

Spread of bird flu to mink signals growing threat to humans

February 8, 2023

In news—A bird flu outbreak on a Spanish mink farm has alarmed scientists. The virus may be spreading for the first time from mammal to mammal and could become a danger for humans.

Why Scientists are worried?

- **The spread of the virus from birds to other species is nothing new. The pathogen that causes bird flu, or avian influenza, has been found in raccoons, foxes and seals, though these remain isolated cases.**
- **While there have been some cases of H5N1 infecting humans, the World Health Organization has said there's no evidence of human-to-human transmission so far.**
- When the disease has spread to humans and other mammals, it has been via direct contact with excrement from infected birds or their carcasses.
- **But the mink outbreak appears to be a rare case where mammals are transmitting the disease to each other rather than through direct contact with an infected bird.**
- **Part of the problem is that mink are intensively farmed.** They're kept in high numbers in confined spaces, which means infection spreads rapidly in the highly susceptible mammals.
- Researchers have identified several pathogen mutations in the mink, one of which allows the virus to better reproduce in mammals.
- Scientists are worried that the virus, which has led to the deaths of tens of millions of birds globally, could spread to more mink farms and become "more

transmissible.”

Could avian influenza trigger a human pandemic?

- According to the WHO, of the 868 known cases of H5N1 infection in humans worldwide between January 2003 and November 2022, 457 were fatal.
- However, **because there has been no sustained human-to-human transmission**, the risk of human infection from avian flu is low.
- Some highly pathogenic avian influenza viruses have an increased potential to cause new zoonotic diseases – which are transmissible from animals to humans and vice versa.

About Mink-

- Mink are dark-colored, semiaquatic, carnivorous mammals of the genera *Neogale* and *Mustela* and part of the family Mustelidae, which also includes weasels, otters, and ferrets.
- There are two extant species referred to as “mink”: the American mink and the European mink.
- The extinct sea mink was related to the American mink but was much larger.
- The American mink’s fur has been highly prized for use in clothing. Their treatment on fur farms has been a focus of animal rights and animal welfare activism.

What is avian influenza?

- Influenza/ Bird flu is a disease caused by avian influenza Type A viruses found naturally in wild birds worldwide.
- The virus can infect domestic poultry including chickens, ducks, turkeys and there have been reports of H5N1 infection among pigs, cats, and even tigers.
- There are about 18 HA subtypes and 11 NA subtypes.

- There have been reports of avian and swine influenza infections in humans including A(H1N1), A(H1N2), A(H5N1), A(H7N9), etc...
- The first report of human H5N1 infection was in 1997.

Further reading:
<https://journalsofindia.com/h5n1-avian-influenza/>