



Future Pandemics and Reduction Measures

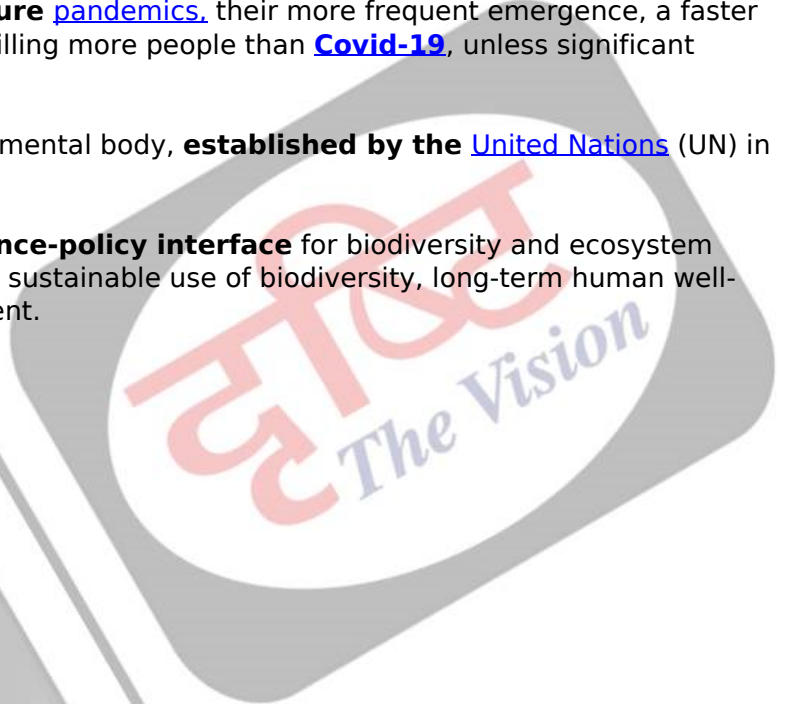
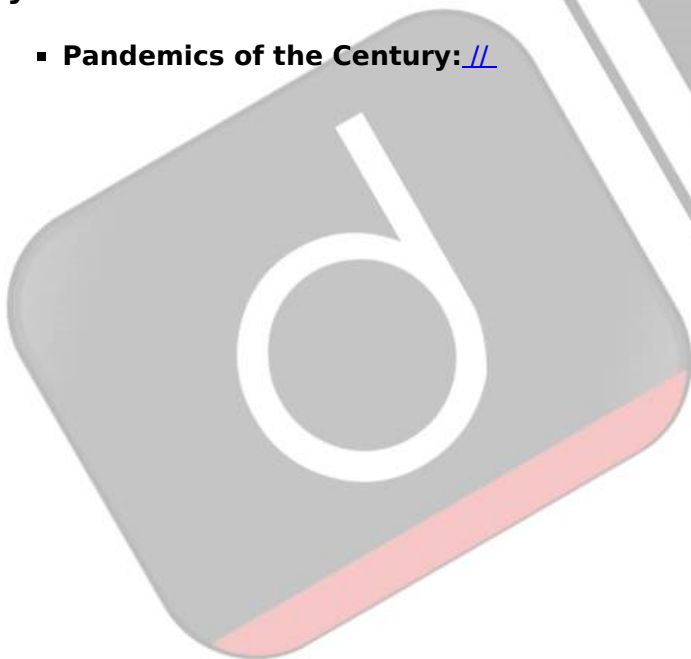
Why in News

Recently, the **Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem** (IPBES) has released a **report which warns about future [pandemics](#)**, their more frequent emergence, a faster pace of spread and more damage to the world killing more people than **Covid-19**, unless significant measures are taken.

- The IPBES is an independent intergovernmental body, **established by the [United Nations](#)** (UN) in 2012.
 - It **aims to strengthen the science-policy interface** for biodiversity and ecosystem services for the conservation and sustainable use of biodiversity, long-term human well-being and sustainable development.

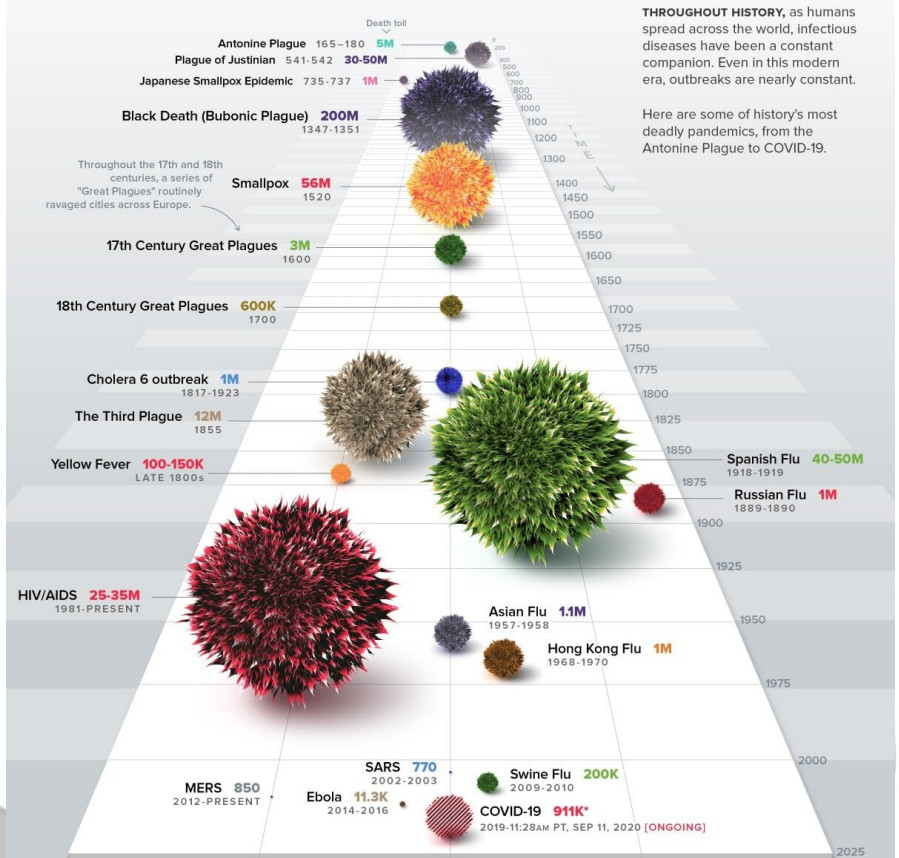
Key Points

- **Pandemics of the Century:** [//](#)



HISTORY OF PANDEMICS

PAN-DEM-IC (of a disease) prevalent over a whole country or the world.



THROUGHOUT HISTORY, as humans spread across the world, infectious diseases have been a constant companion. Even in this modern era, outbreaks are nearly constant.

Here are some of history's most deadly pandemics, from the Antonine Plague to COVID-19.



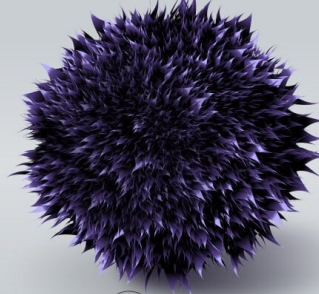
DEATH TOLL [HIGHEST TO LOWEST]

WHO officially declared COVID-19 a pandemic on Mar 11, 2020.

It is hard to calculate and forecast the impact of COVID-19 because the disease is new to medicine, and data is still coming in.

*Johns Hopkins University estimates

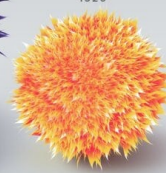
200M
Black Death (Bubonic Plague)
1347-1351



The plague originated in rats and spread to humans via infected fleas.

The outbreak wiped out 30-50% of Europe's population. It took more than 200 years for the continent's population to recover.

56M
Smallpox
1520



Smallpox killed an estimated 90% of Native Americans. In Europe during the 1800s, an estimated 400,000 people were being killed by smallpox annually. The first ever vaccine was created to ward off smallpox.

40-50M
Spanish Flu
1918-1919



30-50M
Plague of Justinian
541-542



The death toll of this plague is still under debate as new evidence is uncovered, but many think it may have helped hasten the fall of the Roman Empire.



25-35M
HIV/AIDS
1981-PRESENT



12M
The Third Plague
1855



5M
Antonine Plague
165-180



3M
17th Century Great Plagues
1600



1.1M
Asian Flu
1957-1958



1M
Russian Flu
1889-1890



1M
Hong Kong Flu
1968-1970



1M
Cholera 6 outbreak
1817-1923



1M
Japanese Smallpox Epidemic
735-737



911K*
COVID-19
2019-11:28AM PT, SEP 11, 2020 [ONGOING]



600K
18th Century Great Plagues
1700



200K
Swine Flu
2009-2010



100-150K
Yellow Fever
LATE 1800s



11.3K
Ebola
2014-2016



850
MERS
2012-PRESENT



770
SARS
2002-2003

*Johns Hopkins University estimates

- Covid-19 is at least the sixth pandemic to have taken place in the last century since the [Spanish Influenza Pandemic of 1918](#).
 - In March 2020, the [World Health Organisation](#) (WHO) declared Covid-19 a pandemic.
- **Three** of the pandemics were caused **by influenza viruses**, one by [Human Immunodeficiency Virus](#) (HIV) followed by [Severe Acute Respiratory Syndrome](#) (SARS) and now Covid-19.

▪ **Causes:**

- Almost all the pandemics so far, have been [zoonoses](#) (diseases caused by germs that spread between animals and people).
- More than 70% of emerging diseases, such as [Ebola](#), [Zika](#) and [Nipah](#), are **caused by microbes found in animals** which **spread due to contact** among wildlife, livestock and people.
 - The estimated value of the legal international wildlife trade in 2019 was about USD 107 billion, a 500% increase since 2005 and a 2000% increase since the 1980s.
- **Covid-19's origins also lie in microbes carried by animals** but its **emergence has been entirely driven by human activities** like all pandemics.
- About 30% of emerging infectious diseases are attributed to [land-use change](#), **agricultural expansion** and **urbanisation**.

▪ **Future Possibilities:**

- Currently, there are over **1.7 million 'undiscovered' viruses** that exist in mammals and birds, out of which **up to 827,000 could have the ability to infect humans**.

▪ **Reduction Measures:**

- Pandemic risk can be lowered by **reducing the human activities that drive the loss of biodiversity**, by greater **conservation of protected areas** and through measures that **reduce unsustainable exploitation** of high biodiversity regions.
- These measures will help in **reducing the contact between wildlife-livestock and humans**, thereby **helping prevent the spread** of new diseases.
- Policy options like launching a **high-level intergovernmental council on pandemic prevention**, countries setting **mutually-agreed goals or targets** regarding the environment, animals and people, and **reducing zoonotic disease risk in the international wildlife trade** by forming intergovernmental 'health and trade' partnerships will also reduce the risks substantially.

Pandemic

- According to the WHO, a pandemic is declared when a new disease for which people do not have immunity spreads around the world beyond expectations.

Epidemic

- An epidemic is a large outbreak, one that spreads among a population or region. It is less severe than pandemic due to a limited area of spread.

[Source: IE](#)

