WAHIS wildlife disease reporting system

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WOAH – World Animal Health Information and Analysis Department

WOAH – Data Integration Department

World Organisation for Animal Health | Organisation mondiale de la santé animale | Organización Mundial de Sanidad Animal

Regional webinar for WOAH National Focal Points on Wildlife in Europe

Wildlife disease education and prediction at the human-animal interface

World Organisation for Animal Health

Contents

- Reporting wildlife diseases to WOAH
  - listed and non-listed diseases
- Statistics on reporting wildlife diseases to WOAH
- Support for reporting non-listed diseases

1. Reporting wildlife diseases to WOAH

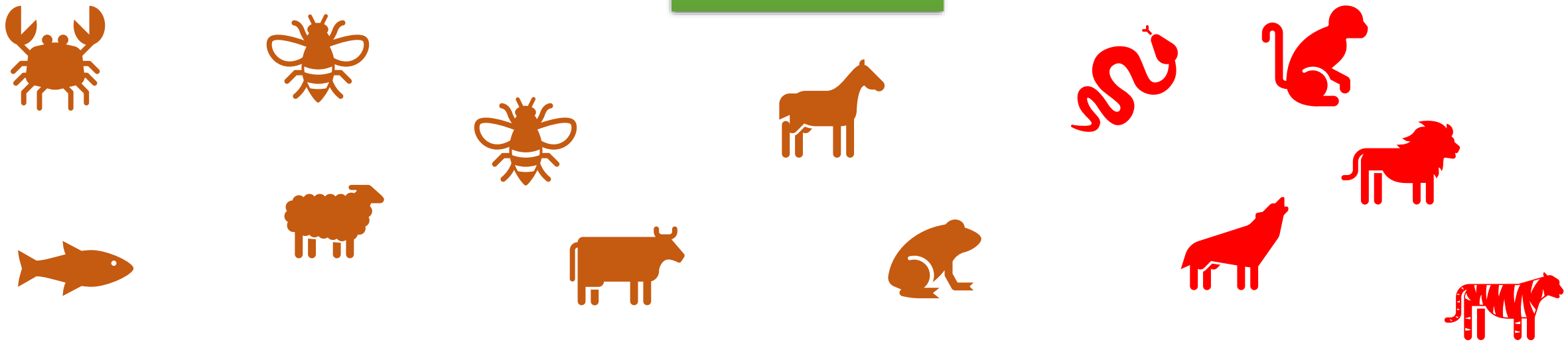
• Reporting wildlife diseases to WOAH

117 listed diseases
Domestic animals and wildlife

Emerging diseases

182 Members + 24 Territories

53 Non-listed diseases in wildlife



https://www.oie.int/en/what-we-do/animal-health-and-welfare/animal-diseases/

Reporting LISTED Diseases

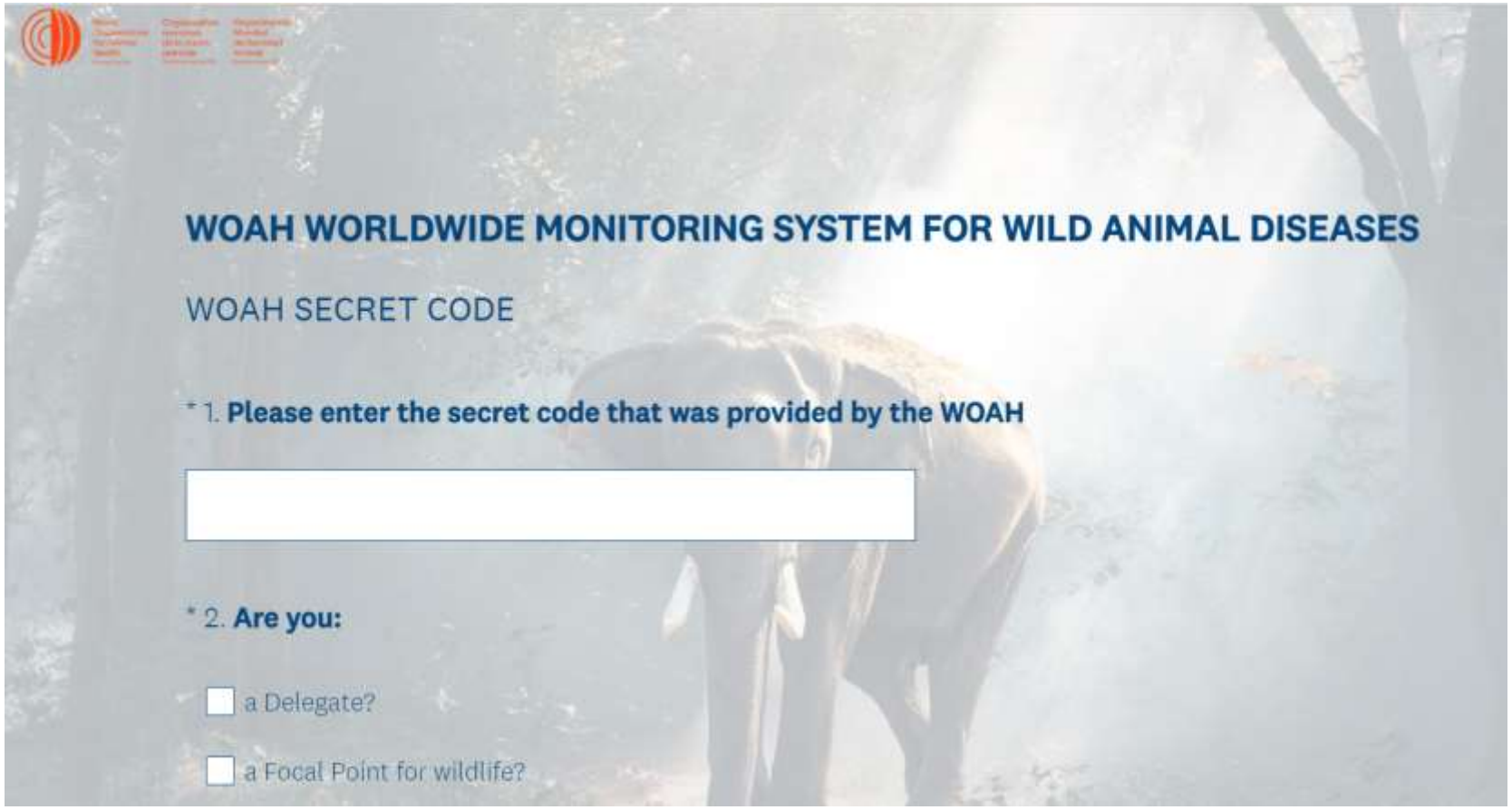
- User-friendly, intuitive, time-efficient
- High resolution dynamic mapping
- Open access to WAHIS data

https://wahis.woah.org

Facilitates reporting, promotes the use of data

Reporting NON-LISTED diseases

[WOAH WORLDWIDE MONITORING SYSTEM FOR WILD ANIMAL DISEASES Survey (surveymonkey.com)]



2.Statistics on reporting wildlife diseases to WOAH

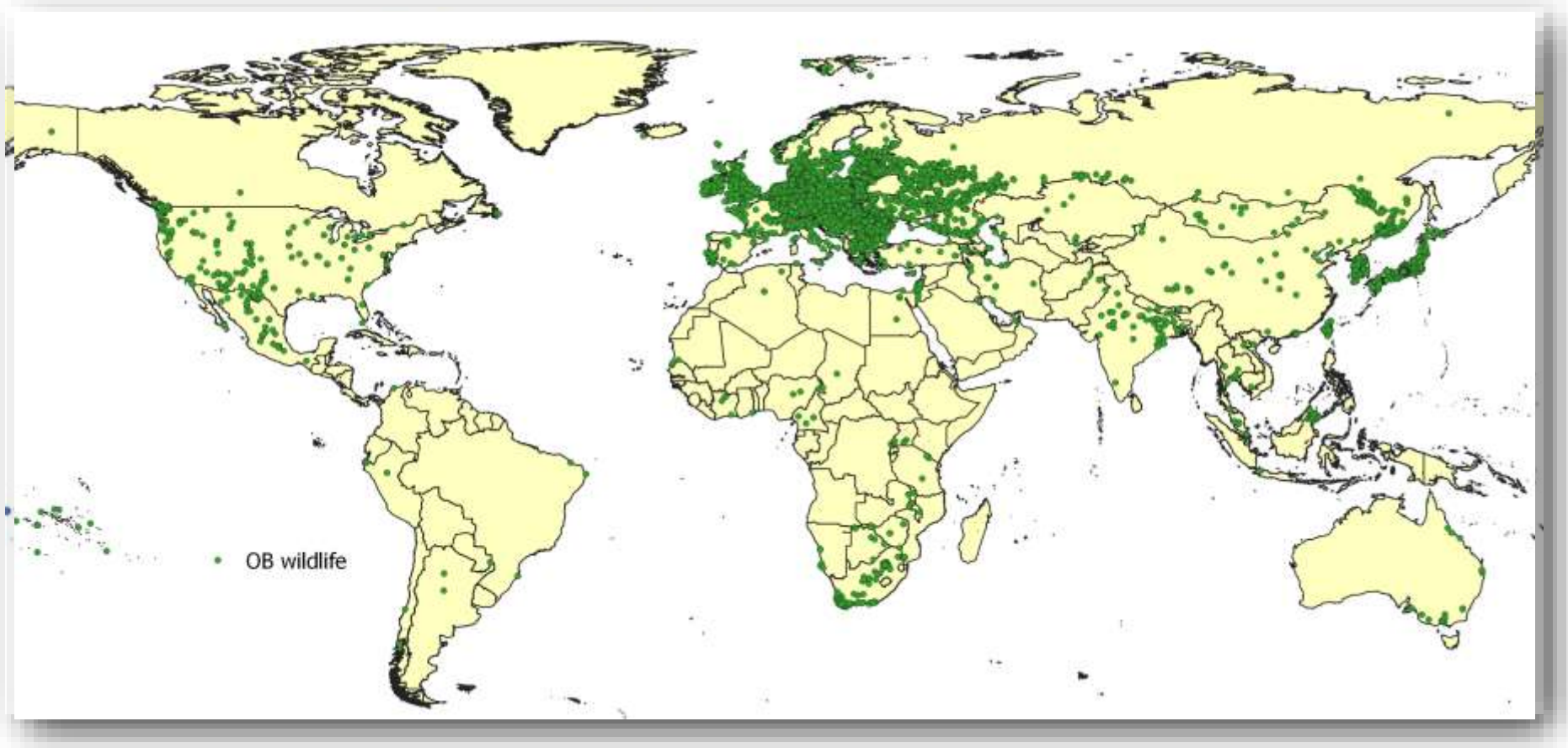
Reporting LISTED Diseases

32,716 outbreaks (early warning system)

31% of all the OB in the database

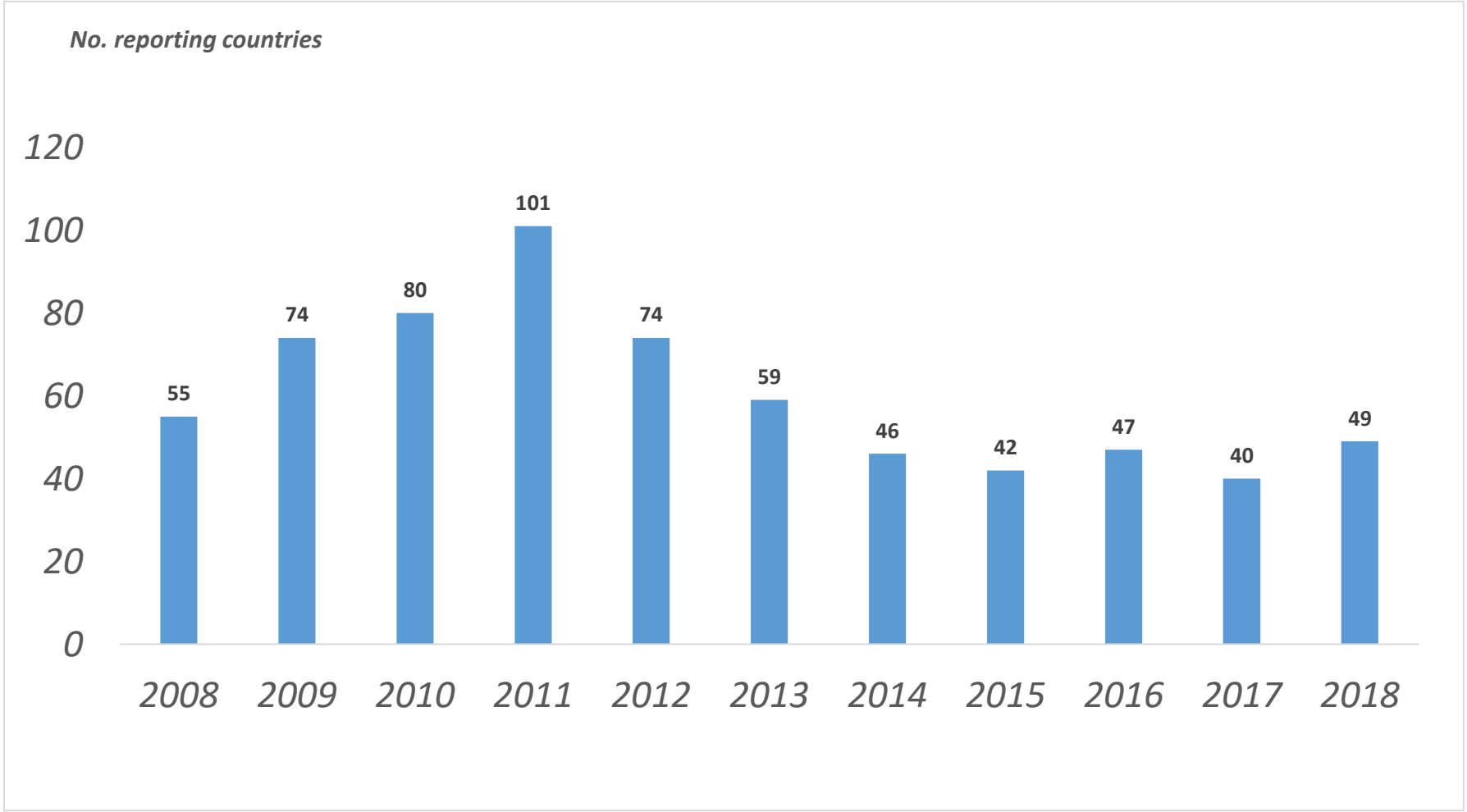
ASF and HPAI top reported

447 species



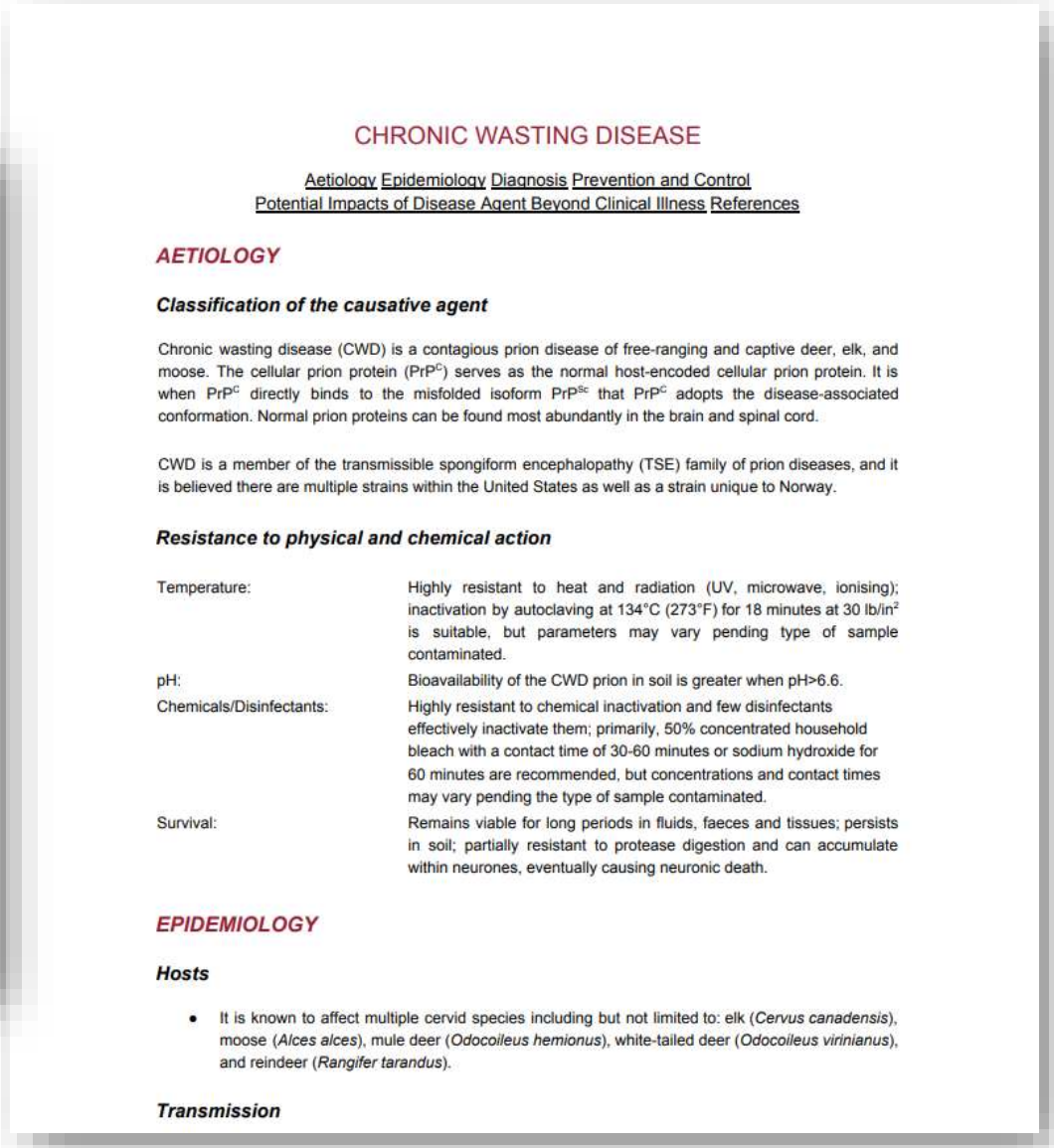
Reporting NON-LISTED diseases

- Reporting trend (2008 - 2018) – No. countries submitting reports



3. Support for reporting non-listed diseases

Technical Disease Card



CHRONIC WASTING DISEASE

Aetiology Epidemiology Diagnosis Prevention and Control
Potential Impacts of Disease Agent Beyond Clinical Illness References

AETIOLOGY

Classification of the causative agent

Chronic wasting disease (CWD) is a contagious prion disease of free-ranging and captive deer, elk, and moose. The cellular prion protein (PrP^C) serves as the normal host-encoded cellular prion protein. It is when PrP^C directly binds to the misfolded isoform PrP^{Sc} that PrP^C adopts the disease-associated conformation. Normal prion proteins can be found most abundantly in the brain and spinal cord.

CWD is a member of the transmissible spongiform encephalopathy (TSE) family of prion diseases, and it is believed there are multiple strains within the United States as well as a strain unique to Norway.

Resistance to physical and chemical action

Temperature:	Highly resistant to heat and radiation (UV, microwave, ionising); inactivation by autoclaving at 134°C (273°F) for 18 minutes at 30 lb/in^2 is suitable, but parameters may vary pending type of sample contaminated.
pH:	Bioavailability of the CWD prion in soil is greater when pH>6.6.
Chemicals/Disinfectants:	Highly resistant to chemical inactivation and few disinfectants effectively inactivate them; primarily, 50% concentrated household bleach with a contact time of 30-60 minutes or sodium hydroxide for 60 minutes are recommended, but concentrations and contact times may vary pending the type of sample contaminated.
Survival:	Remains viable for long periods in fluids, faeces and tissues; persists in soil; partially resistant to protease digestion and can accumulate within neurones, eventually causing neuronic death.

EPIDEMIOLOGY

Hosts

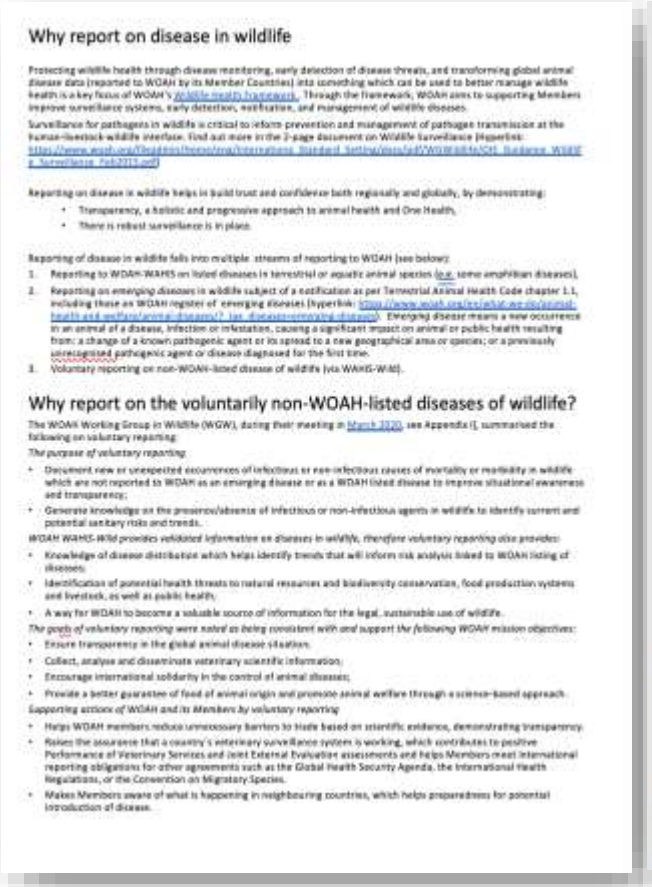
- It is known to affect multiple cervid species including but not limited to: elk (*Cervus canadensis*), moose (*Alces alces*), mule deer (*Odocoileus hemionus*), white-tailed deer (*Odocoileus virinianus*), and reindeer (*Rangifer tarandus*).

Transmission

https://www.woah.org/en/what-we-do/animal-health-and-welfare/animal-diseases/?_tax_diseases=non-listed-affecting-wildlife

Reporting NON-LISTED diseases

Notification Procedure: why, where, and what to report



Why report on disease in wildlife

Protecting wildlife health through disease monitoring, early detection of disease threats, and transforming global animal disease data (reported to WOAH by its Member Countries) into something which can be used to better manage wildlife health is a key focus of WOAH's Wildlife Health Framework. Through the framework, WOAH aims to supporting Members improve surveillance systems, early detection, notification, and management of wildlife diseases.

Surveillance for pathogens in wildlife is critical to inform prevention and management of pathogen transmission at the human-livestock-wildlife interface. Find out more in the 2-page document on Wildlife Surveillance (hyperlink: https://www.woah.org/fileadmin/Home/eng/International_Standard_Setting/docs/pdf/WG/Wildlife/EN_Guidance_Wildlife_Surveillance_Feb2015.pdf)

Reporting on disease in wildlife helps in build trust and confidence both regionally and globally, by demonstrating:

- Transparency, a holistic and progressive approach to animal health and One Health,
- There is robust surveillance is in place.

Reporting of disease in wildlife falls into multiple streams of reporting to WOAH (see below):

1. Reporting to WOAH-WAHIS on listed diseases in terrestrial or aquatic animal species (e.g. some amphibian diseases),
2. Reporting on emerging diseases in wildlife subject of a notification as per Terrestrial Animal Health Code chapter 1.1, including those on WOAH register of emerging diseases (hyperlink: https://www.woah.org/en/what-we-do/animal-health-and-welfare/animal-diseases/? tax_diseasecommunity%5B%5D=emerging). Emerging disease means a new occurrence in an animal of a disease, infection or infestation, causing a significant impact on animal or public health resulting from: a change of a known pathogenic agent or its spread to a new geographical area or species; or a previously unrecognised pathogenic agent or disease diagnosed for the first time.
3. Voluntary reporting on non-WOAH-listed disease of wildlife (via WAHIS-Wild).

Why report on the voluntarily non-WOAH-listed diseases of wildlife?

The WOAH Working Group in Wildlife (WGW), during their meeting in March 2020, see Appendix I, summarised the following on voluntary reporting:

The purpose of voluntary reporting

- Document new or unexpected occurrences of infectious or non-infectious causes of mortality or morbidity in wildlife which are not reported to WOAH as an emerging disease or as a WOAH listed disease to improve situational awareness and transparency;
- Generate knowledge on the presence/absence of infectious or non-infectious agents in wildlife to identify current and potential sanitary risks and trends.

WOAH WAHIS-Wild provides validated information on diseases in wildlife, therefore voluntary reporting also provides:

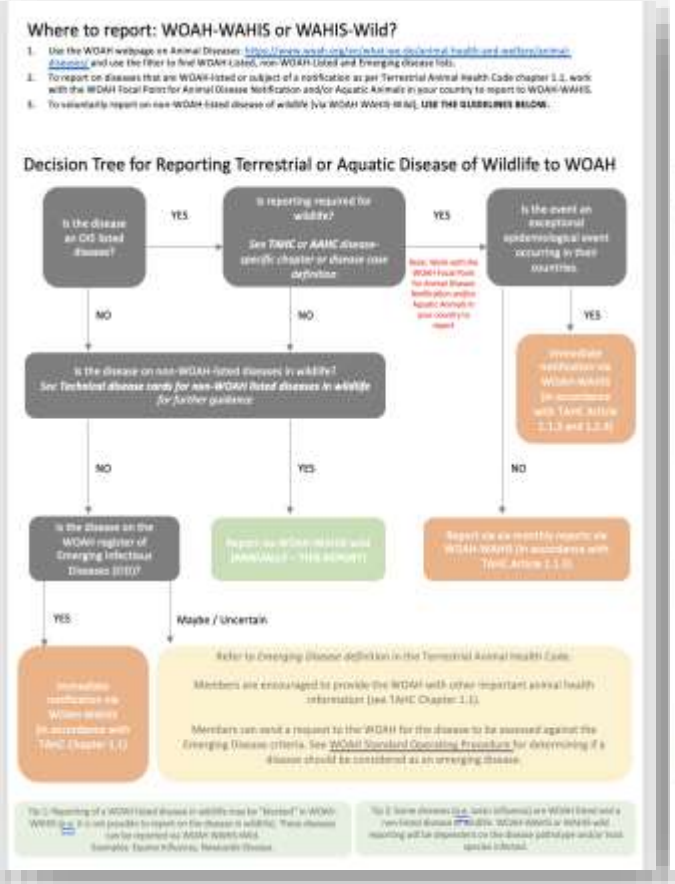
- Knowledge of disease distribution which helps identify trends that will inform risk analysis linked to WOAH listing of diseases;
- Identification of potential health threats to natural resources and biodiversity conservation, food production systems and livestock, as well as public health;
- A way for WOAH to become a valuable source of information for the legal, sustainable use of wildlife.

The goals of voluntary reporting were noted as being consistent with and support the following WOAH mission objectives:

- Ensure transparency in the global animal disease situation;
- Collect, analyse and disseminate veterinary scientific information;
- Encourage international solidarity in the control of animal diseases;
- Provide a better guarantee of food of animal origin and promote animal welfare through a science-based approach.

Supporting actions of WOAH and its Members by voluntary reporting

- Helps WOAH members reduce unnecessary barriers to trade based on scientific evidence, demonstrating transparency.
- Raises the assurance that a country's veterinary surveillance system is working, which contributes to positive Performance of Veterinary Services and Joint External Evaluation assessments and helps Members meet international reporting obligations for other agreements such as the Global Health Security Agenda, the International Health Regulations, or the Convention on Migratory Species.
- Makes Members aware of what is happening in neighbouring countries, which helps preparedness for potential introduction of disease.



Where to report: WOAH-WAHIS or WAHIS-Wild?

1. Use the WOAH webpage on Animal Diseases: https://www.woah.org/en/what-we-do/animal-health-and-welfare/animal-diseases/ and use the filter to find WOAH-Listed, non-WOAH-Listed and Emerging disease lists.
2. To report on diseases that are WOAH-listed or subject of a notification as per Terrestrial Animal Health Code chapter 1.1, work with the WOAH Focal Point for Animal Disease Notification and/or Aquatic Animals in your country to report to WOAH-WAHIS.
3. To voluntarily report on non-WOAH-listed disease of wildlife (via WOAH-WAHIS-Wild), **USE THE GUIDELINES BELOW.**

Decision Tree for Reporting Terrestrial or Aquatic Disease of Wildlife to WOAH

What to report - Voluntary reporting of diseases in wildlife

- Reporting of WOAH-listed disease in wildlife may be "blocked" in WOAH-WAHIS (e.g., it is not possible to report on the disease in wildlife). These diseases can be reported via WOAH-WAHIS-Wild.
- Some diseases (e.g., avian influenza) are WOAH-listed and a non-listed disease of wildlife. WOAH-WAHIS or WAHIS-wild reporting will be dependent on the disease pathotype and/or host species infected.

Use the Terrestrial Animal Health Code, Aquatic Animal Health Code and the WOAH-Listed and non-WOAH Listed disease Technical disease cards for further guidance when reporting.

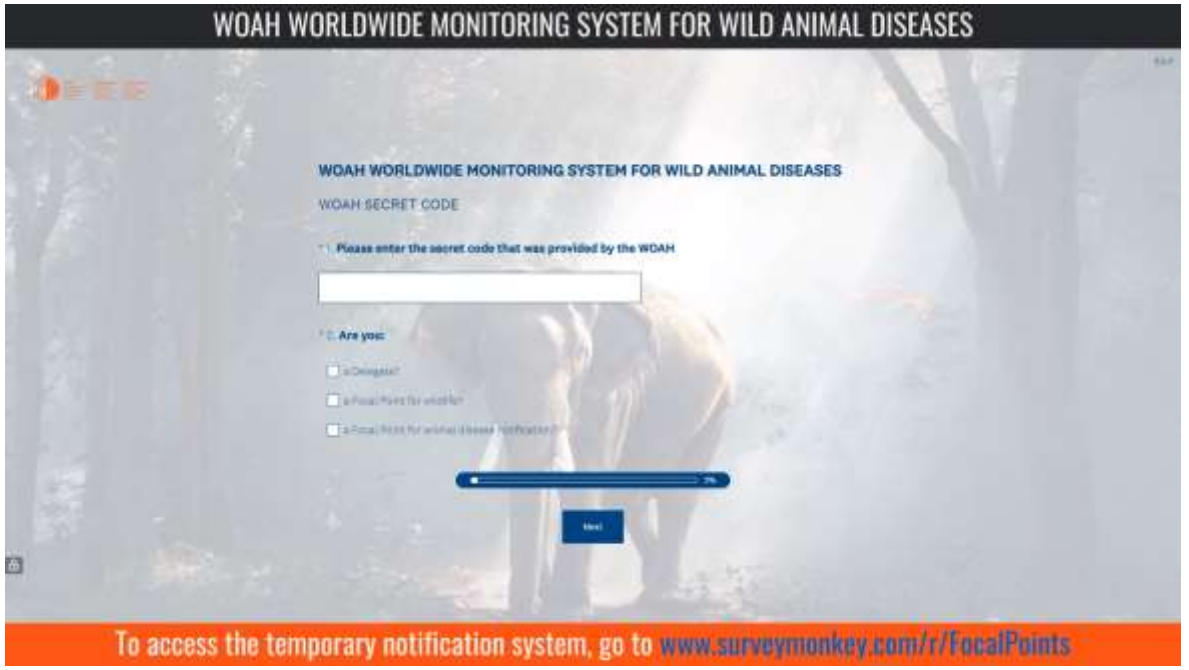
See below for some examples.

Examples – Reporting detections / infections in wild animals to WOAH-WAHIS or WAHIS-Wild

Disease	WOAH Listed Disease (Report to WOAH-WAHIS)	WOAH Non-Listed disease of wildlife (Voluntary reporting to WAHIS-Wild)
Avian influenza	High pathogenicity avian influenza viruses (H5 and H7) detected in wild birds. TAHC: "...infection with influenza A viruses of high pathogenicity in birds other than poultry, including wild birds, should be notified in accordance with Article 1.1.3."	Low pathogenicity avian influenza viruses (all serotypes) detected in all wildlife.
Rabies / Lyssaviruses	Rabies virus TAHC: "...a case is any animal infected with rabies virus (Rabies virus, the taxonomic prototype species in the Lyssavirus Genus formerly referred to as 'classical rabies virus, genotype 1')..." should be notified in accordance with Article 1.1.3.	Lyssaviruses other than Rabies virus are voluntarily reportable in wild animals.
Newcastle disease (ND) /Avian Paramyxovirus serotype 1	Infection of velogenic ND in poultry is an WOAH notifiable disease. It is not possible to reported ND in wild animals in WOAH-WAHIS (e.g. reporting is "blocked" for wild animal reporting)	Velogenic and lentogenic strains of Avian Paramyxovirus serotype 1 is voluntarily reportable in non-poultry.
Salmonella	*S. abortusovis* (sheep and goats); *S. gallinarum* (Pullorum disease of chickens); *S. gallinarum* (Fowl typhoid) (still updating)	Salmonella enterica (all serovars)
Equine influenza (EI)	EI is a WOAH notifiable disease in domesticated equids. It is not possible to reported EI in wild animals in WOAH-WAHIS (e.g. reporting is "blocked" for wild animal reporting)	EI is voluntarily reportable in wildlife.
Infection with Pseudogymnoascus destructans in bats (White-nose syndrome)	Not WOAH listed disease	Voluntarily reportable in wildlife.

Video tutorial and step-by-step procedure

Access to the module



Conclusions

- **Opportunities:**
  - *Legal framework and standards on animal diseases*
  - *Centralised and standardised reporting system for diseases in wildlife*
  - *Effort from WOAH to support countries' reporting. What can we do better?*
- **Gaps and challenges:**
  - *Significant differences within and among regions in reporting behavior*
  - *Sensitivity of the system for some diseases*
    - Surveillance activities at country level
    - Communication gaps among relevant stakeholders / institutions
    - Disease prioritisation

Thank you for your attention