

# Avian influenza

Current situation and spread reduction measures



# Contents

Background information	2
Timeline	2
Transmission	3
Possible symptoms of H5N1	4
In birds	4
In wild mammals	4
AECO Biosecurity Guidelines and information	5
Ways to reduce the spread of HPAI	6
If you spot a sick or dead animal	7
Region-specific information and reporting information	8
Svalbard	8
Canada	8
Iceland	9
Greenland	9
References	10



# Background information

## Timeline

The emergence of the highly pathogenic strand of the Avian influenza virus (HPAI) was first noted in Europe during the fall of 2020. The virus spread quickly across Europe, and into Africa, the Middle East and Asia.

In the same year, cases of human infection were also reported in China, Hong Kong and Senegal, while spread to mammals like seals and foxes was reported in the United Kingdom. The following year, spread of the virus and its mutations caused epidemics in seals. In addition, China reported 36 cases of human infection with 18 deaths and human infection cases were observed in England, Spain, the US, Ecuador, Vietnam, and Cambodia.

In 2022, Peru reported mass fatalities of sea lions while the virus was causing worldwide outbreaks in poultry, wild birds, skunks and mink.

Mammal infections were reported in species that eat (presumably infected) birds or poultry including but not limited to wild or feral animals like foxes, bobcats, otters and

seals, stray or domestic animals like cats and dogs as well as zoo animals such as tigers and leopards.

Analysis of a dead walrus found in Hopen in July 2023 detected the HPAI and in December 2023, H5N1 virus was detected in a polar bear for the first time. Meanwhile, the H5N1 virus was also spreading in Antarctica amongst colonies of elephant seals and fur seals.

**Currently, cases of infection have been reported in animals not feeding on wild birds like goats and dairy cows on a farm where infected poultry flock had tested positive for the same virus. In April 2024, the first case of cow-to-human infection was also reported in the US.**

### **Transmission**

Influenza viruses are highly adaptable. Their relatively simple genetic code not only changes at random via mutation in the same way as truly living organisms, but also via reassortment. This is where closely related viruses that infect the same host cell exchange genetic material to produce novel genomes. This can lead to greater adaptation for invasion, survival and replication within that host species. This is probably how the current H5N1 strain has come to affect such a variety of bird species, with devastating effects for some populations.

Since its emergence, the bird flu virus has killed millions of wild and domestic birds and unknown numbers of mammals.

There is no risk of infection from well-cooked eggs or meat, as the virus is killed by heat. Standard washing eliminates the virus on clothing.

# Possible symptoms of H5N1

## In birds

Not all infected birds appear sick and not all sick or dead birds are infected with avian influenza.

Here are signs to look for in birds:

- Nervousness
- Tremors or lack of coordination
- Swelling around the head, neck, and eyes
- Lack of energy or movement
- Coughing, sneezing, or gasping for air
- Diarrhea
- Abnormal behavior
- Sudden death

## In wild mammals

The symptoms of H5N1 in mammals vary between species. Nonetheless, it is important to pay attention to signs like:

- Lethargy
- Difficulty breathing
- Neurological signs (e.g., tremors, seizures)
- Bloody snout
- Increased/excessive salivation
- Abnormal behavior
- Sudden death

# AECO Biosecurity Guidelines and information

AECO members must follow the following biosecurity measures:

1. Follow [AECO Biosecurity Guidelines](#)
2. Follow [AECO Operational Guidelines](#) for biosecurity, including:
  - *Avoid introducing alien species to the Arctic by ensuring that outer clothing, backpacks, etc. are clean, especially at the start of the voyage and between distinct geographical regions.*
  - *A **footwear** wash station containing a disinfectant such as Virkon must be in place for guests to wash their **footwear** after landings. Ensure **footwear** is clean after each landing to avoid the spread of disease such as bird flu.*

AECO members can use the [Stop Arctic Aliens](#) campaign for further guidance and educational material for guests.

# Ways to reduce the spread of HPAI

**A fundamental caution must be exercised in all work in which people are in contact with animals, irrespective if a communicable disease is suspected.**

- Do not handle wild birds, eggs or eggshells, and avoid contact with other animals.
- Wash and disinfect equipment and surfaces that touched the egg, birds or feces.
  - When cleaning equipment, or handling blood, feces, respiratory secretions, or contaminated feed and water, wear disposable gloves (e.g., nitrile), and wash hands with warm soapy water or use hand sanitizer immediately after removing and discarding gloves.
  - Dispose of gloves and all potentially contaminated material immediately in an appropriate manner (i.e., sealed in plastic bags).
- Change and wash clothing and footwear that may be contaminated with blood, feces, or mucous.
- Special emphasis is placed on the importance of careful hand hygiene (with hand washing and hand sanitizer) after contact with birds (infected and uninfected), after contact with contaminated areas, and after using gloves.
- Proper hand washing means washing all areas of both hands with soap and water for 30 seconds. If there is no visible dirt on the skin of the hands, an approved disinfectant can be used, e.g. hand sanitizer (70% - 85% ethanol).
- When you move between separate bird colonies:
  - Make sure to brush soil, vegetation and any organic material off your boots and clothing.
  - Change gloves and/or wash hands/use sanitizer in between bird nesting areas.
- While in a bird nesting area, try to minimize contact with freshwater ponds or wet areas, if possible

# If you spot a sick or dead animal

- DO NOT TOUCH sick or dead birds nor any other animal.
- Take photographic evidence, if possible.
- Note the location of the animal.
- Report your finding to an appropriate governing body (see below).
- If contact with wild animals found dead is unavoidable:
  - Wear gloves or use a doubled plastic bag and avoid contact with the bird's body fluids and feces. Dispose of gloves and all potentially contaminated material immediately in an appropriate manner (i.e., sealed in plastic bags).
  - Wash your hands thoroughly with soap and warm water followed by a hand sanitizer containing at least 60% alcohol.
- Stay informed by visiting local websites and monitoring announcements from respective government bodies.



# Region-specific information and reporting information

## Svalbard

The Governor requests that people who find dead birds or observe birds with abnormal behavior:

- Send information to the Governor on [firmapost@sysselmesteren.no](mailto:firmapost@sysselmesteren.no) with a position on where the bird(s) are found and a picture if possible.
- You can also call the Governor's office +47 79 02 43 00 during office hours: Monday-Friday at 10:00-15:00

The Veterinary Institute has detected contagious bird flu in black-legged kittiwake and northern fulmar on Svalbard. A dead walrus found in Hopen was confirmed to have the bird flu. There are also reports of several dead birds in the terrain and in the sea. The public is asked not to touch dead birds.

## Canada

If you see dead birds or birds acting strangely, tell the Conservation Officer in your closest community. Online reporting tool can be accessed at <http://cwhc.wildlivesubmissions.org> A mobile reporting App can be downloaded from Apple Store and Google Play.

Provincial reporting hotlines are:

- Newfoundland and Labrador, Wildlife Emergency Number (709) 685-7273
- Quebec, Le Ministère de l'Agriculture du Québec 1-877-346-6763
- Ontario, Ontario Regional Centre of the Canadian Wildlife Health Cooperative 1-866-673-4781
- Manitoba, TIP/Forest Fire Situation 24 Hours 1-800-782-0076
- Alberta, Alberta Environment and Parks Office 310-0000
- Yukon, Turn in Poachers and Polluters (TIPP) at 1-800-661-0525 or online
- Northwest Territories, Department of Environment and Natural Resources using the regional wildlife emergency number
- Nunavut, local conservation officer at the Department of the Environment

You can check recorded infection cases on an online map of avian influenza in wildlife here: [CFIA NEOC GIS Service](#). In addition, influenza bi-weekly reports are available here: [AIV reports](#)

If you become ill with influenza symptoms after handling wild birds, their eggs or other wildlife, contact your local health center as soon as possible, and inform them that you have been in contact with wildlife.

### **Iceland**

Information on spotted sick and/or dead birds and other wild animals, particularly sea mammals should be provided to MAST through an online contact form available [here](#). Please provide information on bird species and geo coordinates from the place where the bird has been spotted, if possible. Pictures are always useful as well.

In 2022, the Icelandic Food and Veterinary Authority (MAST) confirmed that bird flu has been detected in Iceland in wild and domestic birds. Updates on detections of avian influenza can be found in a [dashboard](#) on the [Avian Influenza information page](#) (in Icelandic).

### **Greenland**

To report dead or sick wildlife along with position where the animal was found and a photograph, if possible, contact: [info@natur.gl](mailto:info@natur.gl) / +299 36 12 00 / <https://natur.gl/rapporter-til-os/>

The Veterinary and Food Administration of Greenland (VFMG) confirmed in 2023 the presence of HPAI H5N1 in Greenland. The veterinary authority stated that it was unclear where the animals got the virus from as the habitats in question host numerous bird species that breed in summer in Svalbard, Iceland and Nunavut. It was not possible to quantify infected birds, but it was believed that numerous colonies were affected, and death rates were high.

# References

1. Center for Disease Control and Prevention  
<https://www.cdc.gov/flu/avianflu/timeline/avian-timeline-2020s.htm>
2. Government of Canada, Polar Knowledge portal  
<https://www.canada.ca/en/polar-knowledge/publications/avian-influenza-in-canada.html>
3. Public Health Agency of Canada <https://www.canada.ca/en/public-health/services/diseases/avian-influenza-h5n1.html>
4. Icelandic Directorate of Health <https://island.is/en/bird-flu>
5. Icelandic Food and Veterinary Authority <https://www.mast.is>
6. Governor of Svalbard <https://www.sysselmesteren.no/en/news/2023/06/report-if-you-find-dead-birds/>