



Bird Flu Outbreaks in Mammals

[Source: DTE](#)

Why in News?

The recent surge in bird flu outbreaks among mammals has alarmed international agencies, including the [Food and Agriculture Organization \(FAO\)](#), the [World Health Organization \(WHO\)](#), and the [World Organisation for Animal Health \(WOAH\)](#) (founded as OIE).

- The agencies express concern that as **mammals are biologically closer to humans than birds**, the virus could potentially **adapt to infect humans more easily**.

What is Bird Flu?

- **About:**
 - **Bird flu** or Avian influenza refers to the disease caused by **infection with avian influenza Type A viruses**.
 - Infrequently, the **virus can infect mammals from birds**, a phenomenon called spillover, and rarely can spread between mammals.
- **Outbreak in Wild Birds and Poultry:**
 - The most common type of bird flu virus is **H5N1**, which belongs to the **goose/Guangdong-lineage of H5N1 avian influenza viruses** that first emerged in 1996/1997.
 - Since 2020, this virus has caused an unprecedented number of deaths in wild birds and poultry in many countries in **Africa, Asia, Europe and the Americas**.
 - In 2022, WOAAH reported H5N1 high pathogenicity avian influenza outbreaks in poultry and wild birds in **67 countries across five continents**.
 - These outbreaks resulted in the loss of over 131 million domestic poultry due to death or culling in affected farms and villages.
 - An additional **14 countries** have reported outbreaks in **2023**.
- **Outbreaks in Mammals and Potential Hazard for Humans:**
 - Since 2022, approximately **10 countries have reported cases of avian flu outbreaks** in both land and sea mammals.
 - Examples include **farmed mink in Spain, seals in the United States, and sea lions in Peru and Chile**.
 - These outbreaks have been documented in 26 species, with the **recent detection of H5N1 in cats in Poland**.
 - There is a concern that infected mammals may serve as mixing vessels for influenza viruses, **potentially leading to the emergence of new, more harmful viruses that could affect both animals and humans**.
 - However, the WHO has only received reports of a few mild cases in people who had close contact with infected birds.
- **Status in India:**
 - With effect from **September 3, 2019**, the **World Organization for Animal Health** declared the India free from the Avian Influenza (H5N1).
 - However, in **December 2020 and early 2021**, outbreaks of avian influenza H5N1 and **H5N8** were reported in poultry in **15 states in India**.
- **Urgent Measures to Curb the Spread:** To mitigate the risks associated with bird flu outbreaks,

the international agencies **including FAO, WHO, WOA** recommended the following measures:

- They urged countries to share [genetic data of viruses](#) from humans and animals in **publicly accessible databases**.
- Enhancing [biosecurity](#) measures and applying good hygiene practices in farms and poultry value chains.
- Ensuring **rapid detection, reporting, and response** to animal outbreaks.
- Strengthening **influenza surveillance** in both animals and humans.
- Conducting thorough **epidemiological and virological investigations** around animal outbreaks and human infections.
- Promoting collaboration between [animal and human health sectors](#).

Types of Influenza Virus

Types	A Subtypes	HPAI vs LPAI
Influenza A (Infects a wide range of animals including birds)	Avian (Can infect humans) H5N1 H7N3 H7N7 H7N9 H9N2 H10N8	HPAI H5N1 LPAI H5N1 HPAI H5N8 LPAI H5N8
Influenza B (Mainly infects humans)	Swine (Can infect humans) H1N1 H1N2 H3N2	Subtypes can be classified as high path or low path based on the ability of the specific virus strain to kill chickens in the lab setting.
Influenza C (Infects humans and pigs but more rare than types A and B)	Most common human H1N1 H3N2	
Influenza D (Infects cattle)		

UPSC Civil Services Examination, Previous Year Question (PYQ)

Q. H1N1 virus is sometimes mentioned in the news with reference to which one of the following diseases? (2015)

- (a) AIDS
- (b) Bird flu
- (c) Dengue
- (d) Swine flu

Ans: (d)