



Future Pandemics and Reduction Measures

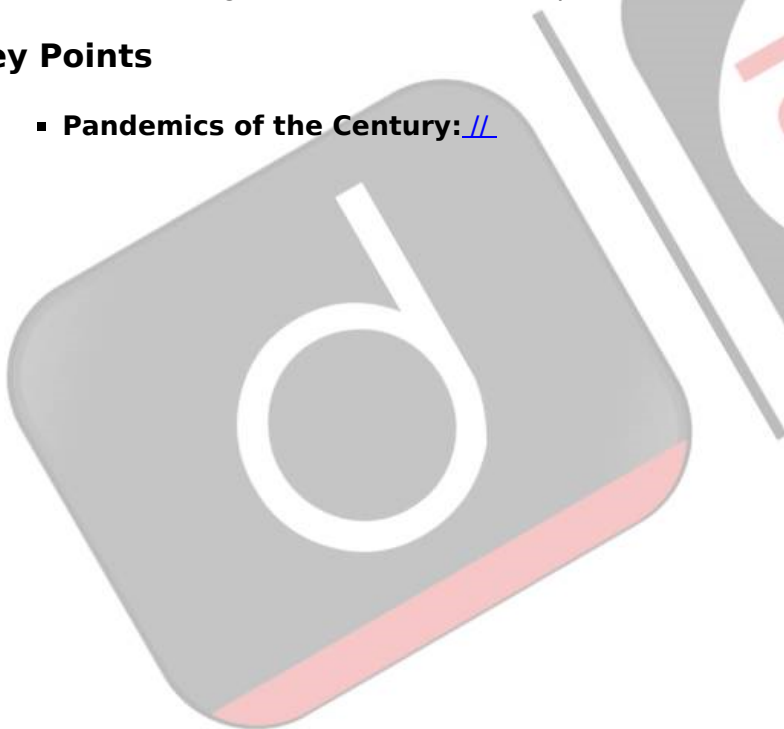
Why in News

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.

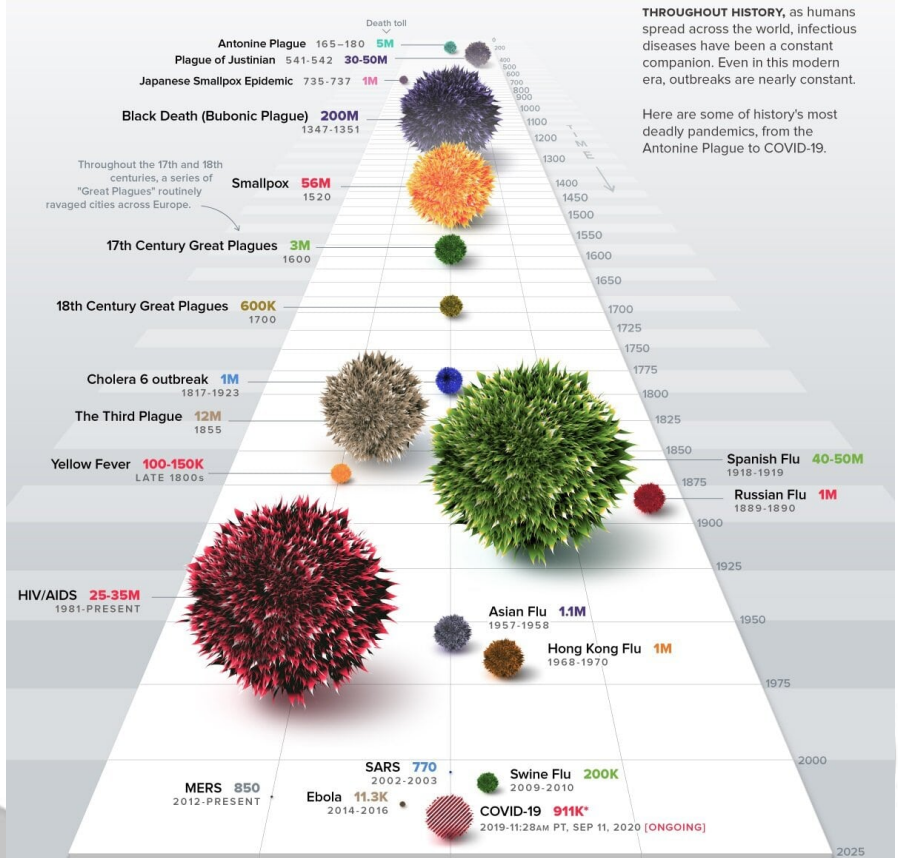
Key Points

- **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.



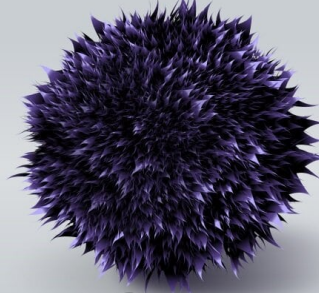
DEATH TOLL [HIGHEST TO LOWEST]

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

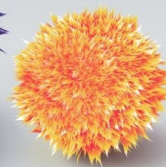
200M Black Death (Bubonic Plague) 1347-1351



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

2019-11:28AM PT, SEP 11, 2020 [ONGOING]
*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](#)

