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ANALYSIS OF THE ANIMAL HEALTH SITUATION IN MEMBERS IN THE REGION DURING 2021 AND 2022

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(Data updated until 18 August 2022)

26/10/2022

This report provides a summary of the animal health situation in the Americas Region during the period 1 January 2021 to 18 August 2022. This animal health situation report is based on the information submitted to WOAHA by 37 countries and territories¹ in the Americas Region through the World Animal Health Information System (WAHIS) and includes: A) an update on the WAHIS project; B) a summary of the situation in the Americas Region regarding infection with high pathogenicity avian influenza viruses and infection with African swine fever virus, and lastly a general overview of reporting for aquatic animal diseases. The main objective of this report is to describe the animal health situation in the region for the selected diseases, based on data provided by Members and non-Members. While these data may have some limitations, being sometimes incomplete and presenting variations in data granularity (depending on the reporting country), they represent the reference official animal health information reported by Veterinary Services, using a standard template and a standard data format.

A. Update on WAHIS

Since the launch, WOAHA has continued to work with the IT provider to put in place a solid maintenance plan for the live platform and to fix important bugs of the existing functionalities. The focus of the project remains on:

1. Stabilising and optimising the existing modules and improving the platform's performance:
 - as a first priority, the optimised immediate notification/follow-up report module went live in September 2022. This has vastly improved user experience and performance of the platform. Outstanding functionalities will be developed in further releases.
 - As a second priority this module will interconnect with the European Union (EU) Animal Disease Information System (ADIS) by the end of 2022 or the beginning of 2023.
 - Next the focus will move to developing the Annual report module by the beginning of 2023.
 - the Six-monthly reporting module will be optimised by the middle of 2023.
2. Developing future evolutions, taking into account feedback from users, and developing remaining functionalities:
 - alert app;
 - developing and improving the dashboards (ongoing);
 - mapping feature evolutions (ongoing).
3. Linking up with the global health community by rolling out public interoperability during the first semester of 2023.

¹ This number includes the 32 Members of the WOAHA Regional Commission for the Americas, as well as the Falkland Islands, Greenland and St. Vincent and the Grenadines

A quality data platform is essential to enable WOAAH to enhance its role of data steward and is inextricably linked to the rolling out of the WOAAH digital transformation strategy. During the COVID-19 pandemic, the role and the contribution of WOAAH in providing a platform interconnecting with other international organisations have become increasingly relevant. WOAAH must continue to provide its Members with the ability to report easily on animal diseases to facilitate transparency, access and analysis. The knowledge thus generated should support WOAAH, its Members and other stakeholders in the decision-making process and inform efforts to improve system performance.

For any support for WAHIS please contact <https://wahis-support.woah.org/>

We are grateful for the continuing support and collaboration of Members and funding partners in the development of WAHIS. To maintain WAHIS relevance over time, continuous investment is needed to allow WAHIS to evolve and align with the needs of its Members and public users.

B. Animal health situation in the Americas Region

Update on animal cases of infection with high pathogenicity avian influenza viruses

Background and importance of the disease in the Region

Infection with high pathogenicity avian influenza (HPAI) viruses is caused by influenza A viruses belonging to the family *Orthomyxoviridae*. Based on the global data reported to WOAHA since 2005, HPAI spread is lowest in September, begins to rise in October and peaks in February². The disease continues to pose a significant global and regional threat to animal health and public health. According to WAHIS data from the Americas Region, HPAI resulted in the death and culling of more than 82 million poultry within affected farms, backyards and villages between October 2005 and 18 August 2022. Moreover, preventive killing around outbreaks was applied in several countries, drastically increasing the disease impact.

The threat represented by the circulation of HPAI viruses was confirmed during the period 1 January 2021 – 18 August 2022, as the region was impacted by the worst avian influenza epidemic wave registered since 2005. Throughout the northern autumn and winter of 2021/2022, multiple HPAI outbreaks at various scales, caused predominantly by H5N1 subtype, occurred in poultry, zoological collections and wild birds. In particular, during 2021/2022 the Americas Region has recorded the highest number of HPAI outbreaks caused by H5N1 ever reported in domestic animals and wildlife as well as the highest number of losses in domestic animals. The results of the genetic analysis of H5N1 showed that the viruses currently circulating in Europe and the Americas belong to clade 2.3.4.4b. HPAI A(H5), indicating that the Eurasian lineage had been introduced via infected wild birds into the American continent. This clade was also detected in wild mammal species, and showed genetic markers of adaptation to replication in mammals³.

To raise awareness of the global AI situation and inform about recent changes in disease circulation, WOAHA produces a periodic avian influenza situation report, available on the WOAHA website⁴; the report provides an overview of HPAI disease events (in poultry and in non-poultry including wild birds) reported to the WOAHA's early warning system (through immediate notifications and follow-up reports) by its Members, as well as by non-Members, and it is updated with the most recent data every three weeks. On average each situation report has been viewed by more than 935 people (minimum 1 – maximum 2282), with an average visualisation time of 1 minute 31 seconds, indicating an overall high interest in the topic.

This section briefly reviews the current situation regarding infection with AI viruses (HPAI in poultry, as well as HPAI in birds other than poultry including wild birds) in the Americas Region.

Trends of surveillance activities implemented in the Region since 2005 (based on data from six-monthly reports)

The most efficient way to control and prevent HPAI spread consists of rapid disease identification and response, with the application of effective preventive and control measures. In this context, the capacity of countries to detect the disease is crucial to minimise the risk of disease introduction and spread. With this in mind, we analysed the evolution of the percentage of countries and territories

² WOAHA High Pathogenicity Avian Influenza (HPAI) Situation Report 32, <https://www.woah.org/app/uploads/2022/07/hpai-situation-report-20220707.pdf>

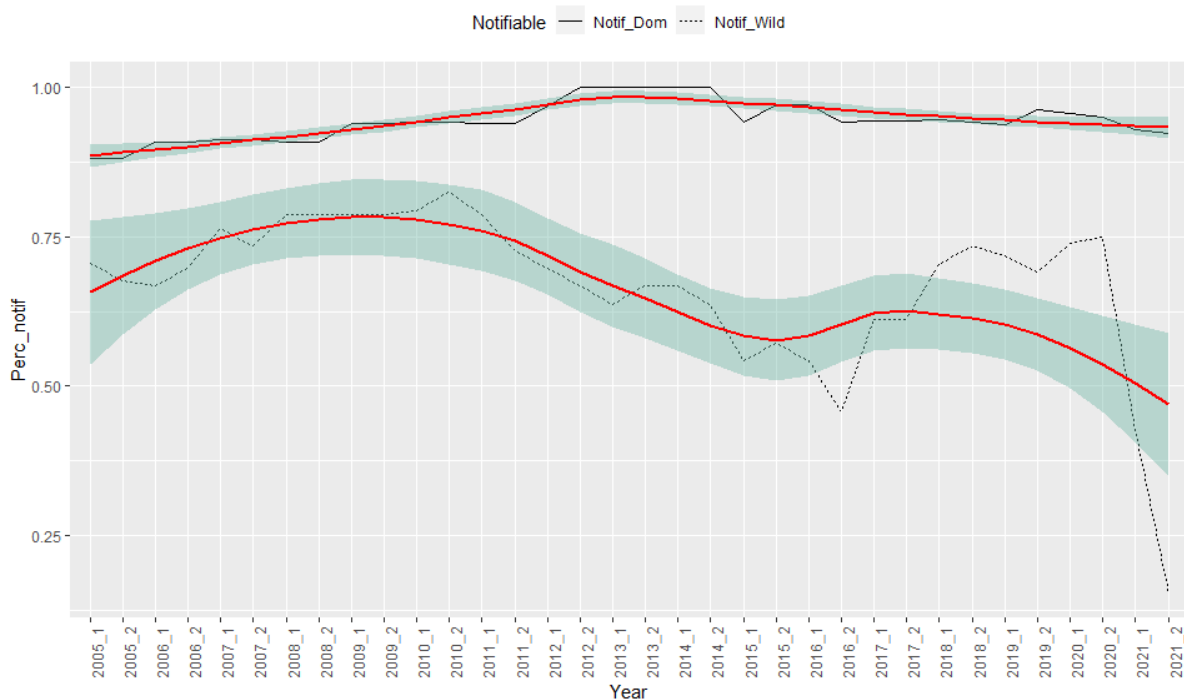
³ <https://www.ecdc.europa.eu/en/publications-data/avian-influenza-overview-march-june-2022>

⁴ <https://www.woah.org/en/disease/avian-influenza/#ui-id-2>

declaring in their six-monthly reports: i) HPAI as a notifiable disease; and ii) the implementation of surveillance⁵ activities, during the period 2005 – 2021 (Figures 1 and 2).

During the period analysed, on average 94% of the Members and non-Members of the Americas Region reported HPAI as notifiable in domestic animals and on average 67% of them reported HPAI as notifiable in wildlife. While the trend in domestic animals was constant throughout the period, a drop in the percentage of countries reporting the disease as notifiable in wildlife was observed during the period 2011 – 2016 (with a minimum of 46% in 2016). The data for 2021 are still partial, and should be treated with caution.

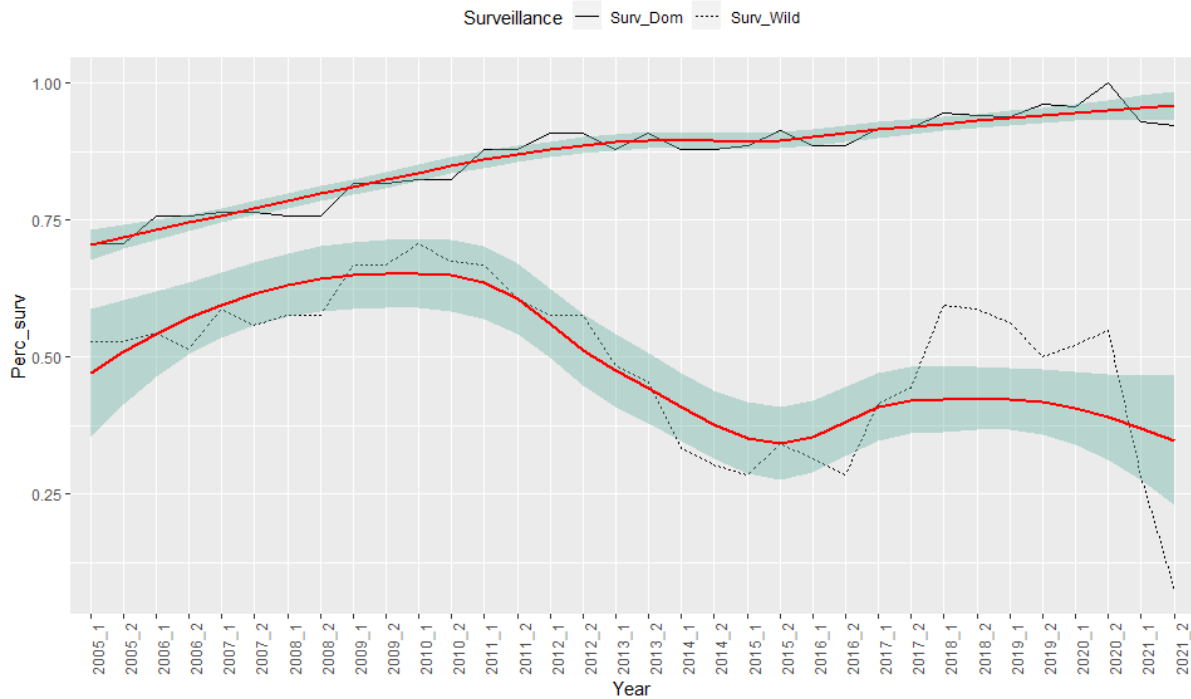
Figure 1. Evolution of the percentage of reporting countries and territories declaring HPAI as a notifiable disease, by animal group and by semester, between 2005 and 2021. *Black lines represent the original data, while red lines represent the trend interpolated using the loess approach. Light green areas represent the standard error of the interpolation. (reports received by WOAHA as of 18 August 2022)*



Regarding the application of disease surveillance, on average 86% of the countries and territories declared activities in domestic animals and only 50% in wildlife. Surveillance activities in domestic animals have been progressively more implemented since 2005, whereas in the period 2010 – 2016 surveillance in wildlife progressively reduced, with a historical minimum (29% of the reporting countries) in 2015 and 2016. The data for 2021 are still partial, and should be treated with caution.

⁵ Surveillance is considered to be applied at country level if at least one of the following control measures is declared in a country's six-monthly reports: general surveillance, targeted surveillance, monitoring, screening

Figure 2. Evolution of the percentage of reporting countries and territories declaring HPAI surveillance activities, by animal group and by semester, between 2005 and 2021. *Black lines represent the original data, while red lines represent the trend interpolated using the loess approach. Light green areas represent the standard error of the interpolation. (reports received by WOAHA as of 18 August 2022)*

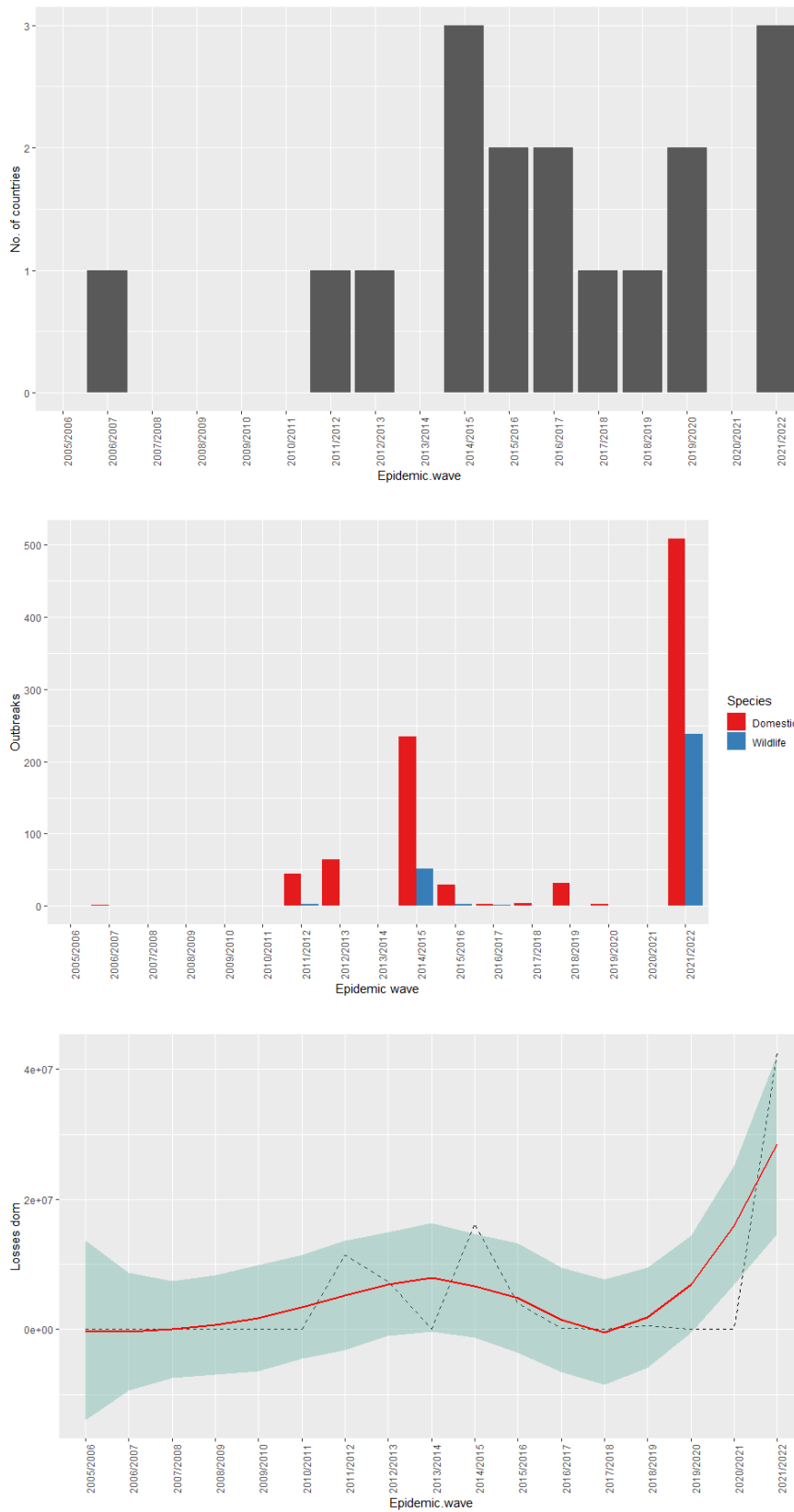


Summary of the situation reported during each seasonal wave in the Americas between October 2005 and 18 August 2022

Figure 3 provides a summary of the situation reported through the early warning system during each seasonal wave in the Americas between October 2005 and 18 August 2022. The number of Members reporting HPAI in the Americas ranged between 0 and 3 per year, and the only countries to have reported HPAI outbreaks since 2005 are Canada, Mexico and the United States of America.

The number of outbreaks and the corresponding losses reported in the most recent epidemic wave (2021/2022) were by far the highest registered in the region since 2005. Taking as the reference the previous most impacting epidemic wave (2014/2015), the number of outbreaks and the corresponding losses reported were almost three times higher during the 2021/2022 epidemic wave.

Figure 3. Evolution in the number of countries and territories in the Americas reporting HPAI outbreaks, evolution in the number of outbreaks reported in domestic animals and wildlife and in the corresponding losses in domestic animals Erreur ! Signet non défini., by HPAI seasonal wave, between 1 October 2005 and 18 August 2022



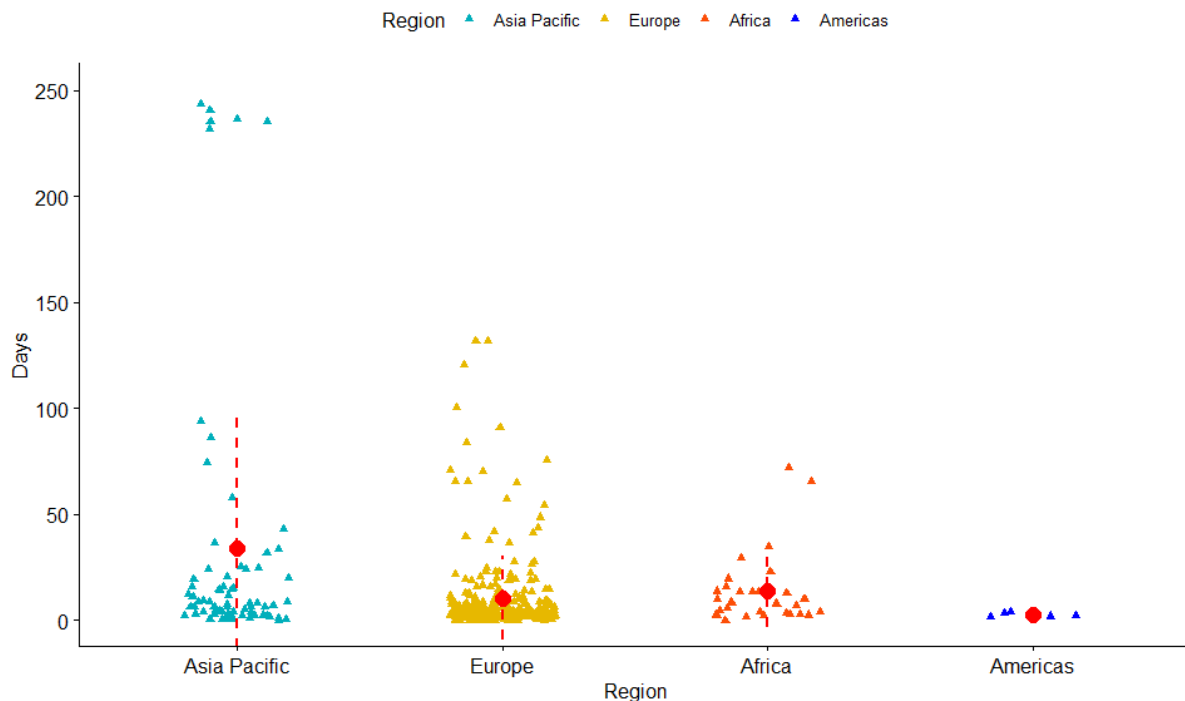
Compliance statistics on HPAI reporting (Americas Region vs other regions) during the 2021/2022 epidemic wave

In accordance with Chapter 1.1. of the WOA *Terrestrial Animal Health Code (Terrestrial Code)* and *Aquatic Animal Health Code (Aquatic Code)*, WOA Members are required to submit an immediate notification for any of the exceptional events of listed diseases described in the aforementioned *Codes*, within 24 hours of confirmation of the event. However, this requirement is not always complied with, for reasons such as a lack of proper communication at country level between diagnostic laboratories and local and central Veterinary Services, technical delays in filing the information in WAHIS and a lack of country transparency.

Figure 4 shows the compliance of countries and territories in the Americas Region in terms of timely reporting of HPAI events after confirmation (submission time [ST]), in comparison with other regions, for events reported during the period 2021 to 18 August 2022.

The Americas Region had the best compliance regarding this disease (even if the number of events analysed was significantly smaller than in other regions and related to only three countries), submitting on average an immediate notification report 2.5 days after disease confirmation (median = 2.2), but still exceeding the required maximum delay of 24 hours after confirmation of the event. As a comparison, the other regions ranged from an average of 10.3 to 33.6 days (median between 3.4 and 8.2).

Figure 4. Distribution of ST (submission time after confirmation) values (no. of days) for submission of an immediate notification report on HPAI during the period 2021 to 18 August 2022, by region. The red dots represent the average submission time, while the dashed red lines represent the standard deviation.



Recent HPAI situation (wave 2021/2022): distribution of HPAI outbreaks reported to WOA and circulating subtypes

During the period 1 January 2021 to 18 August 2022, seven HPAI events were reported to WOA by three Members⁶ of the Americas Region through the early warning system.

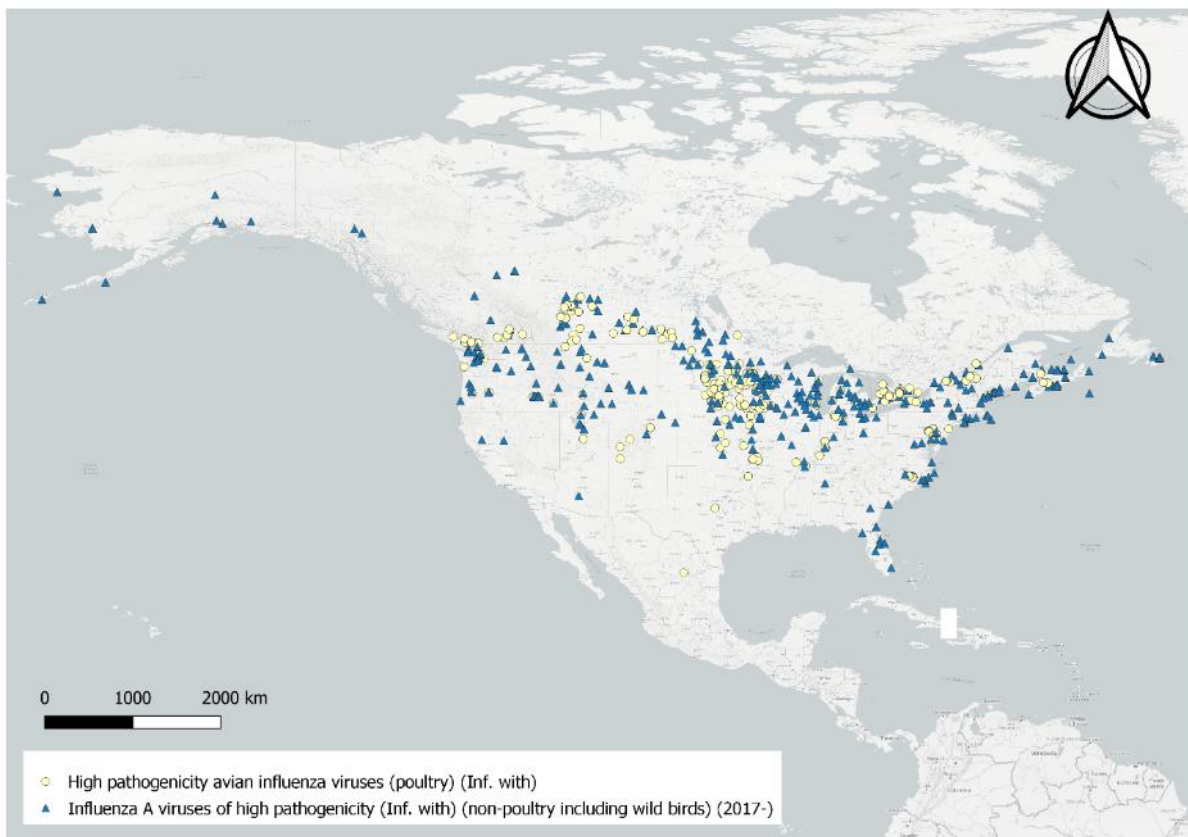
Four events for the recurrence of HPAI (subtype H5N1) were reported by Canada and the United States of America, between December 2021 and February 2022.

In April 2022, Mexico reported the first occurrence of a new strain (H7N3) in a zone.

Finally, the occurrence of HPAI in unusual hosts (see below) was reported by Canada and the United States of America by means of three immediate notifications submitted in May 2022.

The recent distribution of HPAI outbreaks is shown in Figure 5. During this period, 747 outbreaks were reported: 509 in domestic animals and 238 in wildlife. H5N1 was the subtype reported in the vast majority of these outbreaks (746/747), and only one outbreak was reported for HPAI subtype H7N3. The circulating subtype has had a marked impact on wild birds, with mass mortality events reported in the Americas but also in other regions⁷. Nineteen outbreaks were reported in 10 unusual mammal host species: *Canis latrans*, *Didelphis virginiana*, *Halichoerus grypus*, *Lynx rufus*, *Mephitis mephitis*, *Neovison vison*, *Pekania pennanti*, *Phoca vitulina*, *Procyon lotor* and *Vulpes vulpes*. These findings highlight a significant host plasticity demonstrated by the currently circulating H5N1 subtype.

Figure 5. Distribution of HPAI outbreaks reported to WOA by Members in the Americas Region through the early warning system, between 1 January 2021 and 18 August 2022



⁶ Canada, United States of America and Mexico

⁷ <https://www.ft.com/content/dc4bc7e7-40d7-4aad-9582-ea8935aac090>

Self-declaration of freedom

During the period 1 January 2021 – 18 August 2022, no new self-declarations of freedom for HPAI were submitted to WOAAH by Members of the Region. Self-declarations of freedom are still active for Bolivia (“Self-declaration by Bolivia as a country free of avian influenza in poultry” – published in January 2020), Chile (“Self-declaration of the freedom from avian influenza in poultry by Chile” – published in April 2020), and Ecuador (“Self-declaration of continental Ecuador as a zone historically free of infection from the highly pathogenic avian influenza virus in poultry” – published in October 2019).

Simulation exercises

WOAH also has a procedure to disseminate via the web announcements received from Members on disease introduction simulation exercises taking place in their countries. In most cases, these simulation exercises are designed to test and practice implementing an existing national contingency plan. Between 1 January 2021 and 18 August 2022, three WOAAH Members in the Americas informed WOAAH of simulation exercises conducted on avian influenza: Chile (March 2022), Brazil (July/August 2022) and Argentina (August/September 2022).

Vaccination for AI - current vaccination strategies

In many avian influenza endemic countries, H5 and other vaccination are employed as part of overall control efforts to limit disease. Recent H5 HPAI epidemic events have resulted in additional countries considering vaccination to control the disease and this is expected to increase with the current burden of avian influenza.

Chapter 10.4. of the *Terrestrial Code* provides a set of provisions for mitigating animal and public health risks posed by avian influenza viruses. It provides possibilities to prevent and control outbreaks through biosecurity measures, culling and stamping-out procedures. The *Terrestrial Code* also recognises that vaccination can be used as an effective complementary control tool when a stamping-out policy alone is not sufficient and that it could be part of a disease control programme. The WOAAH *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals (Terrestrial Manual)* provides standards on the requirements for vaccines against avian influenza and on the surveillance methods for detecting infection in vaccinated flocks and vaccinated birds.

Specific epidemic intelligence activity on HPAI

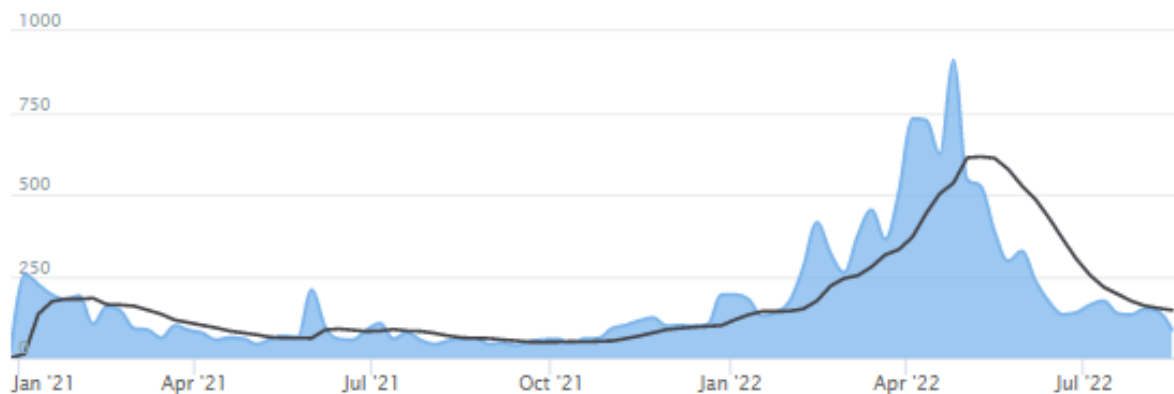
In addition to the official reporting provided by countries, and in order to better monitor the occurrence of several diseases including HPAI, the WOAAH Epidemic Intelligence Team created a specific search algorithm, using the Epidemic Intelligence from Open Source (EIOS) system⁸, to identify and monitor news published in the media and in scientific publications.

During the period 1 January 2021 – 18 August 2022, more than 67 000 items of news around the world were detected by the system for screening and analysis. Around 15 000 specifically concerned the Americas Region, and most of them (around 14 500) related to the three HPAI-affected countries in the region.

The dynamics of the news items detected in EIOS are reported in Figure 6. A peak in the number of items collected by the system was observed around April/May 2022, corresponding to the detection of several cases of the disease in unusual hosts (mammals), raising alerts in the region and in the media.

⁸ <https://www.who.int/initiatives/eios>

Figure 6. Distribution of the number of news items detected by the Epidemic Intelligence from Open Source (EIOS) system for the category “HPAI”, for the period 2021 to 18 August 2022. The blue area represents the number of items collected and the black line the moving average.



Update on the recent avian influenza situation in humans (2021/2022)

In April 2022, a human case of avian influenza A (H5N1) was reported in the United States of America. The case involved a person with direct exposure to poultry and involved in the culling of poultry with presumptive H5N1 avian influenza. This represented the second human case associated with this specific group of H5 viruses that are currently predominant, and the first case in the United States of America. The first case internationally occurred in December 2021 in the United Kingdom. In total, more than 880 human infections with earlier H5N1 viruses have been reported since 2003 worldwide; however, the predominant H5N1 viruses currently circulating among birds globally are different from earlier H5N1 viruses⁹. In particular, the HA gene of the viruses causing the current global incursions belongs to the 2.3.4.4 clade, which is distinct from the previous clades involved in transcontinental disseminations, such as the clades 2.2 and 2.3.2.1 described between 2005 and 2014. Since 2014, genetically distinct HPAI H5Nx clade 2.3.4.4 viruses have posed a considerable threat to poultry, remaining endemic in many parts of Eurasia and Africa and continuing to evolve into subclades that can cause epidemics globally. In particular, in the last six years (since 2016), the A/Goose/Guangdong/1/96 (GsGd) H5 clade 2.3.4.4b viruses have been the ones most frequently detected in domestic poultry and in a broad range of wild bird species across multiple continents (Asia, Europe, Africa, the Americas).

Reporting on low pathogenicity avian influenza (LPAI) transmissible to humans as a listed disease

In 2021, after an assessment of LPAI's compliance with the WOAHA criteria for listing, Chapter 1.3. of the *Terrestrial Code* was amended, and “infection of domestic and captive wild birds with low pathogenicity avian influenza viruses having proven natural transmission to humans associated with severe consequences” was adopted for inclusion in the list of diseases. The requirement to notify the disease came into force in January 2022. As of 18 August, no such event had been detected and reported to WOAHA.

⁹ <https://www.cdc.gov/media/releases/2022/s0428-avian-flu.html>

OFFLU¹⁰ activities

In response to the recent extensive upsurge and impact of HPAI outbreaks, OFFLU network experts participated in numerous teleconferences and meetings to share epidemiological and experimental data and diagnostic protocols needed to inform surveillance and control policies and build technical partnerships with network members. OFFLU and WHO were in regular communication to share public health and animal health data so that risk assessments could be continually updated and to establish a consensus on issues related to the animal-human interface, including pandemic preparedness.

Summary

North America is currently experiencing the worst avian influenza epidemic wave recorded since 2005, with all the main indicators (number of outbreaks, number of cases, number of animal losses) showing values almost three times higher than the 2014/2015 epidemic wave.

Even if HPAI has been historically reported only in the northern part of the Region, the risk of further spread southward through bird flyways, due to the progressive adaptation of the virus to wild birds, is increasingly higher.

Even though HPAI viruses have once again demonstrated their capacity to significantly impact animal and public health, there is still a highly variable level of surveillance activities applied in Members and non-Members of the Americas Region. This is particularly noticeable for surveillance in wildlife, with around 50% of the countries declaring they have no surveillance in place.

This is quite concerning, considering that the new circulating H5N1 subtype seems to be very well adapted to wildlife, and having demonstrated flexibility to adapt to unusual hosts (mammals).

Of particular interest is the reporting of HPAI in several unusual host species (N=10), representing the highest number of HPAI unusual host species reported in WAHIS since 2005.

In this highly variable and dynamic epidemiological situation, WOAHA's epidemic intelligence activity is pivotal to track and follow almost in real time any unusual sign of disease spread and changing epidemiological behaviour.

¹⁰ OFFLU: WOAHA/FAO global network of expertise on animal influenza

Update on animal cases of infection with African swine fever virus

Background and importance of the disease in the Region

African swine fever (ASF) was first described in Kenya, in 1921, and was later observed in several Sub-Saharan countries. ASF is one of the most complex and socio-economically devastating animal diseases due to its huge impact on animal production and high mortality. In addition, the virus presents several characteristics that facilitate its spread and complicate its eradication after introduction in a previously free area¹¹. In 1957, ASF spread to Portugal, outside its “traditional” range in Africa, due to waste from airline flights being fed to pigs near Lisbon airport¹², and then to several other countries in Europe. In the Americas Region, the first country to report the occurrence of the disease was Cuba, in 1971, and the virus was probably introduced from Spain. In Cuba, the first epizootic started in a fattening holding in the province of Havana. In January 1980, a second epizootic occurred in the eastern part of the island, close to Haiti. ASF was also reported in Brazil (1978), Dominican Republic (1978) and Haiti (1979).

All the affected countries in the Americas Region implemented control strategies that enabled the progressive eradication of the disease. The disease was eradicated from Cuba in 1980, Brazil in 1981 and Dominican Republic in 1981. Haiti was the last country in the region to eradicate the disease, in 1984. The impact of ASF introduction in the region was very high. In Cuba alone, the introduction in 1980 led to a total cost, including the eradication programme, of USD 9.4 million¹³. A study published in 2020 estimated that the potential cost of ASF introduction in the United States of America could be as much as USD 50 billion in revenue losses (assuming the worst case scenario with the disease spreading to feral swine and that the country was unable to eliminate the disease over a ten-year projection period)¹⁴.

Given the emergency situation caused by the ASF outbreaks detected in the Dominican Republic and notified to WOAHA on 29 July 2021, the Standing Group of Experts on African Swine Fever (SGE-ASF) in the Americas, within the framework of the Global Framework for the Progressive Control of Transboundary Animal Diseases (GF-TADs), met as a matter of urgency to discuss the actions to be taken. The Members of the SGE-ASF created a Regional Emergency Management Team to coordinate the required actions to mitigate the current outbreaks, under the coordination of the WOAHA Regional Representation for the Americas. The World Organisation for Animal Health calls on countries to strengthen their surveillance efforts, as one of the main actions to prevent further disease spread.

Trends in ASF surveillance activities implemented in the Region since 2005

Considering the importance of ASF surveillance, we evaluated the capacities for disease detection of countries in the region. The analysis focused on two main indicators, obtained from the data reported through six-monthly reports for the period 2005 – 2021: i) percentage of reporting countries and territories having declared that the disease is notifiable; ii) percentage of reporting countries having reported the implementation of surveillance⁵ activities.

¹¹ Sánchez-Vizcaíno, J.M., Mur, L. and Martínez-López, B., 2012. African swine fever: an epidemiological update. *Transboundary and emerging diseases*, 59, pp.27-35.

¹² Costard, S., Wieland, B., De Glanville, W., Jori, F., Rowlands, R., Vosloo, W., Roger, F., Pfeiffer, D.U. and Dixon, L.K., 2009. African swine fever: how can global spread be prevented? *Philosophical Transactions of the Royal Society B: Biological Sciences*, 364(1530), pp.2683-2696.

¹³ Simeon-Negrin R. E., Frias-Lepoureau M. T., 2002. Eradication of African swine fever in Cuba (1971 and 1980). In *Trends in emerging viral infections of swine* (eds Morilla A., Yoon K. J., Zimmerman J. J.), pp. 125–131 Ames, IA: Iowa State Press

¹⁴ Carriquiry, M., A. Elobeid, D.A. Swenson, and D.J. Hayes. 2020. "Impacts of African Swine Fever in Iowa and the United States." Working paper 20-WP 600. Center for Agricultural and Rural Development, Iowa State University.

Figure 7 details the evolution of the percentage of reporting countries declaring the disease notifiable in domestic animals and/or in wildlife during the period 2005 – 2021. On average, during the whole period, the disease was reported as notifiable by 90% of the reporting countries and territories in domestic animals and by 57% in wildlife. For both animal groups (domestic and wildlife) the graph shows a trend for an increase in these percentages since 2005 (please note, the data for 2021 are still only partial, and should be treated with caution).

Figure 7. Evolution of the percentage of reporting countries and territories declaring ASF as a notifiable disease, by animal group and by semester, between 2005 and 2021. *Black lines represent the original data, while red lines represent the trend interpolated using the loess approach. Light green areas represent the standard error of the interpolation. (reports received by WOAHA as of 18 August 2022)*

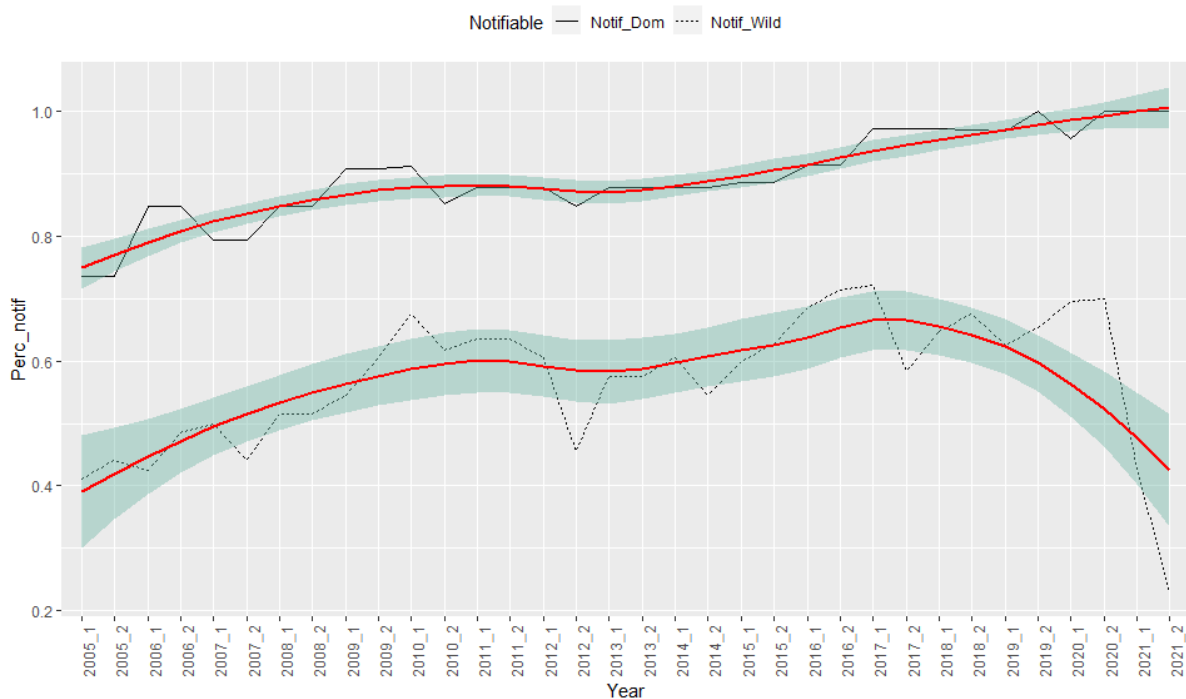
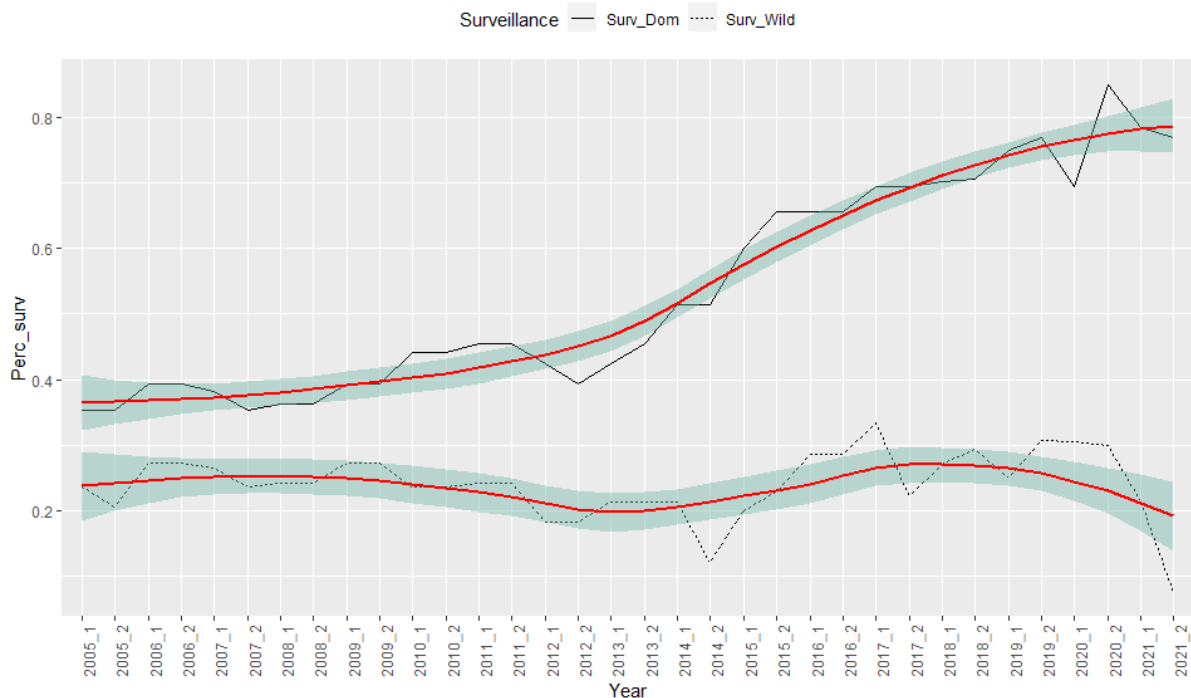


Figure 8 show the evolution of ASF surveillance activities in the Americas Region. On average, during the whole period, surveillance activities on ASF were reported by 54% of Members and non-Members in domestic animals and by only 24% in wildlife. The results are quite worrying in terms of the real capacity of Members and non-Members of the Americas Region to quickly and effectively detect any introduction of the disease in a previously free area. The graph shows a positive and improving trend in surveillance activities in domestic animals, which appear to have been more widely implemented in recent years. The application of surveillance activities in wildlife remained at a very low level during the whole period of the analysis. The data for 2021 are still only partial, and should be treated with caution.

Figure 8. Evolution of the percentage of reporting countries and territories declaring ASF surveillance activities, by animal group and by semester, between 2005 and 2021. Black lines represent the original data, while red lines represent the trend interpolated using the loess approach. Light green areas represent the standard error of the interpolation. (reports received by WOAHA as of 18 August 2022)



Recent situation (2021/2022): distribution of ASF outbreaks reported to WOAHA

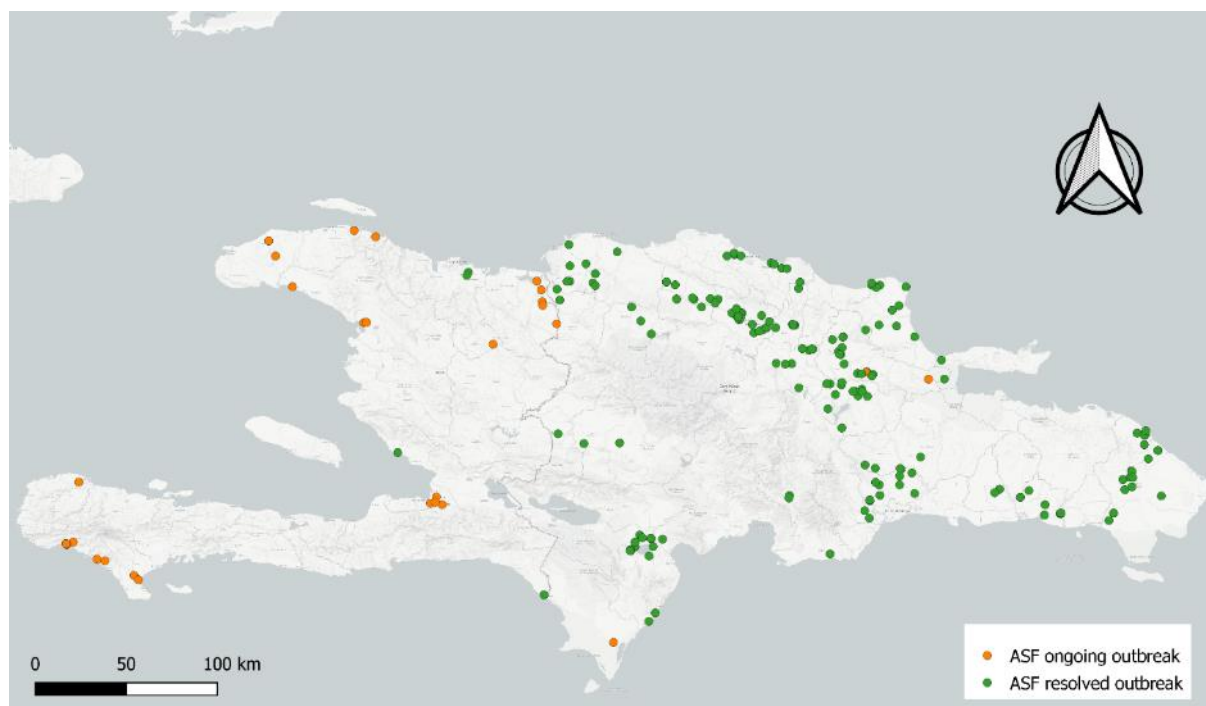
During the period 1 January 2021 to 18 August 2022, two ASF events were reported to WOAHA by two Members¹⁵ of the Americas Region through the early warning system (Figure 9).

On 29 July 2021, Dominican Republic reported the recurrence of the disease, after a period of absence of around 40 years (date of previous occurrence 30 April 1981). The event started on 10 April 2021, but the disease was only confirmed around four months later, on 28 July 2021. The first outbreaks affected backyard pigs in Monte Cristi (close to the border with Haiti) and Sánchez Ramírez administrative divisions. Since then, 224 outbreaks have been reported in backyard and farmed swine in 27 administrative divisions, and four outbreaks are still ongoing. The last follow-up report to provide an update on the ASF situation in the country was sent in February 2022; as of 18 August 2022, no further follow-up reports had been provided.

On 19 September 2021, Haiti submitted an immediate notification to notify the recurrence of the disease (date of previous occurrence was 21 September 1984). An outbreak was reported in backyard swine in the “Sud-Est” administrative division, very close to the border with Dominican Republic. The start of the event was reported as 26 August 2021. Thirty-one additional outbreaks were then reported in the country, mostly in backyard swine. Twenty-seven outbreaks are still ongoing. The last follow-up report to provide an update on the ASF situation in the country was sent in April 2022; as of 18 August 2022, no further follow-up reports had been provided.

¹⁵ Haiti and Dominican Republic

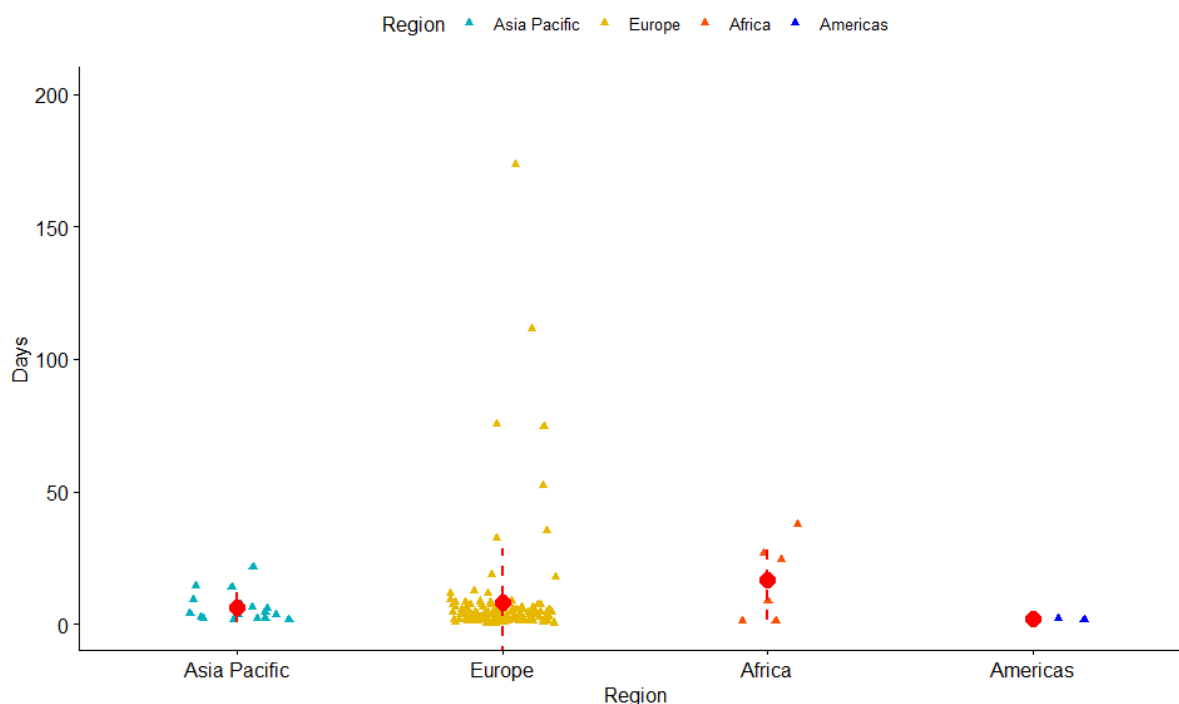
Figure 9. Distribution of ASF outbreaks reported to WOAHA by Members in the Americas Region through the early warning system, between 1 January 2021 and 18 August 2022



Compliance statistics on ASF reporting (Americas Region vs other regions)

In terms of compliance with the requirements for timely notification of ASF disease events through immediate notifications, the two events reported by the Americas Region show an average submission time after confirmation (ST) of 1.9 days (median = 1.9). In comparison, the average submission times in the other affected WOAHA regions were respectively 8.2 days (median = 3.6) in Europe, 16.5 days (median = 16.5) in Africa and 6.2 days (median = 4) in Asia and the Pacific (Figure 10). When comparing the submission times among the regions, one should take into consideration the difference in the number of events reported by each region (Americas = 2 events; Africa = 6 events; Asia and the Pacific = 17 events; Europe = 131 events).

Figure 10. Distribution of submission time after confirmation (ST) values (no. of days) for ASF during the period 2021 and 18 August 2022. The red dots represent the average submission time, while the dashed red lines represent the standard deviation.



Self-declaration of freedom

During the period 1 January 2021 – 18 August 2022, a new self-declaration of freedom for ASF was submitted to WOA. In October 2021, the following self-declaration was submitted: “Self-declaration of historical freedom from African swine fever by the United States of America and the establishment of a Protection Zone for U.S. Territories in the Caribbean”. The self-declaration for the establishment of a protection zone in the Caribbean was detailed in a second document defining the U.S. Territories in the Caribbean: the Commonwealth of Puerto Rico (PR) (including the islands of Mona, Monito, Desecheo, Caja de Muertos and numerous other small cays that lie offshore of PR) and the U.S. Virgin Islands (USVI) (comprised of three principal islands – St. Croix, St. John, and St. Thomas – plus 50 smaller islands, cays and islets that are part of the Caribbean archipelago). A self-declaration of freedom is still active for Canada (“Self-declaration of historical freedom from African swine fever by Canada” – published in July 2019). As a comparison with another region, in 2007, following the introduction of ASF in Europe, many European countries (around 20) submitted a self-declaration of ASF freedom to give visibility to their status and to the measures they implement. Such a dynamic has not yet been seen in the Americas.

Simulation exercises

Simulation exercises are conducted by countries to test and practice implementing an existing national contingency plan. Since January 2021, several countries have notified WOA that they have conducted simulation exercises for ASF: Cuba (May 2021), Peru (November 2021), Chile (November 2021), Colombia (November/December 2021), Nicaragua (April 2022), Honduras (July 2022), and Brazil (July/August 2022). The high number of simulation exercises is most likely linked to the recent reports

of the disease in Dominican Republic and Haiti. Announcements of all the simulation exercises are published and available on the WOAHA website¹⁶.

Specific epidemic intelligence activity on ASF

As already mentioned in the HPAI section, epidemic intelligence activities are conducted on several diseases of particular interest to WOAHA. A specific search algorithm has been implemented in the EIOS system¹⁷ to detect relevant information related to ASF. During the period 1 January 2021 – 18 August 2022, more than 24 000 items of news around the world were detected by the system for screening and analysis. Of these, around 6 000 specifically concerned the Americas Region. The dynamics of the news detected in EIOS are reported in Figure 11. A peak in the number of news items was observed after July 2021, corresponding to the detection of ASF in Dominican Republic. The role of the epidemic intelligence activity on ASF is not confined to investigating news of animal disease events circulating in the media and also includes tracking any other relevant information, combating misinformation and disinformation and helping to avoid the generation and propagation of false information.

Figure 11. Distribution of the number of news items detected by the Epidemic Intelligence from Open Source (EIOS) system for the category “ASF”, for the period 2021 to 18 August 2022. The blue area represents the number of items and the black line the moving average.



ASF situation reports

To ensure Members, non-Members, other stakeholders and the international community are kept as fully informed as possible of the global ASF situation, WOAHA produces a bi-weekly update and makes it available on its website. These reports provide an update on the recent reporting situation (i.e. during the previous 2 weeks), followed by a summary of the main data relating to the period 2020 – 2022. The disease situation and dynamics are commented on, with a brief epidemiological interpretation and recommendations. On average each report has been viewed by more than 600 people (minimum 66 – maximum 1846), with an average visualisation time of 2 min 36 sec, indicating an overall high interest in the topic. It is worth highlighting that the ASF page, including the ASF situation report, is one of the most visited pages on the WOAHA website, with more than 6000 visits/week on average.

¹⁶ <https://www.woah.org/en/what-we-do/animal-health-and-welfare/disease-data-collection/simulation-exercises/>

¹⁷ <https://www.who.int/initiatives/eios>

Main outcomes of the WOAHA Observatory pilot phase prototype on ASF

During its pilot phase, the WOAHA Observatory developed several prototypes. ASF was the disease targeted for the last of these¹⁸. One of the indicators of potential interest for the Americas Region is the percentage of Members that reported zoning as part of their prevention and control measures: only 6% of Members in the Americas reported zoning as a control measure in their 2019 six-monthly reports, compared to 19%, 22% and 42% of Members in Africa, Asia and the Pacific and Europe, respectively. It is worth noting that a vast majority of the Members that reported implementing zoning also reported the absence of the disease, implying that they were planning to implement zoning in the event of the disease being introduced.

In addition, at global level and during the same period, 100 Members reported implementing precautions at borders (to prevent the introduction of ASF) and 62 reported implementing movement control within their territory). It is interesting to note that all Members in the Americas Region that provided a six-monthly report in 2019 reported implementing precautions at borders; however, only 8% reported movement controls within their territory. These figures are consistent with the 2021 figures (data extracted on 15/05/2022 when many six-monthly reports for 2021 had not yet been received): All the Members that had submitted their six-monthly reports for 2021 indicated that they implemented precautions at borders for ASF but none reported implementing movement controls within their territory.

Summary

The detection of ASF in July 2021 in the Americas Region, indicating a jump of the disease of thousands of kilometres from the closest active outbreaks, represented a major change in the global disease epidemiology, confirming once more the capacity of the virus to easily elude prevention and control measures.

The presence of ASF in the Caribbean has increased the risk of further spread to the rest of the Americas Region, threatening high economic costs and increasing the risk of food insecurity.

The low percentage of countries reporting active or passive surveillance activities in the Americas Region might increase i) the risk of undetected circulation of the virus, and ii) delayed identification of the disease after its introduction in a country.

The need to improve the surveillance and diagnostic capacity of countries in the Region is highlighted by the time needed to confirm the events: while the submission time to report the events was relatively short, the final confirmation of the disease took around four months after the start of the first outbreak.

Information about the two ongoing events in the Region has not been updated in the recommended manner (follow-up reports should be submitted on a weekly basis), with an interval of more than 4 months between reports. Regular follow-up reports on ongoing ASF events are crucial so that Members can be updated on the evolving disease situation in the Region.

Lastly, WOAHA's epidemic intelligence activity also has an important role to play in closely monitoring the evolution of the ASF situation, supplementing the official information provided by Members with unofficial information circulating in the media.

¹⁸ [Observatory - WOAHA - World Organisation for Animal Health](#)

Update on reporting of aquatic animal diseases by countries and territories of the Region

In compliance with the relevant WOAAH standards, Members are required to report aquatic animal disease data through WAHIS, via two main channels:

a) Immediate notifications and follow-up reports: these reports are required from Members solely in the case of exceptional events concerning WOAAH-listed diseases and emerging diseases (as described in Chapter 1.1. of the *Aquatic Code*). In a given year, the number of Members in the region notifying such exceptional events is quite small.

b) Six-monthly reports: for each listed disease, Members are required to send, every six months, information on the following: the disease situation (present/absent/no information collected), prevention and control measures implemented and, if a disease is present, aggregated data on the number of outbreaks, cases, deaths, etc. This information is required for all listed diseases and covers stable aquatic animal health situations as well as evolving situations.

This section of the report provides an overview of Members' reporting of aquatic animal diseases in the Region, based on some key indicators.

Recent aquatic animal disease situation (2021/2022), notified through immediate notifications and follow-up reports

The recent situation for aquatic animal diseases reported through immediate notifications and follow-up reports in the Americas Region is shown in Figure 12. During this period, four immediate notifications were submitted to report the occurrence of four different diseases (infectious hypodermal and haematopoietic necrosis, infectious spleen and kidney necrosis (ISKNV), infectious salmon anaemia and necrotising hepatopancreatitis). The reports were submitted by three WOAAH Members: Brazil, Colombia and United States of America.

Two of these events deserve to be highlighted for their epidemiological relevance.

In April 2021, Colombia reported the first occurrence of infectious hypodermal and haematopoietic necrosis in the country (event started in January 2021). In June 2021, the event was declared closed, as stable.

In February 2021, Brazil reported the occurrence of ISKNV, considered an emerging disease by Brazil (event started in April 2020). The event was declared resolved in November 2021.

During the period 2021 to 18 August 2022, a total of 22 outbreaks were reported for aquatic animal diseases through the early warning system.

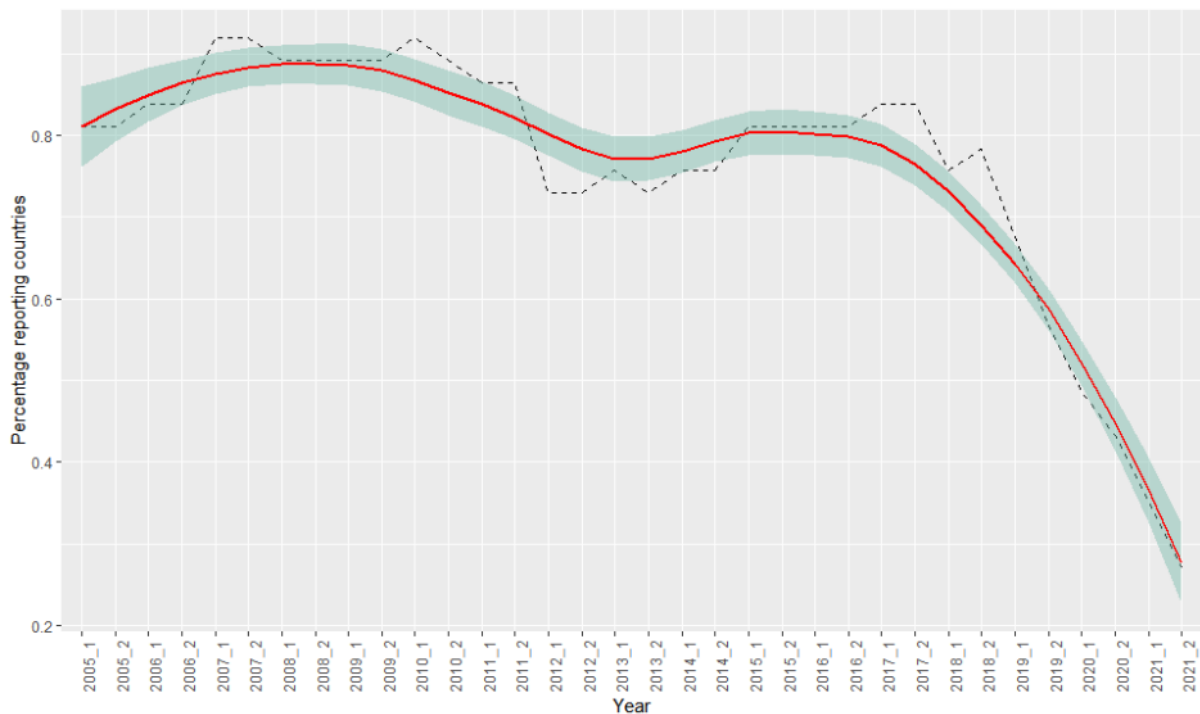
Figure 12. Distribution of aquatic animal disease outbreaks reported to WOAH by Members in the Americas Region through the early warning system, between 1 January 2021 and 18 August 2022



Compliance with standards for submission of six-monthly reports

To evaluate compliance with WOAAH requirements for the reporting of aquatic animal diseases, we evaluated the evolution of the percentage of countries and territories in the region that submitted their six-monthly reports during the period 2005 – 2021 (as of 18 August 2022 – Figure 13). For each semester during this period, an average of 76% of the countries and territories of the Americas Region submitted their six-monthly report for aquatic animal diseases. The overall trend was for a decline in the percentage, especially after 2011. The marked reduction in report submissions for 2019, 2020 and 2021 is most likely due to the impact of the launch of the new WAHIS, with Members experiencing some difficulties in submitting their reports.

Figure 13. Evolution of the percentage of countries and territories having submitted their six-monthly report for aquatic animal diseases, by semester, between 2005 and 2021. *Black line represents the original data, while red lines represent the trend interpolated using the loess approach. Light green areas represent the standard error of the interpolation. (reports received by WOAAH as of 18 August 2022)*

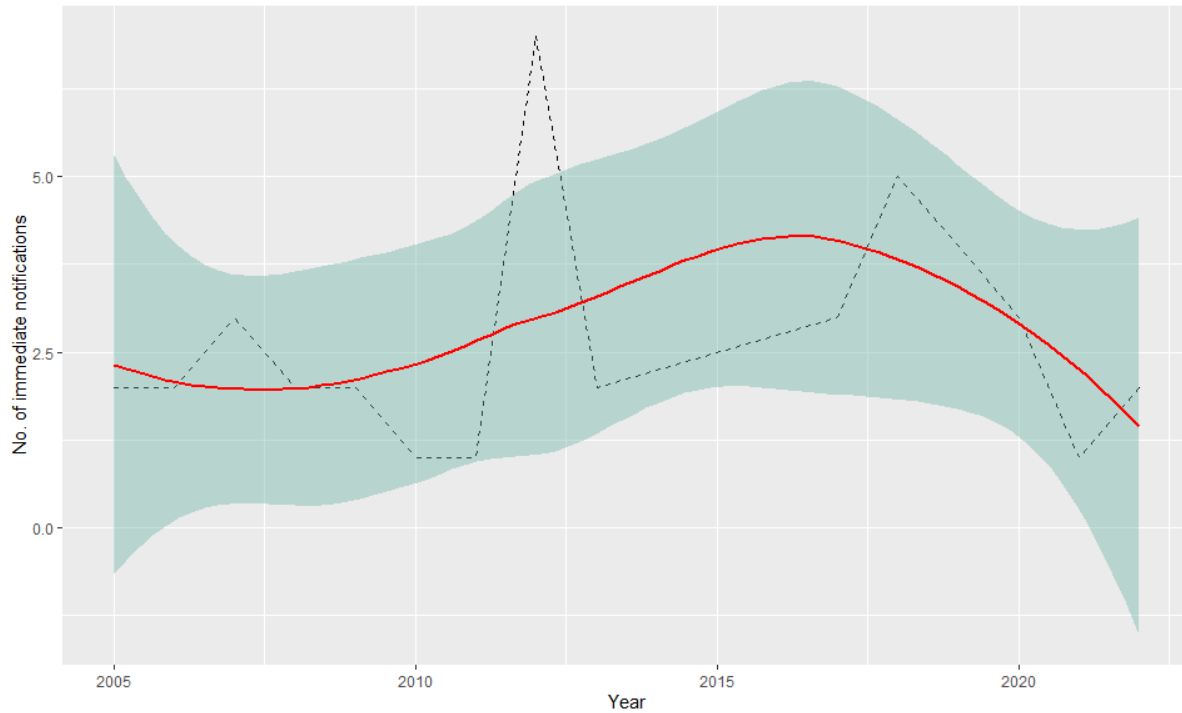


Compliance with standards for timely submission of immediate notifications and follow-up reports for listed aquatic animal diseases

The trend in the number of immediate notifications submitted during the period 2005 – 2021 for aquatic animal diseases in the Region is presented in Figure 14. In total, only 40 events were reported through immediate notifications during the whole period, with a peak in 2012 (N=7) followed by a decreasing trend, with only one immediate notification submitted in 2021. Infectious salmon anaemia virus was the most frequently reported disease in the region during the period 2005 – 2021 (8 immediate notifications), followed by infectious hypodermal and haematopoietic necrosis virus (5 immediate notifications), and white spot syndrome (5 reports).

Figure 14. Evolution of the number of immediate notification submitted each year for aquatic animal diseases by countries and territories in the Americas Region during the period 2005 – 2021

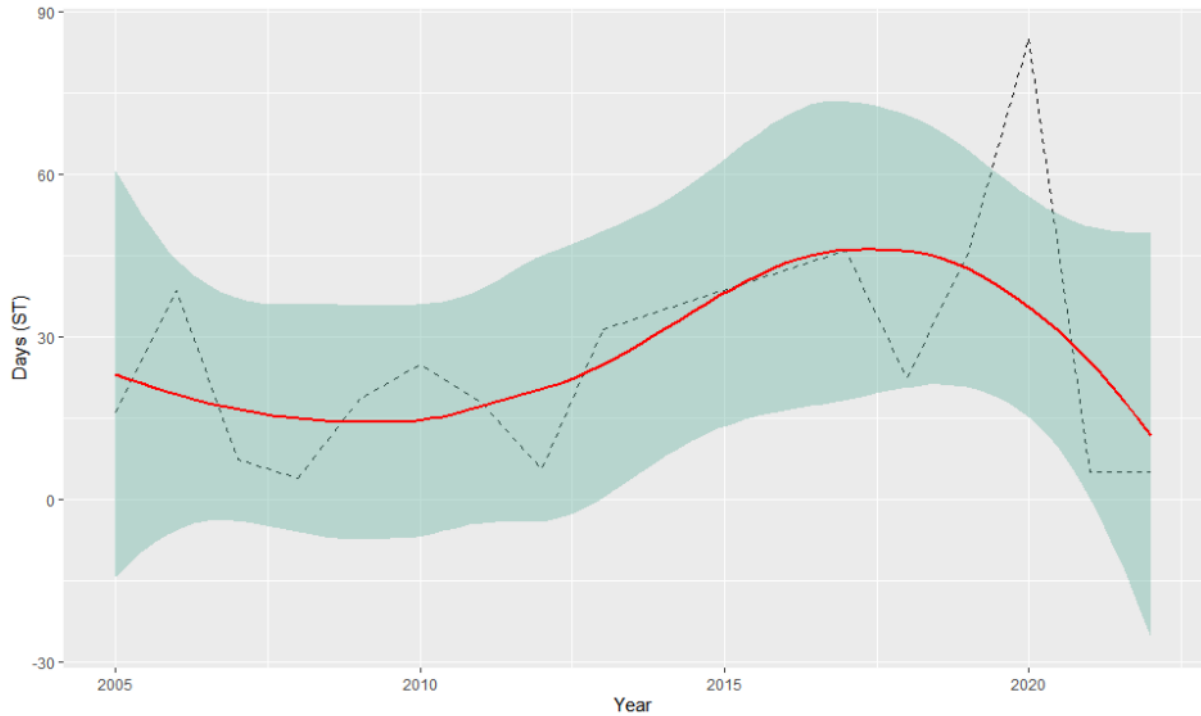
Black line represents the original data, while red lines represent the trend interpolated using the loess approach. Light green areas represent the standard error of the interpolation. . (reports received by WOAHA as of 18 August 2022)



Regarding compliance with standards for timely submission of immediate notifications of aquatic animal diseases, countries and territories of the Americas Region submitted their immediate notifications an average of 18.5 days (median = 9.6) after confirmation of the event. Submission times showed high variability during the period 2005 – 2021 (Figure 15).

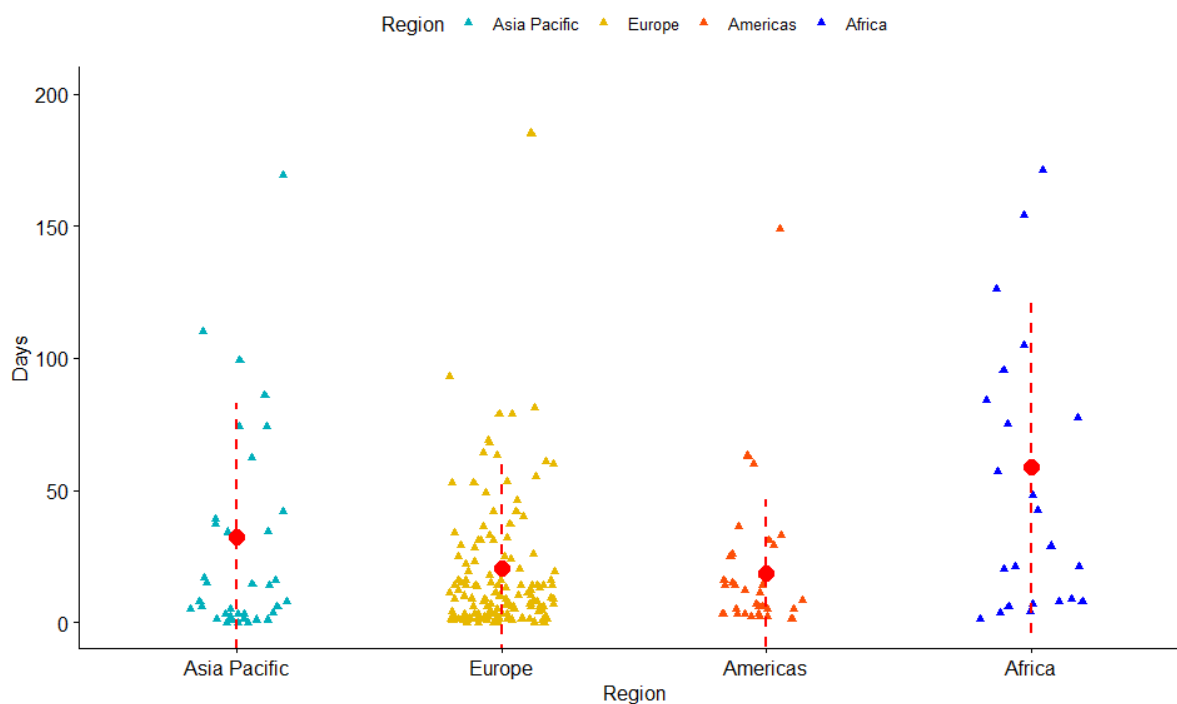
Figure 15. Evolution of the submission times (STs, in no. of days) for the immediate notifications of aquatic animal diseases submitted each year by countries and territories in the Americas Region between 2005 and 2021.

Black line represents the original data, while red lines represent the trend interpolated using the loess approach. Light green areas represent the standard error of the interpolation. . (reports received by WOAHA as of 18 August 2022)



These ST values are very close to the ones recorded for Europe (average = 20.3; median = 9), and lower than the ones recorded for Africa (average = 58.6; median = 35.6) and Asia and the Pacific (average = 32.3; median = 8) (Figure 16).

Figure 16. Distribution of ST values (no. of days) for aquatic animal disease immediate notifications during the period 2005 to 18 August 2022. The red dots represent the average submission time, while the dashed red lines represent the standard deviation.



Finally, regarding compliance with the standards for timely submission of follow-up reports for listed diseases (weekly submission), currently in the Americas Region only one event for an aquatic animals disease is still open, and it is not the subject of regular updates. Information on the event involving Tilapia lake virus in Peru, reported on February 2018, was updated until February 2020 but, since then, no further follow-up report has been provided through WAHIS.

Surveillance on aquatic animal diseases: disease notifiable at national level and surveillance activities

As also in the HPAI and ASF sections of the report, this analysis focused on two main indicators, obtained from the data reported through six-monthly reports: i) average percentage of reporting countries and territories having declared the aquatic animal disease notifiable (Figure 17); ii) average percentage of Members and non-Members having reported the implementation of surveillance⁵ activities for aquatic animal diseases (Figure 18). The analysis considered the information from the six-monthly reports for 2017 and 2018 (the most recent years with a high number of Members and non-Members providing their six-monthly reports).

On average, the aquatic animal diseases were reported as notifiable by 53% of the Members in farmed aquatic animals and 49% in wild aquatic animals. Regarding surveillance, on average 34% of Members reported applying some surveillance for farmed aquatic animals and only 22% for wild aquatic animals.

Figure 17. Percentage of reporting countries and territories in the Americas Region that declared each aquatic animal disease as notifiable in farmed and wild aquatic animals in their six-monthly reports for the years 2017 and 2018 (the percentages are the average for this period).

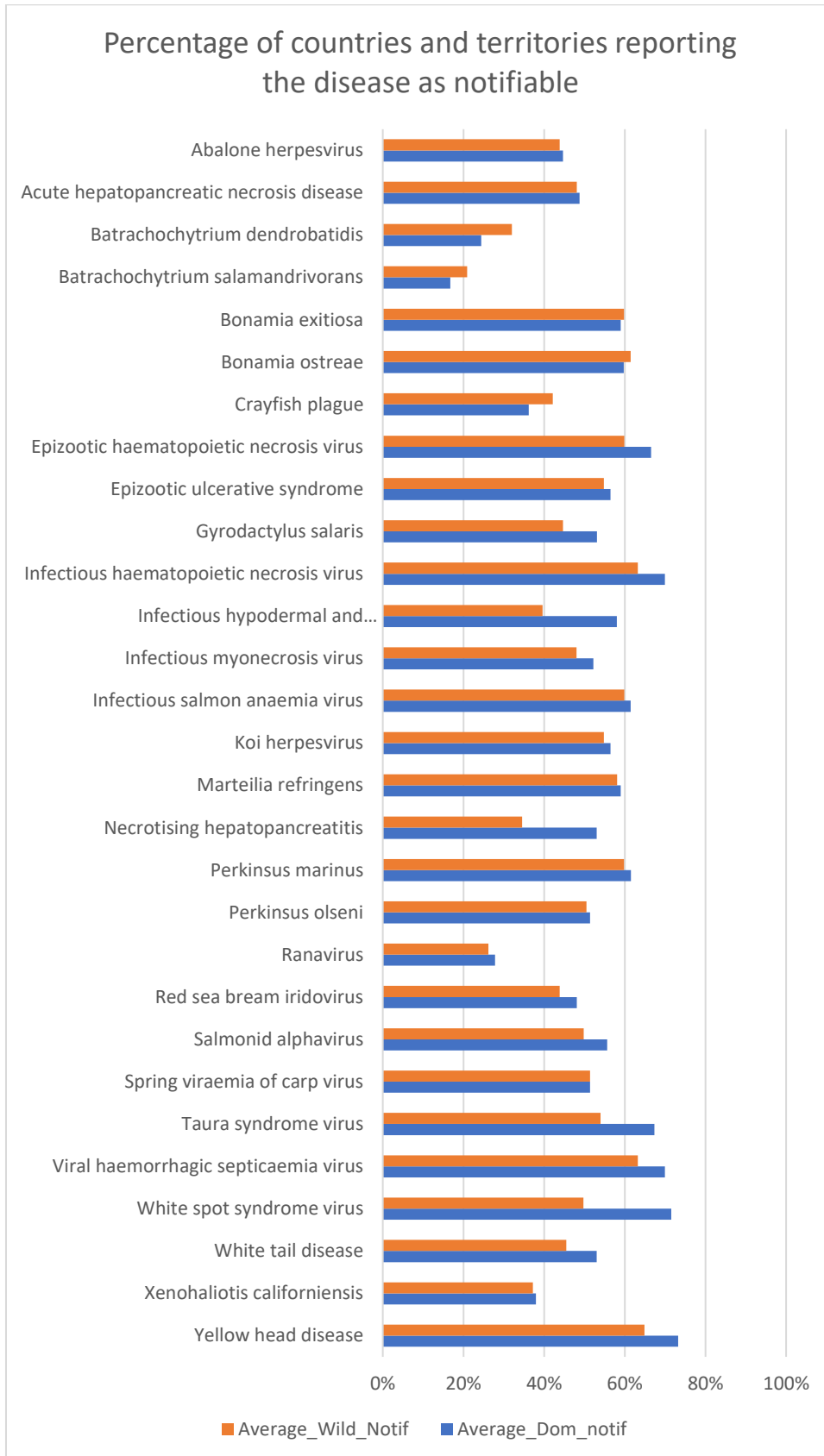


Figure 18. Percentage of reporting countries and territories in the Americas Region that declared implementing surveillance activities in farmed and wild aquatic animals in their six-monthly reports for the years 2017 and 2018, by aquatic animal disease (the percentages are the average for this period)



The WOAAH Aquatic Animal Health Strategy

The WOAAH Aquatic Animal Health Strategy was launched in 2021 with the aim of improving aquatic animal health and welfare worldwide. One of the key activities of the strategy is to identify and understand both the barriers to timely and accurate disease reporting, and the circumstances in which timely reporting actually occurs. Timely and accurate information on disease status is fundamentally important to enable Members to implement standards and prevent the transboundary spread of diseases. Prompt and accurate reporting builds trust and underpins the effectiveness of international arrangements for safe trade. Reporting of aquatic animal diseases has improved, but more must be done to build a culture of conscientious reporting.

Summary

The findings of this reports highlight that in the Americas Region, as in other regions, there is still room to improve the reporting of aquatic animal diseases.

To better understand the barriers to the implementation of aquatic animal health standards, a survey was sent to National Focal Points in April 2021 and its main results will be published by the end of 2022.

Very few exceptional epidemiological events involving aquatic animal diseases have been reported since 2005 and there has even been a downward trend in recent years.

The submission of six-monthly reports has followed a similar downward trend. Furthermore, on average around 25% of the Members in the region do not submit their six-monthly reports for aquatic animal diseases.

The median submission time after confirmation of an exceptional event (9.6 days) is significantly higher than the maximum delay indicated in the *Aquatic Code* (24 hours).

Considering the above mentioned survey on aquatic animal sent to National Focal Points, a large majority of respondents from the Americas Region declared they were very confident they had submitted accurate and timely reports on aquatic animal diseases; this percentage was higher than the average percentage declared in other regions.

Finally, the data provided by Members in the region highlight a lack of surveillance activities for most of the aquatic animal diseases by more than half of the Members in the region.

The results of the survey on aquatic animal sent to National Focal Points, show that compliance with standards on disease surveillance is highest for fish diseases, followed by crustacean diseases, mollusc diseases and amphibian diseases. Specifically, almost half of the responding Members at global level consider that they have a high degree of compliance with standards relating to fish diseases, while 59% of them consider that they do not comply with amphibian disease standards or that those standards are not relevant to their country/territory.

Understanding the barriers to transparency in disease reporting will help Members see the benefits of sharing information to improve their aquatic animal production and to inform the development of approaches to address the identified barriers to reporting. This will be done through the implementation of the WOAAH Aquatic Animal Health Strategy. Preliminary results from the survey sent to National Focal Points indicate that the Americas Region is the second only to the Africa Region in declaring the highest number of blocking or highly impacting barriers to the application of aquatic animal health standards.