease situations in fish that have been reported by countries and territories to WOAAH through WAHIS. This reporting is a requirement for WOAAH's Members and covers listed diseases, for which information on presence/absence must be reported through six-monthly reports. Members are also requested to inform WOAAH if the epidemiological situation of the disease is unknown.

Although these data may have some bias, either because they are incomplete or because their granularity varies (depending on the reporting country/territory), they represent the reference information on animal health reported by the official services, using a standard template and a standard data format.

These maps show the situation reported for the 11 listed diseases of fish in the past five years.

**“Presence or suspicion” is shown in red.**

**“Absence with surveillance activities” is shown in green.**

**“Absence with no surveillance activities” is shown in light grey.**

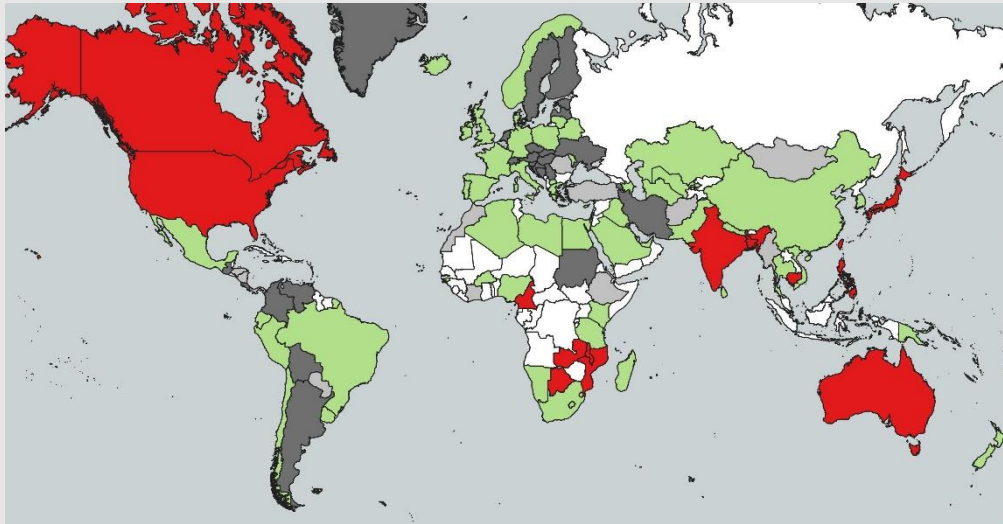
**“No information” is shown in dark grey.**

**“No report submitted” to WOAAH is shown in white.**

General information on each disease is available in the [WOAH Manual of Diagnostic Tests for Aquatic Animals](#).

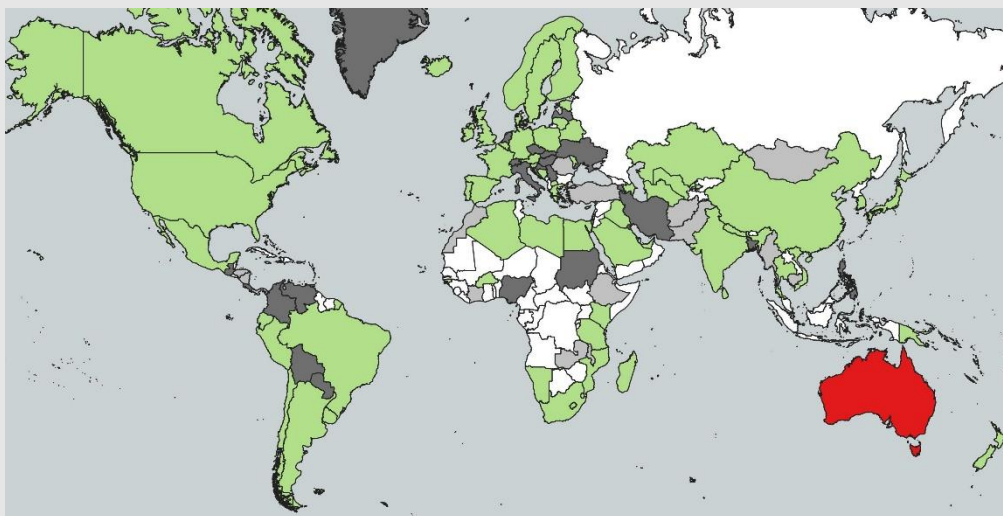
## Infection with *Aphanomyces invadans* (epizootic ulcerative syndrome)

During the past five years, it has been reported present or suspected (see area in red) to WOA in 14 countries and territories (Australia, Bangladesh, Botswana, Cambodia, Cameroon, Canada, Chinese Taipei, India, Japan, Malawi, Mozambique, Philippines, United States of America, Zambia).



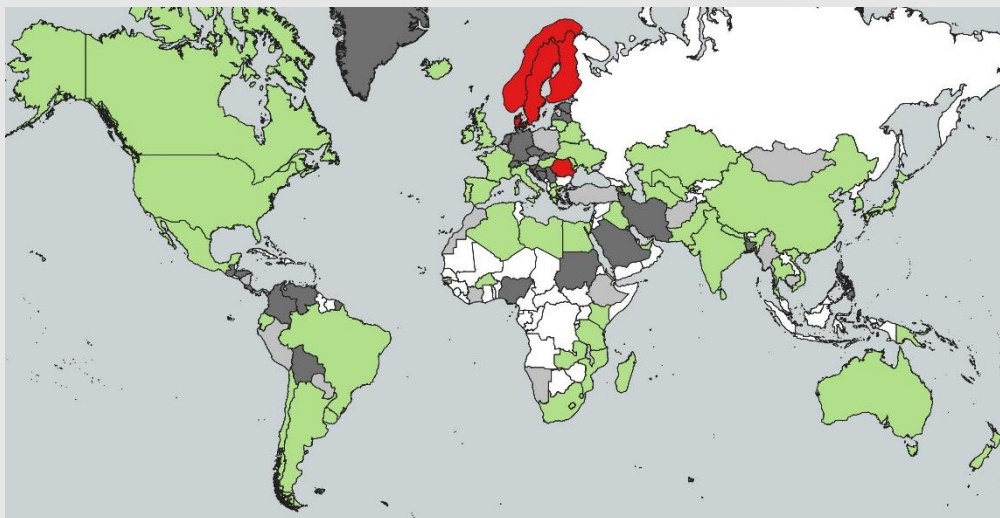
## Infection with epizootic haematopoietic necrosis virus

During the past five years, it has been reported present (see area in red) to WOA in Australia.



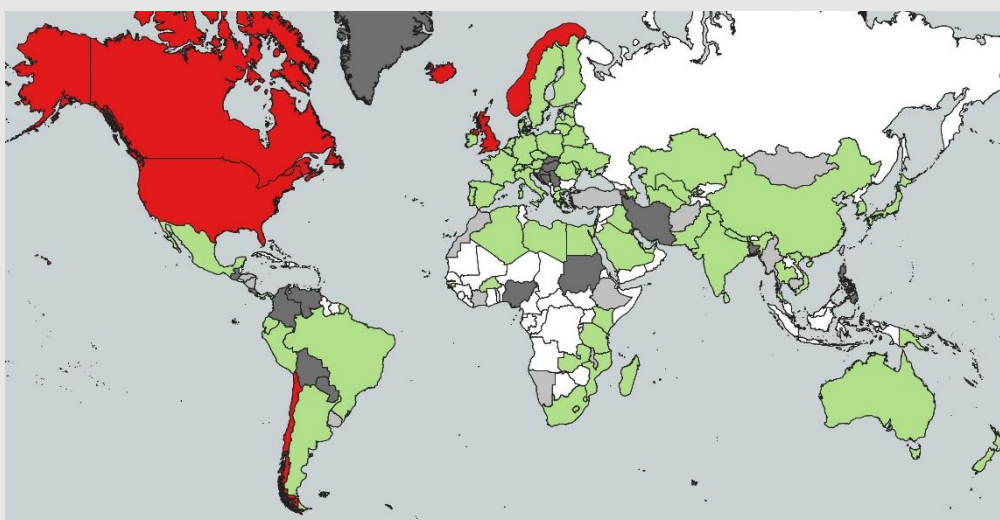
## Infection with *Gyrodactylus salaris*

During the past five years, it has been reported present or suspected (see area in red) to WOA in 5 countries (Denmark, Finland, Norway, Romania and Sweden).



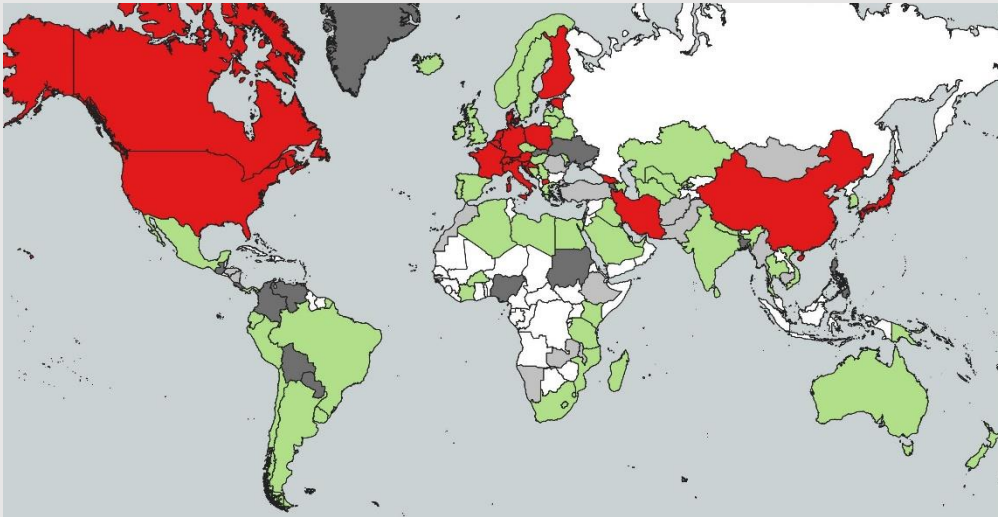
## Infection with HPR-deleted or HPR0 infectious salmon anaemia virus

During the past five years, it has been reported present or suspected (see area in red) to WOA in 7 countries and territories (Canada, Chile, Faeroe Islands, Iceland, Norway, United Kingdom and United States of America).



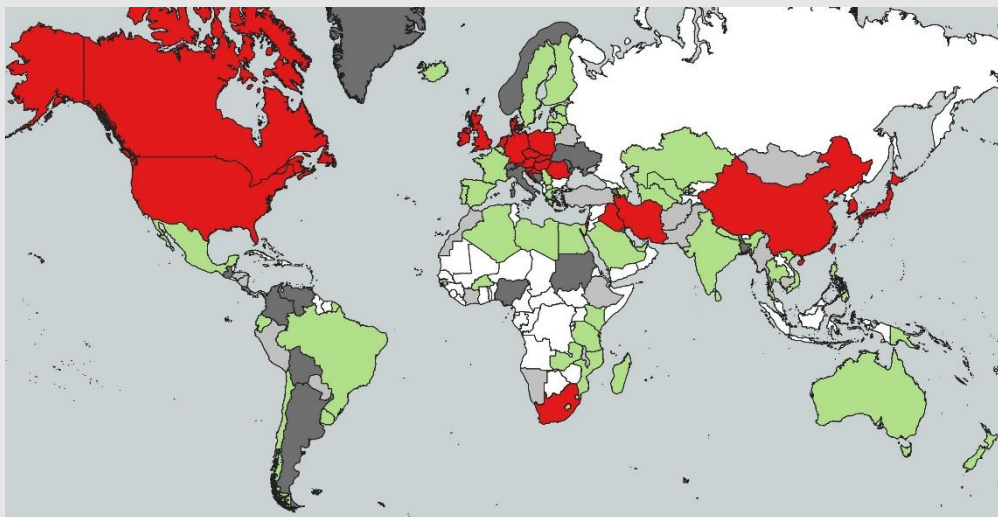
## Infection with infectious haematopoietic necrosis virus

During the past five years, it has been reported present or suspected (see area in red) to WOA in 20 countries (Austria, Belgium, Canada, China [People's Rep. of], Croatia, Denmark, Estonia, Finland, France, Georgia, Germany, Iran, Italy, Japan, Netherlands, North Macedonia, Poland, Slovenia, Switzerland, United States of America).



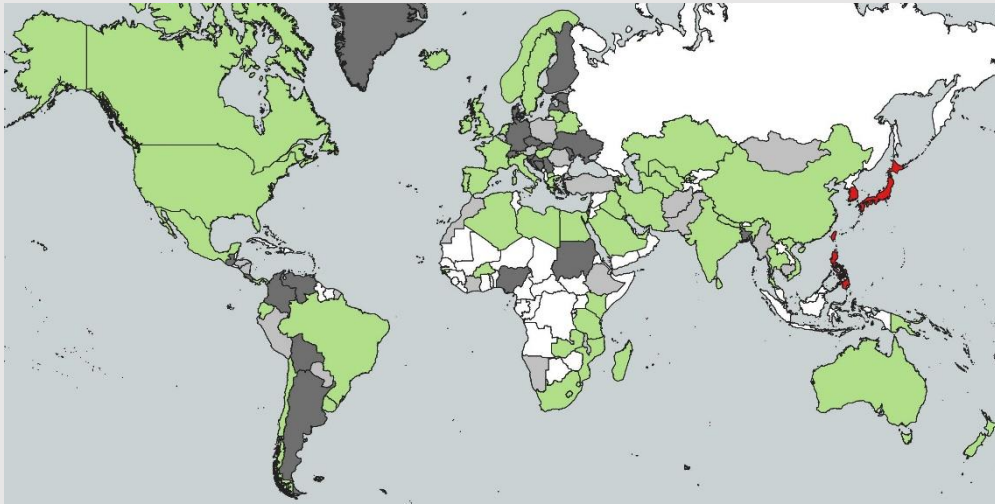
## Infection with koi herpesvirus

During the past five years, it has been reported present or suspected (see area in red) to WOA in 23 countries and territories (Austria, Canada, China (People's Rep. of), Chinese Taipei, Croatia, Czech Republic, Denmark, Germany, Hungary, Iran, Iraq, Ireland, Israel, Japan, Korea (Rep. of), Netherlands, Poland, Romania, Slovakia, Slovenia, South Africa, United Kingdom, United States of America).



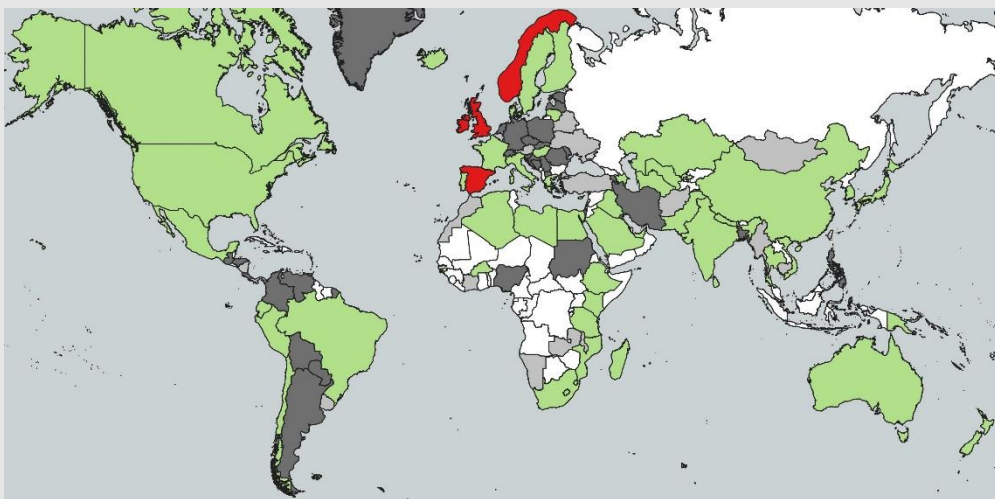
## Infection with red sea bream iridovirus

During the past five years, it has been reported present or suspected (see area in red) to WOA in 4 countries and territories (Chinese Taipei, Japan, Korea (Rep. of), Philippines).



## Infection with salmonid alphavirus

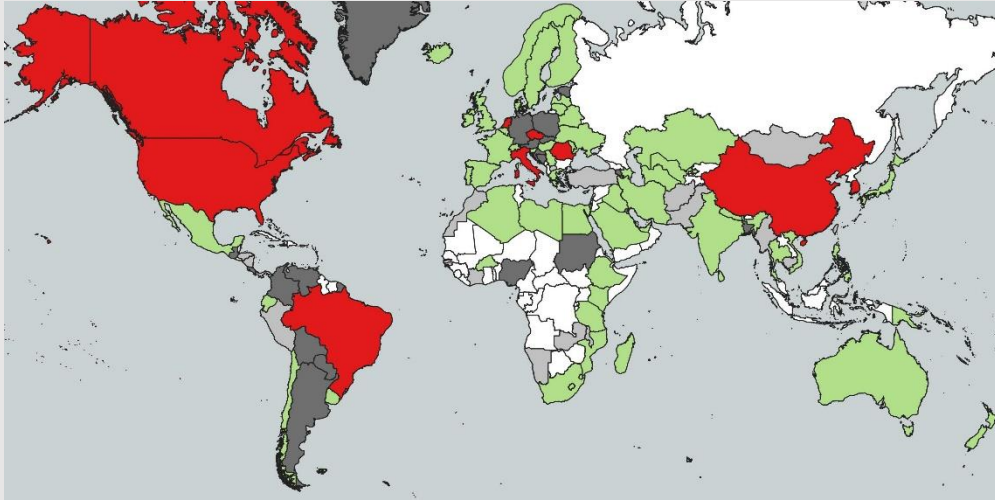
During the past five years, it has been reported present or suspected (see area in red) to WOA in 4 countries (Ireland, Norway, Spain, United Kingdom).





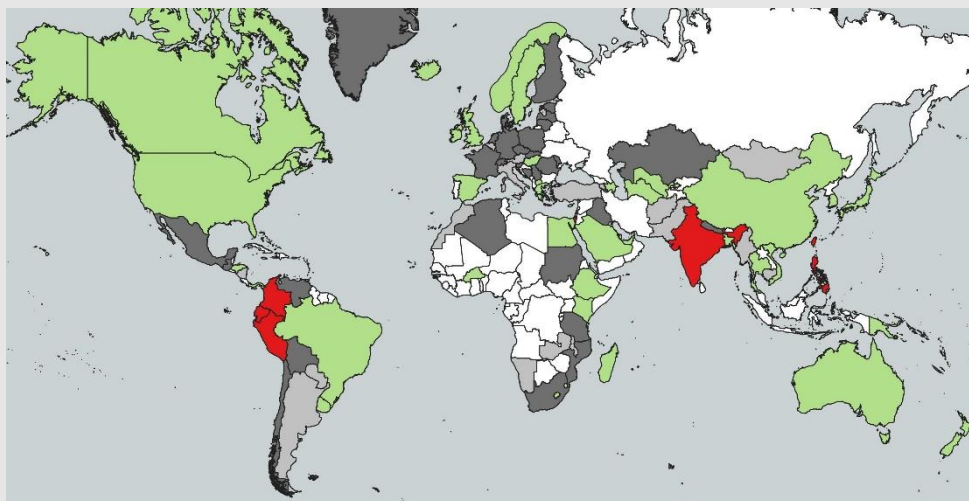
## Infection with spring viraemia of carp virus

During the past five years, it has been reported present or suspected (see area in red) to WOA in 9 countries (Brazil, Canada, China [People's Rep. of], Czech Republic, Italy, Korea (Rep. of), Netherlands, Romania and United States of America).



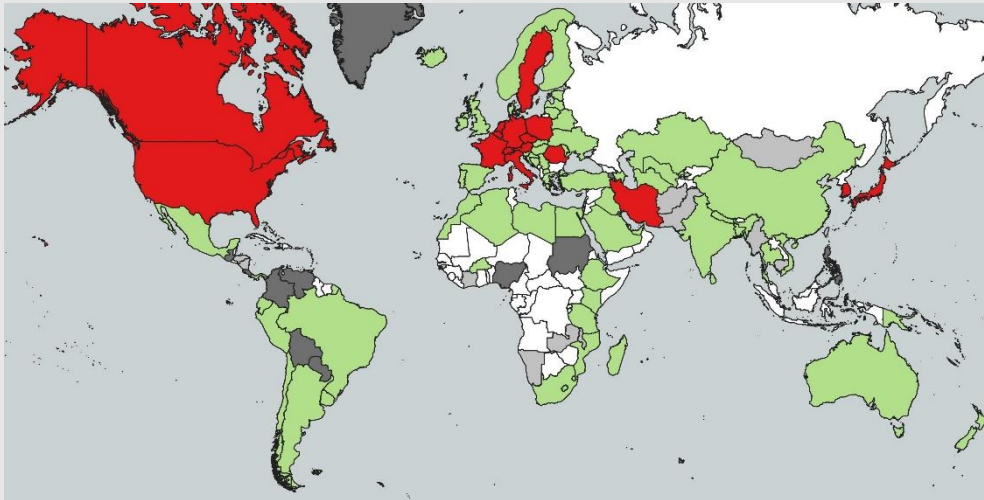
## Infection with tilapia lake virus

The disease was listed by WOA in 2023. During the past two years, it has been reported present or suspected (see area in red) to WOA in 8 countries and territories (Ecuador, Philippines, Colombia, India, Peru, Singapore, Israel, Chinese Taipei).



## Infection with viral haemorrhagic septicaemia virus

During the past five years, it has been reported present or suspected (see area in red) to WOA in 9 countries and territories (Brazil, Canada, China (People's Rep. of), Czech Republic, Italy, Korea (Rep. of), Netherlands, Romania and United States of America).



## Exceptional events reported during the past year (05/07/2023 – 05/07/2024)

This section highlights exceptional disease events in fish that have been reported by countries and territories through [WAHIS](#) during the past year. As noted above, this reporting is a requirement for WOA's Members and covers listed diseases as well as emerging diseases, for which exceptional events must be reported through immediate notification, followed by weekly follow-up reports until the situation has stabilised or resolved. Exceptional events include first occurrence, recurrences, detection of new strains, occurrence of the disease in new hosts, and unexpected changes in disease dynamics in the country. Stable situations are not covered in this section and are reported to WOA through another channel of WAHIS.

### New events by world region (reported through immediate notifications)

#### Africa

Infection with *Aphanomyces invadans* (Epizootic ulcerative syndrome) in wild straightfin barb (*Barbus peludinosus*):

- The first occurrence in Mozambique (Nassa) started on 15 July 2023

## Asia

Infection with tilapia lake virus in farmed Malaysian red hybrid tilapia (*Oreochromis niloticus* x *Oreochromis mossambicus*):

- The first occurrence in Singapore (Singaporean Exclusive Economic Zone) started on 25 December 2023

## Europe

Infection with infectious salmon anaemia virus (HPR0 genotype) in farmed Atlantic salmon (*Salmo salar*) – three recurrences occurred in United Kingdom:

- A first recurrence started in Scotland and United Kingdom Exclusive Economic Zone on 3 November 2023
- A second recurrence started in United Kingdom Exclusive Economic Zone on 26 March 2024
- A third recurrence started in Scotland on 5 June 2024

Infection with infectious salmon anaemia virus (HPR-deleted genotype) in farmed Atlantic salmon (*Salmo salar*):

- A recurrence started in Faeroe Islands (Faeroe Exclusive Economic Zone) on 25 May 2024

Infection with infectious haematopoietic necrosis virus in farmed rainbow trout (*Oncorhynchus mykiss*)

- A first recurrence started in Italy (Trento) on 20 October 2023
- A second recurrence started in Italy (Trento) on 11 December 2023
- A first recurrence started in Belgium (Wallonie) on 4 October 2023
- A second recurrence started in Belgium (Wallonie) on 15 May 2024

Infection with viral haemorrhagic septicaemia virus in farmed rainbow trout (*Oncorhynchus mykiss*)

- A recurrence started in Italy (Trento) on 2 November 2023

## Americas, and Oceania

No new events reported.

**On-going events for which there were new reported outbreaks, by world region (reported through follow-up reports)**

## Africa

Infection with koi herpesvirus in South Africa

## Asia, Americas, Europe and Oceania

No new outbreaks reported in the on-going events, or no on-going events.

## **New outbreaks**

During the period covered by this report, a total of 25 new outbreaks were reported by seven countries and territories (Belgium, Faeroe Islands, Italy, Mozambique, Singapore, South Africa, United Kingdom) for 6 diseases (Infection with *Aphanomyces invadans* [Epizootic ulcerative syndrome], infection with infectious haematopoietic necrosis virus, infection with infectious

salmon anaemia virus, , infection with koi herpesvirus, infection with tilapia lake virus, infection with viral haemorrhagic septicaemia virus). Spatial details are presented in Figure 3.

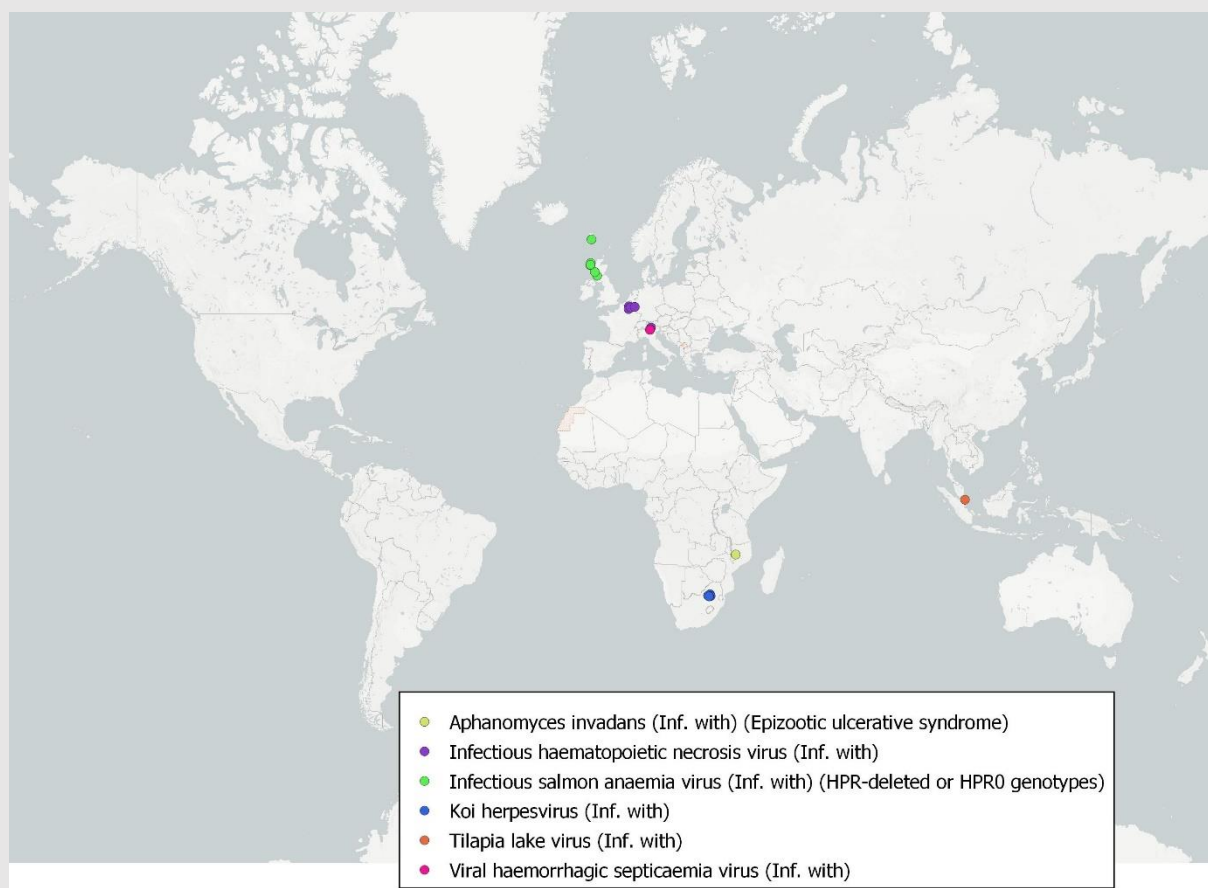


Figure 3. Distribution of new outbreaks, by disease

**Events which started before the period of interest but were reported during the period (reported through immediate notifications)**

### Africa

Infection with koi herpesvirus in domestic and wild common carp (*Cyprinus carpio*):

- A recurrence started in South Africa (Gauteng) on 24 January 2023

### Americas

Infection with tilapia lake virus in farmed tilapia (*Oreochromis spp*):

- A recurrence started in Colombia (Cesar) on 18 March 2023

### Asia

Infection with infectious haematopoietic necrosis virus in domestic rainbow trout (*Oncorhynchus mykiss*):

- The first occurrence started in Georgia (Shida Kartli) on 4 July 2023

### Europe

Infection with *Gyrodactylus salaris* in farmed rainbow trout (*Oncorhynchus mykiss*):

- The first occurrence started in Romania (Sibiu) on 8 June 2023

Infection with koi herpesvirus in domestic common carp (*Cyprinus carpio*):

- A recurrence started in Ireland (Dublin) on 7 September 2022

### Oceania

No events reported.

## Self-declared Disease Status during the past year (05/07/2022 – 05/07/2024)

In accordance with the provisions of the *Aquatic Animal Health Code* (Aquatic Code), Members may wish to self-declare the freedom of their country, zone or compartment from a disease. A Member wishing to publish a self-declaration for disease-freedom, should provide the relevant documented evidence of compliance with the provisions of the relevant chapters of the *Aquatic Code*. The following self-declarations were published in the past year and were still active as of 5 July 2024.

**Infection with salmonid alphavirus, infection with HPR-deleted or HPRO infectious salmon anaemia virus, infection with *Gyrodactylus salaris***

The Delegate of **Korea (Rep. of)** declared that the country obtained the status of country freedom from infection with salmonid alphavirus as of 1 June 2023 and from infection with HPR-deleted or HPRO infectious salmon anaemia virus as well as infection with *Gyrodactylus salaris* as of 27 February 2024.

## Antimicrobial use in aquatic animals

In the past decades, a range of pathogens have been reported to develop resistance to antimicrobials. To make sure these key medicines remain efficient, WOAHA is gathering data on the amounts of antimicrobial use in animals worldwide. This information is an essential asset to reduce overuse and misuse of antimicrobials and to curb the spread of antimicrobial resistance (AMR).

Since 2015, WOAHA has taken the lead to build a global database on antimicrobial agents intended for use in animals collecting data from its Members. In 2022, the way antimicrobial use data is reported has been transformed with an online customised database system: [ANIMUSE \(ANIMAL antiMicrobial USE\) Global Database](#).

Based on the data reported, WOAHA produces annual reports on antimicrobial agents intended for use in animals. As presented in the [8th report](#), the analysis of antimicrobial agents normalised by estimated animal biomass was performed on data for 2021 provided by 94 Members. Aquatic animals accounted for 9% of the total coverage, with fish representing almost two-thirds. The

interactive WOAHA report shows that, as of 26 July 2024, the highest percentage of reported quantities of antimicrobial agents used in aquatic animals in 2021 (most recent year with information) were amphenicols (41%), then tetracyclines (21%), and fluoroquinolones (18%).

WOAHA is working to raise awareness among its Members of the importance of collecting and sharing antimicrobial use data, and to understand the barriers to collecting and reporting this information. This will help WOAHA to further support its Members in building capacity and increasing reporting for better stewardship of antimicrobials globally. Antimicrobial use in fish production could have influence on AMR emergence, therefore it is critical to monitor it.