



Reducing Risk of Zoonosis in Food Production

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Why in News

The World Health Organization (WHO), World Organization for Animal Health and the United Nations Environment Programme have laid down **fresh guidelines** for governments **to reduce the risk of transmission of zoonotic pathogens to humans** in food production and marketing chains.

Covid-19 has brought new attention to this threat, given the magnitude of its consequences.

Key Points

- **Zoonosis:**
 - A **zoonosis** is an infectious disease that jumps from a non-human animal to humans.
 - Zoonotic pathogens may be bacterial, viral or parasitic.
 - They can spread to humans through direct contact or through food, water and the environment.
- **Concern:**
 - Animals, particularly **wild animals**, are the source of **more than 70%** of all emerging infectious diseases in humans, many of which are caused by **novel viruses**.
 - Most emerging infectious diseases – such as **Lassa fever, Marburg hemorrhagic fever, Nipah viral infections** and other viral diseases – have wildlife origins.
 - Significant **problems can arise when traditional food markets allow the sale and slaughter of live animals**, especially wild animals, which cannot be properly assessed for potential risks – in areas open to the public.
 - Such environments provide the opportunity for animal viruses, including coronaviruses, to amplify themselves and transmit to new hosts, including humans.

- **WHO Guidelines:**
 - Emergency **regulations to suspend live wild animal sales in traditional food markets.**
 - **Conducting risk assessments** for developing regulations to control the risks of transmission of zoonotic microorganisms from **farmed wild animals and caught wild animals.**
 - **Ensuring** that food inspectors are **adequately trained** to ensure that businesses comply with regulations to protect **consumers' health and are held accountable.**
 - Strengthening **surveillance systems for zoonotic pathogens.**

Indian Scenario

- **Zoonotic Diseases:**
 - India is **among the top geographical hotspots** where zoonotic diseases are a major public health issue causing high burden of morbidity and mortality.
 - **Major public health zoonotic diseases in India** include Rabies, Brucellosis, Toxoplasmosis, Cysticercosis, Echinococcosis, Japanese Encephalitis (JE), Plague, Leptospirosis, Scrub typhus, Nipah, Trypanosomiasis, Kyasanur forest disease (KFD) and Crimean-Congo haemorrhagic fever (CCHF).
- **Challenges:**
 - **Large human population** and its frequent interactions with animals.
 - **Poverty:** Leads to increased dependence on animal rearing as a means of livelihood. The intimate human-animal contact puts them at risk for this category of diseases.
 - **Unawareness:** Large part of population remains unaware of the basic hygiene routine to be followed.
 - **Antimicrobial Resistance (AMR):** AMR occurs when bacteria, viruses, fungi and parasites change over time and no longer respond to medicines making infections harder to treat and increasing the risk of disease spread, severe illness and death.
 - **Lack of proper vaccination programmes,** poor sero-surveillance and lack of diagnostic facilities make the preventive and precautionary approach more difficult.

- **Measures Taken:**

- Following Programmes have been launched under **National Centre for Disease Control:**
 - Integrated Disease Surveillance Programme (IDSP).
 - National Programme for Containment of Antimicrobial Resistance.
 - National Viral Hepatitis Surveillance Programme.
 - Strengthening Inter-sectoral coordination for prevention and control of Zoonotic Diseases of Public Health Importance.
 - National Rabies control programme.
 - Programme for prevention and control of Leptospirosis.
- Further, experts have underscored the need for the **One Health framework** in the country. One Health is a collaborative, multisectoral, and transdisciplinary approach linking human, animal, and environmental health.

Source: DTE