

UN Report on Zoonotic Diseases

Why in News

According to a report published by the <u>United Nations Environment Programme (UNEP)</u> and the **International** <u>Livestock</u> **Research Institute (ILRI)**, about 60% of known infectious diseases in humans and 75% of all emerging infectious diseases are <u>zoonotic</u>.

- The report was released on 6th July 2020, observed as 'World Zoonoses Day'.
- It focuses on the context and nature of potential future zoonotic disease outbreaks, during the Covid-19 pandemic by identifying the anthropogenic (changes in environment due to human activity) factors.

Key Points

Zoonoses or Zoonotic Disease:

- It is a disease that passes into the human population from an animal source directly or through an intermediary species.
- Zoonotic infections can be bacterial, viral, or parasitic in nature, with animals playing a vital role in maintaining such infections.
- Examples of zoonoses include <u>HIV-AIDS</u>, <u>Ebola</u>, <u>Malaria</u>, and the current <u>Covid-19</u> disease.

Anthropogenic Factors:

- Increased Use of Wildlife: Exploitation of wildlife for hunting, harvesting of wild animals
 for meat and research or medical purposes can bring humans in closer contact with wild
 animals, thus increasing the risk of zoonotic disease emergence.
- Changes in Food Supply Chains: The popularity of food products with animal source and the need for immediate delivery to consumers is driving major changes in the food supply chain.
- Increased Demand for Animal Protein: This has encouraged the intensification and industrialisation of animal production, wherein a large number of genetically similar animals are bred in for higher productivity.
- Intense and Unsustainable Farming: Intensive farm settings cause animals to be raised in close proximity to each other characterised by poor waste management. This makes them more vulnerable to infections, which can further lead to emergence of zoonotic diseases.
- **Use of Antimicrobials:** High **use of antimicrobials** in farm settings is contributing to the burden of **AntiMicrobial Resistance (AMR).**
 - **Antimicrobial resistance** is the **resistance acquired** by any microorganism (bacteria, viruses, fungi, parasite, etc.) against antimicrobial drugs (such as antibiotics, antifungals, antivirals, antimalarials, and anthelmintics) that are used to treat infections.
 - As a result, standard treatments become ineffective, infections persist and may spread to others.

Recommendations:

- One Health Approach: One Health is a multisectoral and transdisciplinary approach
 with the goal of achieving optimal health outcomes by recognizing the interconnection
 between people, animals, plants, and their shared environment.
 - It aids a coordinated response to future pandemics and is a key to zoonoses risk reduction and control.
- Expanding Scientific Enquiry: This is a crucial element of AMR containment efforts since
 waste from intensive farms using antimicrobials paves way for AMR determinants
 (e.g. antibiotic residues, resistant bacteria) in the environment.
- **Strengthening Monitoring:** It would help in regulating practices associated with zoonotic diseases.
- Sustainable Land Management Practices: It would help in developing alternatives for food security and livelihoods that do not rely on the destruction of habitats and biodiversity.
 - It would also enhance sustainable co-existence of agriculture and wildlife.
- **Identifying Key Drivers:** It would encourage management and control measures for emerging zoonotic diseases in animal husbandry.

United Nations Environment Programme

- The UNEP is a leading global environmental authority established on 5th june 1972.
- Functions: It sets the global environmental agenda, promotes the sustainable development within the <u>United Nations</u> system, and serves as an authoritative advocate for global environment protection.
- Major Reports: Emission Gap Report, Global Environment Outlook, Frontiers, Invest into Healthy Planet.
- Major Campaigns: Beat Pollution, UN75, World Environment Day, Wild for Life.
- Headquarters: Nairobi, Kenya

International Livestock Research Institute

- The ILRI is an **international agricultural research institute** formed in 1994 through the merger of the International Livestock Centre for Africa and the International Laboratory for Research on Animal Diseases situated in Nairobi, Kenya.
- Functions:
 - It focuses on building sustainable livestock pathways out of poverty in low-income countries.
 - It works with partners worldwide to help poor people keep their farm animals alive and productive and find profitable markets for their animal products.
- Headquarters: Nairobi, Kenya

Way Forward

- The report is one of the first to focus on the environmental side of the zoonotic dimension of disease outbreaks during the Covid-19.
- There is an immediate need to invest in in-depth understanding of environmental linkages with zoonotic diseases and monitoring of such diseases in human-dominated environments.
- There is an urgency for adoption of sustainable methods of food production and to reduce dependence on intensive systems to preserve health and ecosystems.

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