



## World Zoonosis Day

**For Prelims:** World Zoonosis Day, [Zoonotic Diseases](#), [One Health](#)

**For Mains:** One Health Concept and its Significance, Zoonotic Diseases and its impacts on public health

### Why in News?

The **Department of Animal Husbandry and Dairying, Ministry of Fisheries, Animal Husbandry and Dairying** recently conducted an awareness program on [zoonotic diseases](#) as part of the [Aazadi Ka Amrit Mahostav](#) initiative on **World Zoonosis Day (July 6<sup>th</sup>, 2023)**.

- The program aimed to **educate farmers about zoonotic disease** risks and national efforts for prevention. Due to their **close contact with animals**, farmers are at higher risk of contracting zoonotic diseases.
- The importance of the ["One Health" concept](#) is highlighted in addressing zoonotic disease risks.

### What is World Zoonosis Day?

- **History:**
  - World Zoonosis Day marks the anniversary of the **first vaccination against a zoonotic disease**.
  - On **July 6, 1885, Louis Pasteur**, a French scientist, successfully administered the **first vaccine for zoonotic disease**.
- **Significance:**
  - World Zoonosis Day educates people about the **risks and impacts of zoonotic diseases** on human and animal health.
  - **60% of known infectious diseases and 75% of emerging infectious diseases** are zoonotic, according to the [World Health Organization\(WHO\)](#).

### What are Zoonotic Diseases?

- **About:**
  - Zoonotic diseases are illnesses that can be transmitted **between animals and humans**. These diseases can be caused by **bacteria, viruses, parasites, or fungi**.
- **Classification:**
  - **Based on Pathogens:**
    - **Bacterial Zoonoses:** These diseases are caused by **bacterial infections** that can be transmitted from **animals to humans**.
      - Examples include [anthrax](#), and [brucellosis](#).
    - **Viral Zoonoses:** Well-known viral zoonotic diseases include [rabies](#), [Ebola](#), and [Covid-19](#).
    - **Parasitic Zoonoses:** Diseases such as [toxoplasmosis](#) and [leishmaniasis](#) fall under this category.

- **Fungal Zoonoses:** Zoonotic fungal infections, like [ringworm](#) are caused by fungi that can be transmitted from animals to humans.
- **Based on Animal Species:**
  - **Wildlife Zoonoses:** These diseases primarily **involve interactions between humans and wildlife**, such as **hantavirus infections transmitted by rodents** or diseases spread by wild birds, like [avian influenza \(bird flu\)](#).
  - **Domestic Animal Zoonoses:** Diseases such as [brucellosis](#) from cattle or [toxoplasmosis](#) from cats, fall under this category.
- **Based on Mode of Transmission:**
  - **Direct Contact Zoonoses:** Infections that occur through **direct contact with infected animals**, their body fluids, or contaminated surfaces.
    - Examples include **rabies transmitted through animal bites** and Q fever from contact with infected livestock.
  - **Vector-Borne Zoonoses:** Diseases transmitted by vectors such as **mosquitoes and ticks**.
    - Examples include **Lyme disease** transmitted by ticks and [dengue](#) fever transmitted by mosquitoes.
  - **Waterborne Zoonoses:** [Leptospirosis](#) from contaminated water sources is an example of waterborne zoonotic disease.
- **Causes of Zoonotic Diseases:**
  - The emergence and spread of zoonotic diseases are influenced by several factors, including **environmental changes, wildlife interactions, livestock farming practices, and human behavior**.
  - Encroachment into natural habitats, wildlife trade, inadequate food safety measures, and improper sanitation contribute to the transmission of zoonotic diseases.
- **Prevention Strategies:**
  - Multisectoral collaboration is essential in preventing and controlling zoonotic diseases.
  - The **"One Health" approach** emphasizes the collaboration between human health, animal health, and environmental sectors.
  - Early **detection and surveillance systems** for zoonotic diseases play a crucial role in preventing outbreaks and epidemics.
  - Promoting **hygiene practices**, such as proper handwashing, food safety measures, and safe handling of animals, helps reduce the risk of transmission.
  - **Vaccination programs for animals**, especially those in close contact with humans, can be effective in preventing zoonotic diseases.
  - Improving **public awareness and education about zoonotic diseases** and their prevention is vital in promoting responsible behavior and reducing the risk of transmission.

## What are India's Initiatives Related to Zoonotic Diseases?

- **[National Animal Disease Control Programme \(NADCP\):](#)**
  - Played a vital role in controlling two major zoonotic diseases: [Foot & Mouth Disease \(FMD\)](#) and Brucellosis.
- **Mobile Veterinary Units (MVUs):**
  - MVUs have been deployed to provide veterinary services at farmers' doorsteps, including disease diagnosis, treatment, minor surgeries, and raising awareness about the management of diseased animals.
- **[Animal Birth Control \(Dogs\) Rules, 2023:](#)**
  - The focus of the rules is on **anti-rabies vaccination of stray dogs** and neutering of stray dogs as means of population stabilization.
- **[National One Health Programme for Prevention & Control of Zoonoses:](#)**
  - Focuses on strengthening surveillance, diagnosis, prevention and control of zoonotic diseases through inter-sectoral coordination and collaboration.
- **Vaccination efforts:**
  - Focus on achieving 100% vaccination coverage for FMD in buffalo, sheep, goat, and pig populations, as well as vaccinating 100% of bovine female calves aged 4-8 months for brucellosis.

## What is the One Health Concept?

# ONE HEALTH

An approach to balance and optimize the health of people, animals and the environment

Based on the agreement between the tripartite-plus alliance i.e., the FAO, the World Organisation for Animal Health (OIE) and the WHO

## THE APPROACH

- Prevent outbreaks of zoonotic disease in animals and people
- Improve food safety and security
- Reduce AMR infections and improve human and animal health
- Protect global health security
- Protect biodiversity and conservation

## ONE HEALTH FACTS

- 60% of pathogens that cause human diseases originate from domestic animals or wildlife
- 20% of global animal production losses are linked to animal diseases
- Humans and their livestock are more likely to encounter wildlife when more than 25% of an original forest cover is lost

## ONE HEALTH JOINT PLAN OF ACTION

- Launched by the Quadripartite-the FAO, UNEP, the WHO, and the OIE
- It is valid from 2022-2026 and is aimed at mitigating the health challenges at global, regional, and country levels

## National One Health Mission

### ABOUT

- Aims to coordinate across achieving overall pandemic preparedness and integrated disease control against priority diseases of both human and animal sectors

### LATEST STEP

- Animal Pandemic Preparedness Initiative (APPI)
- Animal Health System Support for One Health (AHSSOH)

### EARLIER INITIATIVES

- The Integrated Disease Surveillance Project, 2004
- A multi-disciplinary Road Map to Combat Zoonoses in India, 2008

### ELEMENTS

- Pandemic Preparedness (Human & Animal)
- Integrated Disease Surveillance
- Strengthening Routine Prevention Programs
- Joint Outbreak Response

WHO, FAO, OIE, Drishti IAS

## UPSC Civil Services Examination, Previous Year Questions (PYQs)

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

**Source:** PIB

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