



# Zoonotic Diseases

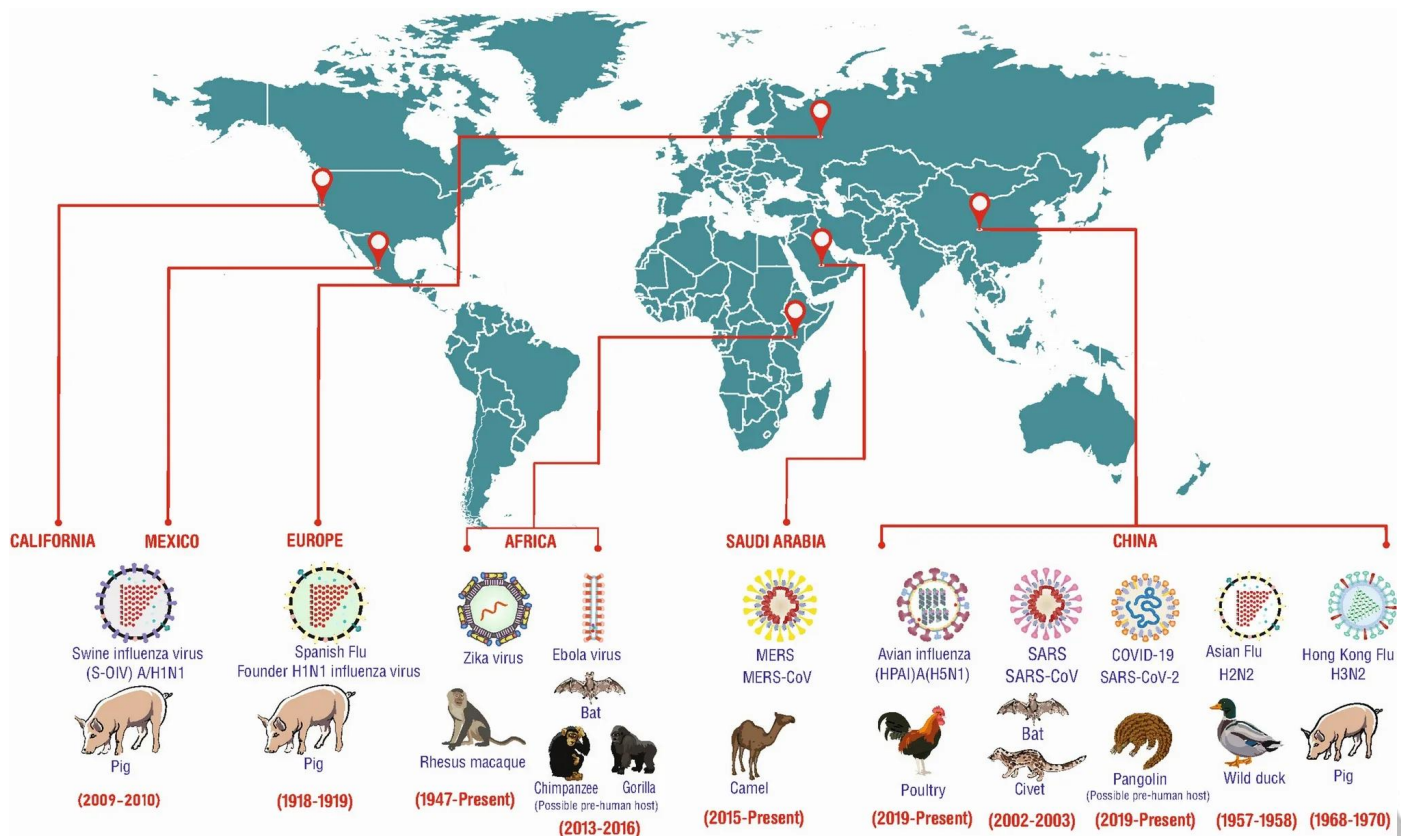
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## Why in News?

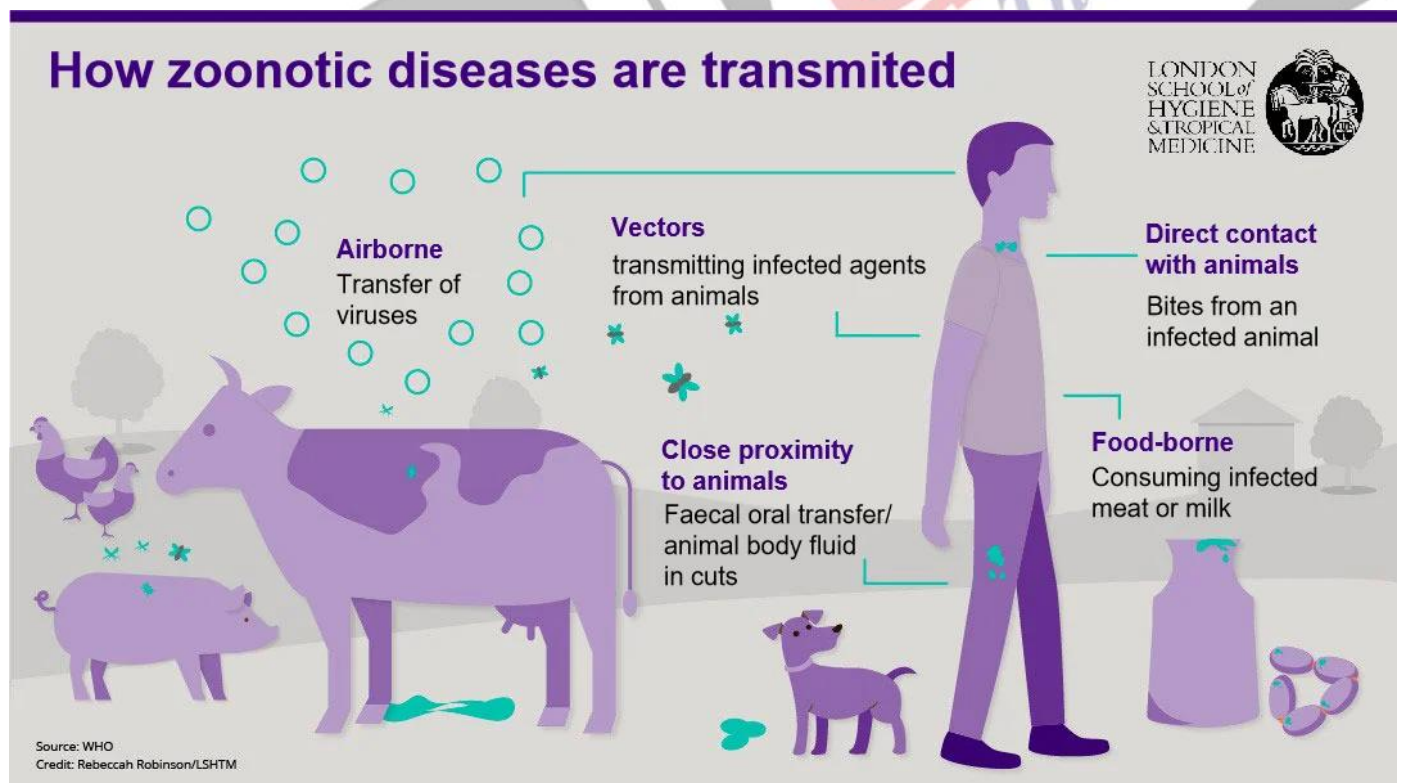
A recent study shows that over **9% of the Earth's land** faces **high or very high risk of zoonotic diseases**. It introduced an "**epidemic risk index**" that combines **zoonotic risk with countries' preparedness**, helping policymakers identify **vulnerable areas**, **improve response**, **allocate resources**, and **enhance global health cooperation**.

## What are Zoonotic Diseases?

- **About: Zoonotic diseases (zoonoses)** are **infectious diseases transmitted between animals and humans**.
  - They can be caused by [bacteria](#), [viruses](#), [parasites](#), and [fungi](#), ranging from **mild to life-threatening**.
    - **Climate change** (rising temperatures, shifting precipitation) and **land-use changes** (deforestation, urban expansion) **increased human-animal interactions, escalating the risk of zoonotic spillovers**.
  - Eg: [Rabies](#), [anthrax](#), [influenza \(H1N1 and H5N1\)](#), [Nipah](#), [Covid-19](#), [brucellosis](#), [tuberculosis](#), [Ebola](#) and [SARS](#)
- **Disease Burden: Zoonotic diseases constitute 60% of known infectious diseases** and up to **75% of emerging infectious diseases (EIDs)**, causing over **2.5 billion cases** and **2.7 million deaths globally each year**.
  - Globally, **9.3% of land** is at **high (6.3%) or very high (3%) risk** of zoonotic outbreaks, with **3% of the population** in extremely high-risk zones and **20% in medium-risk areas**.
  - **Latin America (27%), Oceania (18.6%), Asia (7%), and Africa (5%)** have significant regional vulnerabilities.



- **Modes of Transmission:** Direct contact (avian influenza), food-borne (salmonella), vector-borne (West Nile virus), and water-borne (Cryptosporidiosis) routes.



- **India's Vulnerability to Zoonotic Diseases:** During 2018-2023, **8.3%** (583 of 6,948) of India's diseases were **zoonotic**, with peaks during **June-August** due to **monsoon-driven changes in vector ecology** and **livestock-human interactions**.
  - The **Northeast India** of the country contributed **35.8% of zoonotic disease**

outbreaks.

## What are the Key Initiatives to Control Zoonotic Diseases?

- **Global Initiative:**
  - **Zoonotic Disease Integrated Action (ZODIAC):** It was launched by the [International Atomic Energy Agency \(IAEA\)](#) in 2020 to support countries in preventing and managing zoonotic disease outbreaks by strengthening early detection and rapid response using integrated methods.
  - **World Zoonoses Day:** [World Zoonoses Day](#), celebrated on 6th July in honour of [Louis Pasteur](#), who administered the first successful rabies vaccine, a zoonotic disease, on 6th July 1885.
  - **G20 Pandemic Fund:** G20 Pandemic Fund is a global financing initiative by G20 nations to strengthen preparedness and response to pandemics and zoonotic diseases.
- **India's Initiatives:**
  - **National Animal Disease Control Programme (NADCP)** for mass vaccination to eliminate **Foot & Mouth Disease (FMD)** and **Brucellosis**.
    - India aims for **100% FMD vaccination** in livestock (buffalo, goat, sheep, pig) and **Brucellosis vaccination** in bovine female calves (4-8 months).
      - The overall aim of the **National Animal Disease Control Programme for FMD and Brucellosis (NADCP)** is to control FMD by 2025 with vaccination and its eventual eradication by 2030.
  - **Animal Birth Control (Dogs) Rules, 2023** emphasizes anti-rabies vaccination and neutering of stray dogs for population control.
  - **Department of Animal Husbandry and Dairying (DAHD)** has also undertaken Rabies Vaccination under [Assistance to States for Control of Animal Diseases \(ASCAD\)](#), a component of the [Livestock Health & Disease Control Programme \(LHDCP\)](#).
  - The **National One Health Programme for Prevention and Control of Zoonoses (NOHP-PCZ)** was launched in 2013 as a **Central Sector Scheme** and has been part of the **NCDC's umbrella scheme** since 2017-18.
  - It aims to tackle zoonotic diseases through **One Health mechanisms, inter-sectoral coordination, and integrated surveillance** to safeguard health and reduce socio-economic impacts.

## One Health Approach

[One Health approach](#) is a collaborative, multisectoral, and transdisciplinary strategy recognizing the interconnection between human, animal, and environmental health.

- It aims to sustainably balance and optimize the well-being of all three, acknowledging their close interdependence.
- **WHO, FAO** and [World Organisation for Animal Health \(OIE\)](#) collaborate through the [Global Early Warning System \(GLEWS\)](#) to enhance early warning, data sharing, and coordinated response for zoonotic diseases.

## UPSC Civil Services Examination, Previous Year Question (PYQ)

### Prelims

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)**

### **Mains**

**Q.** Appropriate local community-level healthcare intervention is a prerequisite to achieve 'Health for All' in India. Explain. (2018)

PDF Refernece URL: <https://www.drishtiias.com/printpdf/zoonotic-diseases-2>

