

One Health Approach

April 13, 2021

About One Health Approach



- One Health Approach recognises that health of human beings is connected to the health of animals and environment
- One Health Approach is gaining importance as most of the contagious diseases affecting humans are zoonotic (animal to man origin) in nature.
- One Health is the collaborative efforts of multiple disciplines working locally, nationally, and globally.
- One Health Approach to attain optimal health for people, animals and our environment.
- The areas of work in which a One Health approach is particularly relevant include food safety, the control of zoonotic diseases and combating antibiotic resistance
- The WHO is very effectively addressing emerging issues of antimicrobial resistance through One Health research.
- The example of One Health Approach being operationalised in the field was seen in India. It helped discover the source of Kyasanur Forest Disease (KFD), a highly dangerous haemorrhagic fever more threatening than COVID-19.

Importance of This model

- Of the contagious diseases affecting humans, more than 65% are of zoonotic or animal to man origin.
- One Health model is a globally accepted model for research on epidemiology, diagnosis and control of zoonotic diseases.
- One Health model facilitates interdisciplinary approach in disease control so as to control emerging and existing zoonotic threats.
- Increasing stress on animals due to loss of their habitat would increase scope of zoonotic diseases.

One Health approach in India

- Recently launched the National Mission on Biodiversity and Human Well-being
- **Aim:** To explore the neglected links between biodiversity science and human well-being across the sectors of health, economic development, agricultural production and livelihood generation, in combination with efforts to mitigate climate change and related disasters.
- One of the components of the mission explicitly links biodiversity to human health through the OneHealth framework.

Zoonotic Diseases

- The diseases, which spillover from animals to humans are referred to as zoonotic diseases.
- Diseases that can spread between animals and humans, such as flu, rabies and Rift Valley Fever.
- Represent more than 60% of emerging infectious diseases worldwide.

Kyasanur Forest Disease (KFD)

- KFD is caused by Kyasanur Forest disease virus (KFDV), it is a member of the virus family Flaviviridae.
- KFDV was identified in 1957 when it was isolated from a sick monkey from the Kyasanur Forest in Karnataka.

- Rodents, shrews, and monkeys are common hosts for KFDV after being bitten by an infected tick. KFDV can cause epizootics with high fatality in primates.
- Diagnosis can be made in the early stage of illness by molecular detection by PCR or virus isolation from the blood.
- Later, serologic testing using enzyme-linked immunosorbent serologic assay (ELISA) can be performed.