



Novel Coronavirus 2019-nCoV

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This article is based on “A sneeze, a global cold and testing times for China” which was published in The Hindu on 01/02/2020. It talks about the spread of Coronavirus.

Recently, a new virus belonging to the **Coronavirus family** (now named **novel coronavirus 2019-nCoV**) has claimed over 200 lives in China and the numbers infected have touched 10,000 confirmed cases. As the outbreak continues to spread outside China, the **World Health Organization (WHO)** has declared it a **Public Health Emergency of International Concern** (global emergency).

Under the global emergency, all countries should be prepared for containment, including active surveillance, early detection, isolation and case management, contact tracing and prevention of the onward spread of 2019-nCoV infection, and to share full data with WHO.

Public Health Emergency of International Concern (PHEIC)

- A PHEIC is defined in the International Health Regulations (IHR, 2005) as, “an extraordinary event which is determined to constitute a public health risk to other States through the international spread of disease and to potentially require a coordinated international response”. This definition implies a situation that is:
 - Serious, sudden, unusual or unexpected;
 - Carries implications for public health beyond the affected State’s national border; and
 - May require immediate international action.
- **The declaration of PHEIC would lead to boosting public health measures, funding and resources to prevent and reduce global spread.**
- The WHO has declared five global emergencies in the past decade, including the Ebola epidemic.

What is the novel coronavirus 2019-nCoV?

- Normally, coronavirus is a large family of viruses that are often the **source of respiratory infections, including the common cold.**
- Most of the **viruses are common among animals**, but sometimes, an animal-based coronavirus mutates and successfully finds a human host.
- According to the **World Health Organization**, during previous outbreaks due to other coronaviruses, **human-to-human transmission** occurred through droplets or objects making contact, suggesting that the transmission mode of the 2019-nCoV can be identical.
- **Manifested symptoms** may include fever, cough and shortness of breath. Antibiotics do not work against such viral pneumonia and there are no vaccines against them.
- More significant is the new understanding that the virus is contagious even during incubation, that is even before a patient exhibits any symptoms. This characteristic amplifies transmissibility.
- Due to this, travel bans across China are initiated and the literal isolation of Wuhan (the place where the novel coronavirus outbreak took place) has been done.

Novel Coronavirus 2019-nCoV: A Man Made Disaster

The relationship between **zoonotic pathogens** — those of animal origin — and global pandemics is not new. In the last five years alone, the world has faced outbreaks of dreaded viruses such as **Ebola**, **MERS (Middle East Respiratory Syndrome)**, **SARS (Severe Acute Respiratory Syndrome)** and now **Novel coronavirus**.

- The World Health Organisation (WHO) estimates that globally, about a billion cases of illness and millions of deaths occur every year from **zoonoses**, i.e, diseases and infections naturally transmitted between people and vertebrate animals.
Some 60% of emerging infectious diseases globally are zoonoses. Of the over 30 new human pathogens detected over the last three decades, 75% originated in animals.
- **According to WHO, wherever there is close mixing of humans and animals, especially the unregulated handling of blood and other body products, as happens for example in China's animal markets, there are greater chances of transmission of a virus from animals to humans, and its mutation to adapt to the human body.**
- Animal markets are breeding grounds because there is free interchange of pathogens between species and mutations.

Note

- The novel coronavirus is being compared with the Severe Acute Respiratory Syndrome outbreak in 2002-03 which infected around 8,000 patients and claimed nearly 800 lives.
 - SARS is also a zoonotic case, part of the coronavirus family with clues pointing to horseshoe bats in China as the likely source.
 - The first incidents were reported in Guangdong province in November 2002.
 - It was the first case of a coronavirus family virus developing lethal pathogenicity together with high transmission.
 - The global economic loss due to SARS was estimated at between \$30-\$100 billion.
- **Ebola outbreak in Africa:** There it was wild chimpanzees who had the disease. It came into humans after these were killed and consumed.

Impact on India

- In India, the Ministry of Health and Family Welfare has declared **one positive case** of a novel coronavirus patient in Kerala.
- Since India and Nepal share an open border, the coronavirus **cases being reported in Nepal** is a sign of grave concern for India.
- However, the way, Kerala government dealt with the **Nipah virus outbreak** in May 2018 was a remarkable feat. This can be replicated in case **Novel coronavirus spreads across India**.
 - Nipah is also zoonotic and made the jump from fruit bats to humans. Though there were 17 deaths in India, effective quarantine measures by local authorities prevented the spread.
 - The State health machinery and local administration (without waiting for instructions from Union government) responded with alacrity with many put under observation. This proactivity prevented the spread of the virus and Kerala was declared Nipah-free within a month.

Conclusion

Infectious diseases including those of the zoonotic variety are on the rise in India. In addition, regions in India suffer from seasonal outbreaks of dengue, malaria and influenza strains. In this context:

- The **nation-wide disease surveillance programme** needs to be strengthened.
- Given the growth potential of India's biotech sector, it is time to put in place a robust **public-private partnership model** that can transform the health services sector in the country, covering disease surveillance, diagnostic kit availability and accelerated vaccine development.

Drishti Mains Question

Discuss whether the frequent viral outbreaks can be termed as man-made disasters.
