

## 2. Diseases of Animal and Forest Origin

**Prelims Syllabus:** Disaster Management

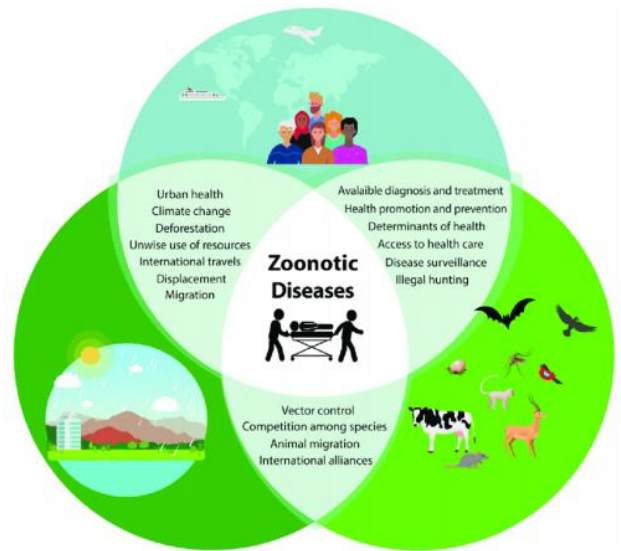
**Mains Syllabus:** GS-III Disaster Management

### Why in News?

- The recent rapid spread of the SARS-CoV-2 virus across the world has focused attention on the invisible processes that help pathogens originally found in wild animals, infect the humans.

### Factors for the origin:

- The destruction of forests and trapping or farming of wild species has brought these animals closer to humans.
- The viruses they harbour find ready hosts in domestic animals, moving to humans.
- Rising Activity:** such as road building and mining cutting through forests bring more people in close contact with animals.
- Global trade in wild species: for instance, in Wuhan the trade ranges from wolf pups to rats, civets and foxes, etc. and their sale in markets along with domestic animals.



### Consequences:

- Unlike previous epidemics, COVID-19 has extracted a staggering toll, killing people, forcing a lockdown.
- Economic devastation and recession.
- Short-term high growth trajectories can come to an abrupt halt with a pandemic.
- Diseases of animal origin: Examples are Ebola, HIV, Severe Acute Respiratory Syndrome, Middle East Respiratory Syndrome, bird flu and swine flu.

### What does these Pandemics Signify?

- Maintain viable ecosystems: For instance, Nipah and Hendra viruses, involving transfer from bats to pigs in the former, and bats to horses, highlights the need of maintaining an ecosystem.
- Eliminate the need for wild animals like bats to colonise human surroundings.

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- Conserve the biodiversity: Biodiversity in forests harmlessly retains dangerous viruses and other pathogens away from people.
  - Stop viewing undisturbed landscapes as an impediment to economic growth.
  - Warning to hasty development process: hasty permissions granted for new roads, dams, mines and power projects in already enfeebled forests can unleash more scourges.
  - Forest should be left undisturbed. Pristine forests with diverse species keep viruses virtually bottled up, out of man's way.

### **Zoonotic Diseases:**

- Zoonotic diseases are an infectious disease caused by bacteria, viruses, or parasites that spread from non-human animals (usually vertebrates) to Humans.

### **Modes of Transmission:**

- **Direct Zoonosis:** the disease is directly transmitted from other animals to humans through media such as air (influenza) or through bites and saliva (rabies).
- **Indirect Zoonosis:** transmission can also occur via an intermediate species (referred to as a vector), which carry the disease pathogen without getting infected.

