

Current Affairs of the Day

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1. Cyclone Nisarga

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➤ International Relations:

1. Trump invites Modi for G-7 summit

➤ Health:

1. Remdesivir cleared for 'emergency use'
2. Scientists identify second most common coronavirus type in India

PAPER 3:

1. Global Economic Prospects (GEP) 2020 Report

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Nisarga barrels towards Mumbai

Maharashtra and Gujarat geared up for Cyclone Nisarga, which is expected to make landfall on Wednesday evening near Alibaug, south of Mumbai.

Value Added Information

When will it be known as Cyclone Nisarga?

➤ After the powerful Cyclone Amphan that struck the eastern coast on May 20, 2020, India is bracing to face another cyclone.

➤ It is not even a full-fledged cyclone right now, just a 'depression'.

➤ This depression is likely to intensify into a 'deep depression' soon, and eventually into a cyclone, after which it would be called Nisarga.

➤ In strength and intensity, Cyclone Nisarga would be much weaker than Cyclone Amphan.

Where is it headed?

➤ It is headed towards the coastline of north Maharashtra and south Gujarat.

➤ It may hit the coastline on June 3, between Harihareshwar in Raigad district, just south of Mumbai, and Daman, just below Gujarat coast.

➤ By that time, it is likely to evolve into a Severe Cyclonic Storm.

➤ This storm, roughly stated, will be of strength 2 on a 1-to-5 of strength of cyclones that arise in the Indian Ocean.

What does that mean?

➤ The cyclones' strength is measured by the wind speeds they generate.

➤ At its strongest, Nisarga would be associated with wind speeds in the range 95-105 km per hour.

➤ Amphan was classified as a super-cyclone of category 5.

➤ But Amphan had weakened to category 4, 'Extremely Severe Cyclonic Storm', ahead of its landfall, at which time the wind speeds were in excess of 180 kph.

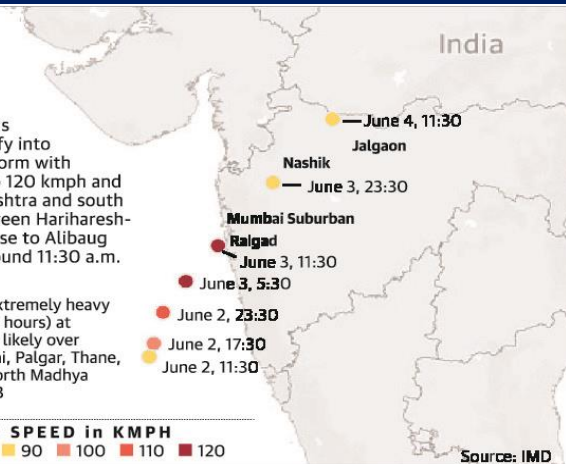
➤ Cyclones formed in the Bay of Bengal side of the Indian Ocean are more frequent and stronger than those on the Arabian Sea side.

Tracking Nisarga

The map shows the predicted route of Cyclone Nisarga. It is expected to intensify into a severe cyclonic storm with winds gusting up to 120 kmph and cross north Maharashtra and south Gujarat coasts between Harihareshwar and Daman, close to Alibaug (Raigad district) around 11:30 a.m. on June 3

• According to IMD, extremely heavy rainfall (> 20 cm in 24 hours) at isolated places is very likely over north Konkan (Mumbai, Palgar, Thane, Raigad district) and north Madhya Maharashtra on June 3

WIND SPEED in KMPH
 70 80 90 100 110 120





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- The relatively cold waters of the Arabian Sea discourage the kind of very strong cyclones that are formed on the Bay of Bengal side.
- Odisha and Andhra Pradesh face the brunt of these cyclones every year.
- However, according to India Meteorological Department, in 2019, the Arabian Sea saw the most frequent and intense cyclonic activity in more than 100 years.
- Five cyclones originated in the area in 2019 - Vayu, Hikka, Kyarr, Maha and Pavan - when normally only one or two are formed.

So how big is the threat?

- If the system does intensify into a cyclonic storm, some coastal districts of Maharashtra will come directly in line of its predicted path.
- Though the exact location of the landfall is still to be determined, it is likely to be close to Mumbai.
- Neighbouring Thane, Raigad, Ratnagiri and Sindhudurg are also likely to be affected.
- Heavy to very heavy rainfall is predicted in these areas until June 4.
- The southwest monsoon has already made an onset over Kerala.
- There is an associated depression lying parallel to the west coast, which is intensifying, and moving northwards along the coast.
- Under such circumstances, the east-central and southeast regions of Arabian Sea are already experiencing rough weather conditions.
- These weather conditions are likely to get intensified because of this cyclone.

Would Maharashtra get early monsoon rainfall?

- No, the rainfall over the next three days in Maharashtra would not be due to the southwest monsoon, which is still to begin its northward movement from Kerala.
- Normally, monsoon arrives over Maharashtra after June 10, 2020.

Trump invites Modi for G-7 summit

Key Points:

- While the invite from President Trump is for the upcoming summit, which has been postponed from June, sources indicated that they will argue for not just a change in G-7 but also at other multilateral platforms to reflect India's concerns.
- Mr. Modi had attended the G-7 summit at Biarritz in France last year after being invited by President Emmanuel Macron.

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- The release did not clarify if the G-11 will be launched in the upcoming summit for which President Trump has extended the invite.
- Earlier Mr. Trump had described the G-7 as “outdated” indicating that he wanted the inclusion of Russia, India, Australia, and South Korea in the group.
- Significantly, despite India's claim about holding bilateral talks with China to reduce tension along the Line of Actual Control near Ladakh, Mr. Modi on Tuesday discussed the issue with Mr Trump.

Remdesivir cleared for ‘emergency use’

In News:

- Antiviral drug Remdesivir has been cleared for treatment of COVID-19 patients “under emergency use,” the Union Health Ministry said on Tuesday, adding that the decision was based on available evidence.



Value Added Information

What is Remdesivir?

- It was manufactured in 2014 to treat for Ebola, by US-based biotechnology firm Gilead Sciences.
- It has since been used to treat for MERS and SERS, both caused by members of the coronavirus family.
- Current research is looking at whether the drug’s antiviral properties work against SARS-CoV2, the coronavirus that causes Covid-19 disease.

What does the Remdesivir do?

- The drug remdesivir is designed to obstruct the novel coronavirus SARS-CoV2 at the stage of replication.
- At this stage, the virus creates copies of itself, followed endlessly by the copies creating copies of themselves.
- Researchers have described the exact mechanism of interaction between the virus and the drug.

How does replication take place?

- Once the virus enters the human cell, it releases its genetic material, which is then copied using the body’s existing mechanism.

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- At every stage of infection, various human proteins, virus proteins, and their interactions come into play.
- At the replication stage, the key protein of the virus at play is an enzyme called RdRp.
- RdRp makes copies by processing components of the RNA of the virus.
- Scientifically, such an enzyme is called a polymerase or a replicase.
- In any case, RdRp is the enzyme that is targeted by remdesivir.
- How does remdesivir target the RdRp enzyme?
- In order to replicate, RdRp processes raw material from the RNA of the virus, broken down by another enzyme with that specific function.
- When a patient is given remdesivir, it mimics some of this material, and gets incorporated in the replication site.
- With remdesivir replacing the material it needs, the virus fails to replicate further.

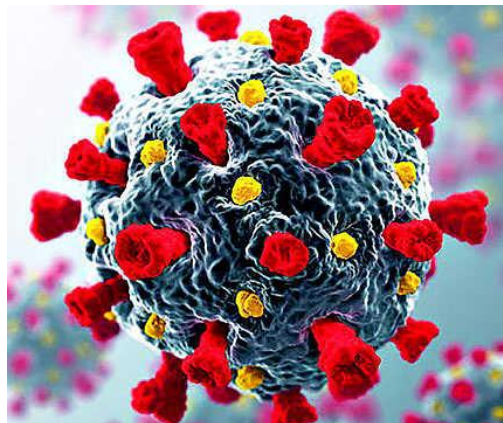
What are some new findings?

- As far as SARS-CoV2 is concerned, a Chinese research paper has added to the emerging knowledge about the action of remdesivir.
- They have imaged the high-resolution structure of the SARS-CoV-2 replicase complex, with remdesivir bound to it.
- The structure shows where the RNA template of the virus enters the replication spot.
- It also shows where the remdesivir is incorporated, and where the process of replication is terminated.

Scientists identify second most common coronavirus type in India

Key Points:

- Scientists at multiple CSIR laboratories have identified a type of coronavirus that may be the second most prevalent in India, and may comprise 3.5% of the genomes globally.
- The most dominant coronavirus clade in India is the A2a, and of 213 genomes analysed by the group, 62% of them were A2a. The newly identified type, that the scientists have christened A3i, comprised 41% of those analysed. With this, there are 11 SARS-CoV-2 types identified globally, with at least six of them identified in India.





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- The coronavirus type, or clade, is a cluster of SARS-CoV-2 viruses that share evolutionary similarities.
- Such classifications are useful in establishing whether certain strains are particularly virulent, spread more easily, how they are likely to evolve over time and whether some could be less vulnerable to certain kinds of vaccines.
- So far, there is no evidence that A3i is more virulent — that is, it's linked to more deaths.

'60 mn could be pushed into poverty'

Global Economic Prospects (GEP) 2020 report:

- The COVID-19 pandemic is expected to have “severe” short and long-term effects on economic growth, the World Bank said in its Global Economic Prospects (GEP) June 2020 report, part of which was released on Tuesday.
- EMDEs (Emerging Market and Developing Economies) are especially vulnerable, the report says.
- Sixty million people could be pushed into extreme poverty this year, World Bank President David Malpass said.

Policy choices:

- “Policy choices made today — including greater debt transparency to invite new investment, faster advances in digital connectivity, and a major expansion of cash safety nets for the poor — will help limit the damage and build a stronger recovery,” Mr. Malpass said.
- “The financing and building of productive infrastructure are among the hardest-to-solve development challenges in the post-pandemic recovery. We need to see measures to speed litigation and the resolution of bankruptcies and reform the costly subsidies, monopolies and protected state-owned enterprises that have slowed development,” he said.

Key findings:

- EMDEs face health crises, restrictions and external shocks like falling trade, tourism and commodity prices, as well as capital outflows.
- These countries are expected to have a 3-8% output loss in the short term, based on studies of previous pandemics, as per the Bank's analysis.
- EMDEs are also expected to witness the spillover effects of the U.S., the Euro Area and China, which represent almost half of global output, being unlikely to return to pre-pandemic levels of output before the end of 2021.
- If these three big economies simultaneously lose 1% in output, EMDEs (excluding China) are expected to lose 1.3% in their output with the lag of a year, the Bank warned.
- Longer term, there is a risk not just of a drop in the level of output but a lowering of potential output growth, it said. The severity of the current recession has been unseen in eight decades.