

## Introduction

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](#). Therefore, WOAH produces this regular aquatic animal health situation report highlighting information on 1) disease events reported by countries and territories through the [World Animal Health Information System \(WAHIS\)](#) and 2) antimicrobial agents intended for use in aquatic animals reported by countries and territories through the Global database for [ANimal antiMicrobial USE \(ANIMUSE\)](#). This report is intended to be used as scientific communication material published on our website. It is produced quarterly, and each edition covers one 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 **fish**.

## Contextual data

By becoming a Member of WOAH, 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 2023 comprises [31 aquatic animal diseases](#).

The implementation of surveillance is essential for the detection of animal disease events, allowing for information sharing. However, not all countries and territories have the capacity to implement surveillance systems for all diseases listed by WOAH and therefore resources are prioritised. Figure 1 provides an overview of the number of listed diseases of fish for which surveillance activities have been reported by countries and territories via WAHIS in 2019 (the most recent year with over 100 countries and territories submitting information). In 2019, the list comprised 10 diseases of fish.

This figure shows that of the 134 countries and territories that shared information via WAHIS, 21% reported no surveillance completed for the 10 diseases of fish, 44% reported surveillance for some of the listed diseases of fish, and 35% reported surveillance for all listed diseases of fish. In some regions of the world, such as western Africa, middle Africa, eastern Africa, southern Asia, and central Asia, many reports were missing. This context, which highlights important gaps in surveillance, must be taken into account when interpreting animal disease events reported to WOAH.

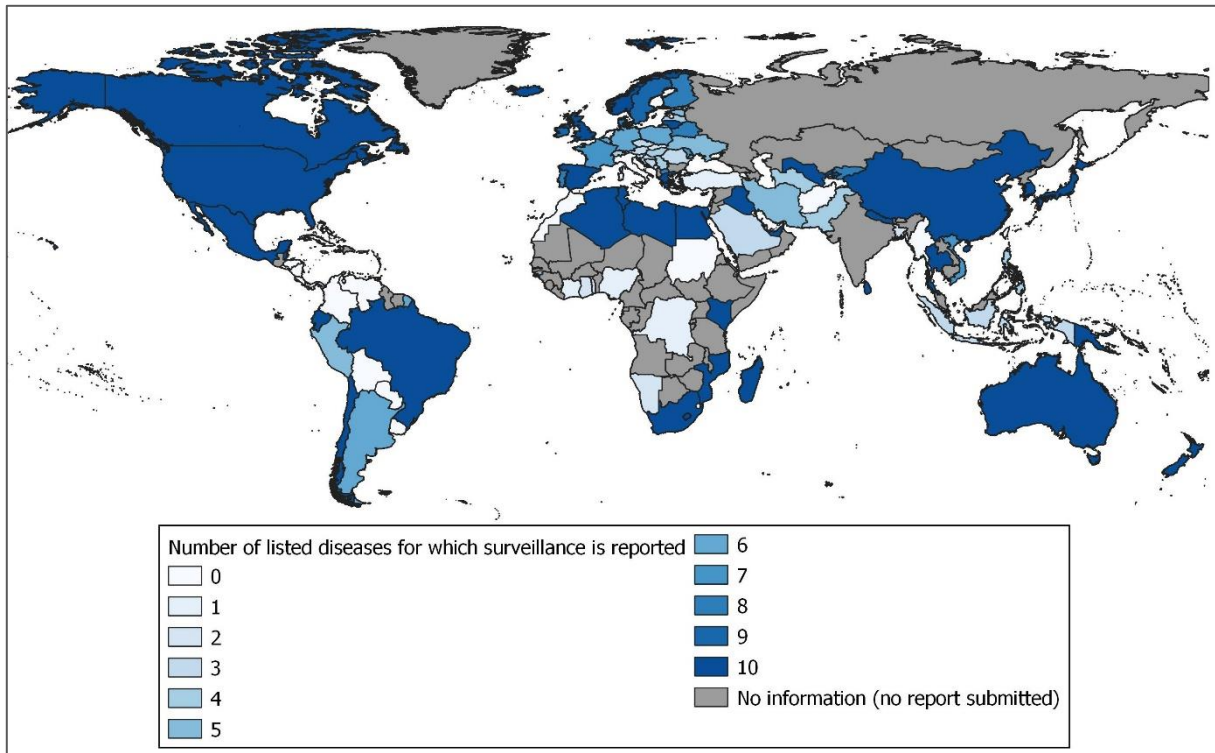


Figure 1. Number of fish listed diseases for which surveillance activities have been reported by countries and territories via WAHIS in 2019

## Exceptional events reported during the period of interest (17/03/2022 – 17/03/2023)

This section highlights exceptional fish disease events that have been reported by countries and territories through WAHIS. As noted above, this reporting is a requirement for our 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. 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 WOAAH through another channel of WAHIS.

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 official reference information on animal health reported by the official services, using a standard template and a standard data format.

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

#### Africa

The first occurrence of infection with *Aphanomyces invadans* (epizootic ulcerative syndrome) in farmed African sharp-tooth catfish (*Clarias gariepinus*) in the area of Lilongwe started in Malawi on 8 July 2022

A recurrence of infection with koi herpesvirus started in farmed amur carp (*Cyprinus rubrofuscus*) in South Africa (Limpopo) on 25 January 2023.

#### Americas

A recurrence of infection with infectious salmon anaemia virus (HPR-deleted genotype) started in farmed Atlantic salmon (*Salmo salar*) the United States of America (Maine) on 29 June 2022

#### Asia

A recurrence of infection with tilapia lake virus started in farmed Tilapia (*Oreochromis spp*) in Chinese Taipei (New Taipei) on 14 September 2022

#### Europe

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

Two recurrences started in Romania:

- In Sălaj in on 1 August 2022
- In Sibiu on 25 January 2023

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

A recurrence started in Finland (Ahvenanmaan valtionvirasto) on 8 June 2022

A recurrence started in France (Hauts-de-France) on 9 August 2022

A recurrence started in Italy (Bolzano) on 7 October 2022

#### Oceania

No new events reported

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

#### Africa, Americas, Asia, 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 10 new outbreaks were reported by 8 countries and territories for 6 diseases (Chinese Taipei, Finland, France, Italy, Malawi, Romania, South Africa and United States of America). Details are presented in Figure 2.

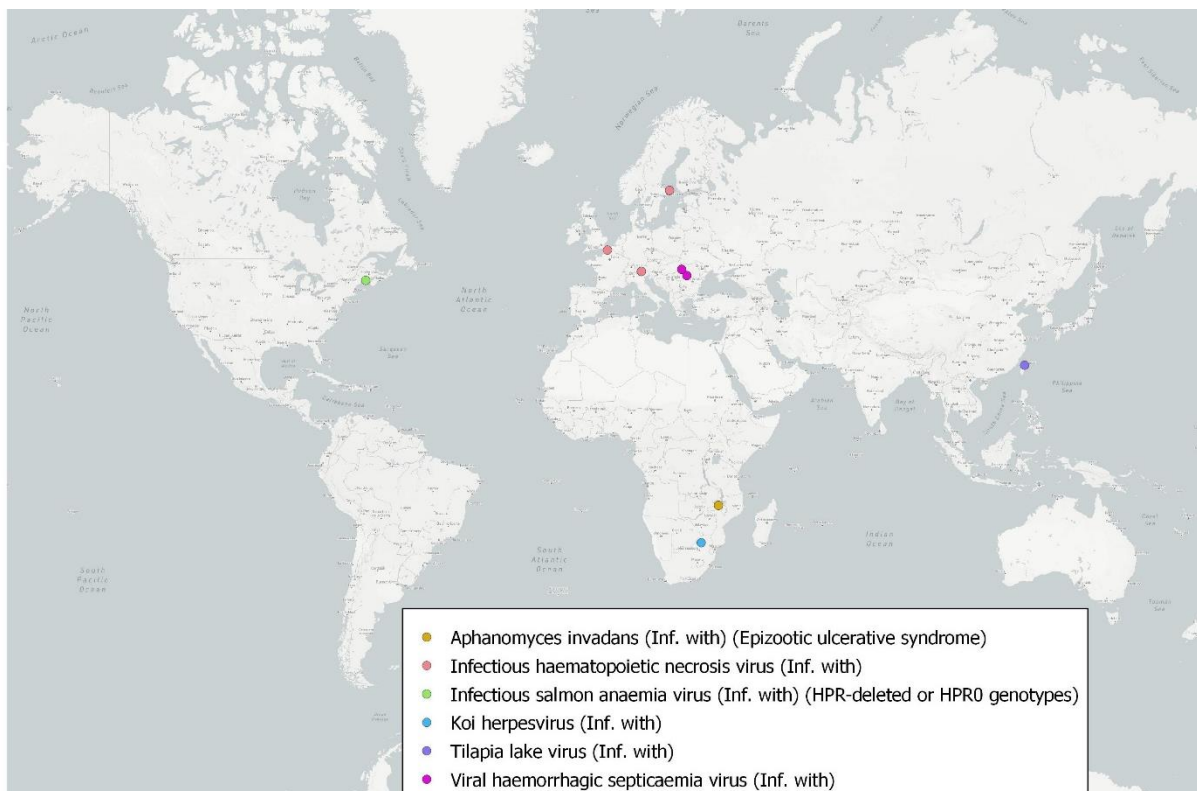


Figure 2. Distribution of new outbreaks, by disease

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

**Africa**

A recurrence of infection with Koi herpesvirus started in farmed common carp (*Cyprinus carpio*) in South Africa (Gauteng) on 4 March 2021

**Europe**

A recurrence of infection with viral haemorrhagic septicaemia virus started in farmed rainbow trout (*Oncorhynchus mykiss*) in Romania (Sibiu) on 11 March 2022

**Americas, Asia and Oceania**

No events reported

**Self-declared Disease Status during the period of interest (17/03/2022 – 17/03/2023)**

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 Delegate Argentina [declared](#) that the that the zone described in the self-declaration document obtained the status of freedom from 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 and Infection with viral haemorrhagic septicaemia virus as of 1 June 2022, as the zone fulfilled the requirements provided in Chapters 10.1, 10.3, 10.4, 10.6, 10.10 of the *Aquatic Code* and Chapters 2.3.2, 2.3.3., 2.3.4., 2.3.5., 2.3.10. of the *Aquatic Manual*. As of 17 March 2023, this declaration was still active.

The Delegate of Korea (Rep. of) [declared](#) that the country obtained the status of country freedom from infection with infectious hypodermal and haematopoietic necrosis virus as of 29 August 2022 as the country fulfilled the requirements for a self-declaration of country freedom from the disease provided in Chapter 1.4. of the *Aquatic Code* and Chapter 2.2.4. of the *Aquatic Manual*. As of 17 March 2023, this declaration was still active.

## Antimicrobial use in fish

In the past decades, a range of pathogens have been reported to develop resistance to antimicrobials. To make sure these key medicines remain efficient, WOAAH 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, WOAAH 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 Global Database](#) (ANimal antiMicrobial USE).

Based on the data reported, we produce annual reports on antimicrobial agents intended for use in animals. According to the [6th report](#), 54 countries covered fish in their total antimicrobial reported quantities. However only a few countries were able to provide specific quantitative data (12 countries). 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. This topic is of critical importance to animal health, including fish health. This will help WOAAH to further support its Members in building capacity and increasing reporting for better management of AMR globally.

## Success stories

The Aquatic Animal Health Strategy (2021-2025) includes an activity to address AMR in aquaculture: Activity 3.4. "Provide practical AMR guidance" to achieve Objective 3 "Resilience; responses to emerging aquatic animal health issues of regional or global concern are coordinated and timely".

Activity 3.4. is divided in four sub-activities:

1) Develop an appendix for aquatic animals in the List of Antimicrobial Agents of Veterinary Importance: an aquatic appendix to the List of Antimicrobial Agents of Veterinary Importance has been developed through an ad hoc Group of experts and published in 2022 in the WOAAH website as [Technical Reference Document Listing Antimicrobial Agents of Veterinary Importance for Aquatic Species](#). This technical document includes an updated list of antimicrobials with authorized use in aquaculture globally and a list of the main bacterial diseases/pathogens and the classes of antimicrobials used to treat them. It is expected that countries will create or update their own national treatment guidelines based on this document.

2) Refine the AMU global data collection for aquatic animals: With two streams:

- Sub-categorisation of Aquatic Animals: in 2022, the newly launched ANIMUSE online system incorporated various subgroups of economic importance within aquatic food-producing animals: 'Cichlids', 'Cyprinids', 'Salmonids', 'Siluriformes', 'Marine' within 'Fish'; and 'Penaeids' for 'Crustaceans'. In addition, 'ornamental fish' has been added to the groups of non-food producing animal species. These subgroups will allow us to have granularized qualitative information of AMU in the main aquaculture sub-sectors. In future, report of AMU quantitative data for these groups will allow us to establish AMU trends that would specifically guide our support.

- AMU monitoring in aquaculture at field level: the creation of methodologies for AMU monitoring at field level specific for aquaculture, through an Electronic Expert Group, is planned for 2023. Later, these methodologies will be piloted. It is expected that eventually field level data will complement AMU data reported to ANIMUSE (mostly coming from sales, purchases, and imports) to give a more complete figure of the actual AMU in aquaculture.

3) Provide systematic training on AMR/AMU in aquaculture to Focal Points: a plan to address training on AMR in aquaculture to Focal Points is underway, with a customized plan for each region. A global Survey on AMU-AMR in Aquaculture was launched in 2022 to address Focal Points for Aquatic Animals and for Veterinary Products. A total of 117 countries/territories participated and the analysis of the results is giving us valuable information for training preparation. In addition, e-learning modules for the responsible use of antimicrobials in terrestrial and aquatic animals (activity led by our regional office in the Americas) will be developed during 2023 to complement in-person training.

4) Evaluate needs for updating relevant WOAAH Standards for aquatic animals: updates on the Aquatic Standards related to AMU/AMR will be proposed for the consideration of the Aquatic Animal Health Standards Commission.

These four sub-activities are also part of the Workplan on AMR in Aquaculture, which is aligned with the [Strategy on Antimicrobial Resistance and the Prudent Use of Antimicrobials](#). The workplan includes ten main activities to support

our Members to address AMR in this sector. A recent output is the development of specific communication tools to address AMR in aquaculture: '[Fighting antimicrobial resistance: A guide for aquatic animal health professionals](#)', and '[Fighting antimicrobial resistance: A guide for aquatic animal health producers](#)'. These guides are aimed to support Members on the responsible use of antibiotics in aquaculture.

Visit our [website](#) for more information. For any press inquiry on the disease, you can email us at [media@woah.org](mailto:media@woah.org)