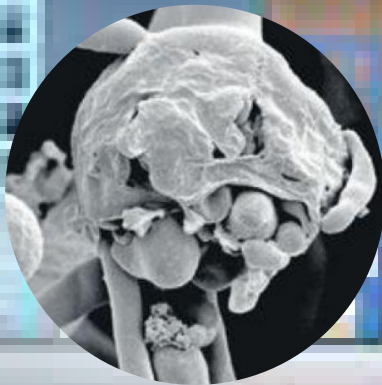
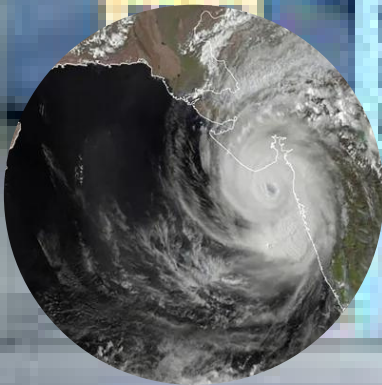


PRAYAS4IAS

AN INITIATIVE BY THE PRAYAS INDIA

MAY WEEK 2

RERA



May (Week 2)

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Prelims

NATIONAL

PM-Kisan

(Source: [Indian Express](#))

Context: When Prime Minister Narendra Modi released Rs 20,667 crore as the eighth installment of payouts under PM-Kisan, among the over 9.5 crore beneficiaries across the country were more than 7 lakh farmers in West Bengal. This was the first time that Bengal farmers received this benefit; the state had thus far stayed away from the central scheme.

PM-Kisan scheme

- The Pradhan Mantri Kisan Samman Nidhi (PM-Kisan) is a 100 per cent centrally funded scheme under which Rs 6,000 is transferred in three equal installments to eligible farmer families in a year.
- Though the scheme was announced in the General Budget (Interim) for 2019-20 ahead of Lok Sabha elections, it was implemented from December 1, 2018, when the first installment for December-March, 2018-19 was released.

How the scheme works

- The money is transferred to bank accounts of beneficiaries through the Direct Benefit Transfer (DBT) mode.
- According to scheme guidelines, state governments are required to send “correct and verified data of farmers”, which State Nodal Officers (SNOs) authenticate and upload to the scheme portal in batches.
- Based on the verified data, SNOs sign the Request For Transfer (RFT), with the total number of beneficiaries.
- The Public Finance Management System (PFMS) then issues a Fund Transfer Order (FTO), based on which the Department of Agriculture, Cooperation & Farmers’ Welfare in the central Ministry of Agriculture & Farmers’ Welfare issues the transaction order for the mentioned amount.
- The money goes to the State Nodal Account maintained at a sponsor bank (in the case of Bengal, it is the State Bank of India), and the SNO gives a letter of authority to the bank manager to auto debit the PM-Kisan amount and credit it to the accounts of eligible farmers.

Samudra Setu II

(Source: [PIB](#))

Context: Indian Naval Ships Airavat, Kolkata and Trikanth reach India with Liquid Medical Oxygen and Critical Medical equipment/supplies from Singapore, Kuwait and Qatar.

About Operation Samudra Setu II:

- Samudra Setu II is the COVID relief operation carried out by the Indian Navy.
- The Navy has deployed nine warships as part of the operation to supplement the oxygen requirement in the country.



- They are sailing in the Persian Gulf, in the Indian Ocean Region carrying back the most critical O₂ supplies for COVID-19 patients.
- For the shipment of Liquid Medical Oxygen (LMO) and related medical equipment from friendly foreign countries in Persian Gulf and South East Asia, ships from all the three naval commands have been deployed.
 - The three naval commands are located in Mumbai, Visakhapatnam and Kochi.

2-deoxy-D-glucose (2-DG)

(Source: [The Hindu](#))

Context: *The Drugs Controller General of India (DCGI) has granted permission for emergency use of an anti-COVID-19 therapeutic application of the drug 2-deoxy-D-glucose (2-DG), developed by the Institute of Nuclear Medicine and Allied Sciences (INMAS), a lab of the Defence Research and Development Organisation (DRDO), in collaboration with Dr. Reddy's Laboratories, Hyderabad.*


Details:

- The Ministry of Defence said that as per the order, emergency use of this drug as adjunct therapy in moderate to severe COVID-19 patients is permitted.
- It added that being a generic molecule and analogue of glucose, it can be easily produced and made available in plenty in the country.
- The drug comes in powder form in sachets and is taken orally by dissolving it in water.
- It accumulates in the virus infected cells and prevents their growth by stopping viral synthesis and energy production. Its selective accumulation in virally infected cells makes this drug unique.
- Clinical trial results have shown that this molecule helps in faster recovery of hospitalised patients and reduces supplemental oxygen dependence, noted the release.
- It further said that higher proportion of patients treated with 2-DG showed RT-PCR negative conversion in COVID-19 patients.


A ray of hope

The use of 2-deoxy-D-glucose (2-DG) in COVID-19 patients showed a higher proportion of them recording faster RT-PCR negative conversion.


HOW IT WORKS:



The drug comes in powder form in sachets, which is taken orally by dissolving it in water



It accumulates in the virus infected cells and prevents their growth by stopping viral synthesis and energy production. Its selective accumulation in virally infected cells makes this drug unique



Clinical trials have shown that this molecule helps in faster recovery of hospitalised patients and reduces their dependence on oxygen

Rupsi Airport

(Source: [The Hindu](#))

Context: *An airport built for warplanes in 1939 took commercial wings recently, heralding the best of times for western Assam's Dhubri district during the worst of times.*

Details:

- Rupsi airport near Gauripur, about 15 km from district headquarters Dhubri, was one of South Asia's largest airports with a 1.8 km runway used by Allied aircraft for supplying arms, manpower and ammunition to forces in Burma and China during World War II.
- Rupsi is Assam's 7th airport and 15th in the northeast including Pakyong in Sikkim. Commercial flights were allowed later.
- India's Partition in 1947 began eroding the airport's importance. It was abandoned after the last flight — a Vayudoot from Dhubri to Guwahati — took off in 1983.
- The All India United Democratic Front leader was one of the passengers who alighted from the 72-seater twin-engine turboprop touched down from Guwahati at 12.10 p.m. The flight took off for Kolkata at 12.40 p.m. and returned to Rupsi at 4.10 p.m. en route to Guwahati.
- Flybig, an Indore-based company, would be operating the Kolkata-Guwahati-Rupsi flight under the subsidised UDAAN scheme for regional connectivity.
- Partition virtually turned Dhubri into a prisoner of geography. The river port was closed after the India-Pakistan war in 1965 and the railway service suspended in 1988.
- The East-West Corridor connecting the northeast with India's "mainland" through Kokrajhar district to the east also reduced the dependence on the old highway via Gauripur.

FCRA hurdle in foreign COVID aid

(Source: [The Hindu](#))

Context: *Indian entities, including hospitals and charitable trusts, hoping to receive COVID-19 relief material from overseas individual donors or donor agencies, could be in trouble, unless they are registered under the Foreign Contribution Regulation Act (FCRA) with a stated objective involving provision of medical care.*

Details:

- On May 3, the government permitted imports without GST levies for pandemic relief material donated from abroad for free distribution in the country, delegating States to certify the entities that will receive such imports.
- However, no exemption has been granted from the FCRA law that requires any domestic entity receiving foreign material or cash donations to have requisite approvals from the Ministry of Home Affairs.
- This ambiguity and the prospect of facing prosecution under the FCRA Act's strict provisions is jeopardising some large donors' plans to buy equipment like oxygen plants and concentrators for Indian hospitals and smaller charities and informal groups of persons working in rural areas with weaker health infrastructure.
- In the case of a large hospital, where nearly two-dozen patients died after Oxygen supplies were not replenished in a timely manner, foreign donors are keen to donate an oxygen production plant on its premises, but the lack of an FCRA nod is holding up the process.
- As FCRA approvals take a lot of time, the government needs to urgently grant an exemption for all such donations, tax and legal experts told The Hindu.

Background of Foreign Contribution Regulation Act (FCRA)

- The Foreign Contribution Regulation Act (FCRA) was first brought in by the Indira Gandhi government during the Emergency in 1976.
- Its aim was to protect the 'sovereignty' of India from 'foreign hands' at a time when global powers were engaged in a cold war.



- The law prohibited political parties, electoral candidates and even cartoonists from accepting foreign contributions.
- In 2010, the government made the renewal of registrations mandatory every five years and placed a 50% limit on administrative expenses.

Key provisions of Foreign Contribution Regulation (Amendment) Act, 2020

- **Prohibition to accept foreign contribution:** These include: election candidates, editor or publisher of a newspaper, judges, government servants, members of any legislature, and political parties.
- **Transfer of foreign contribution:**
 - Under the Act, foreign contribution cannot be transferred to any other person unless such person is also registered to accept foreign contribution.
 - FCRA registered organisations are barred from transferring foreign donations to smaller non-profits (a practice known as sub-granting) who often find it difficult to access donors on their own.
- **Aadhaar for registration:** The Act states that a person may accept foreign contribution if they have obtained a certificate of registration from central government or obtained prior permission from the government to accept foreign contribution. The bill makes Aadhaar mandatory for registration.
- **Restriction in utilisation of foreign contribution:** The Bill gives government powers to stop utilisation of foreign funds by an organisation through a “summary enquiry”.
- **Reduction in use of foreign contribution for administrative purposes:** The bill decreases administrative expenses through foreign funds by an organisation to 20% from 50% earlier.
- **More power to government:** FCRA registration can be suspended now after a summary enquiry and the period of suspension can extend up to a year (from 180 days earlier).

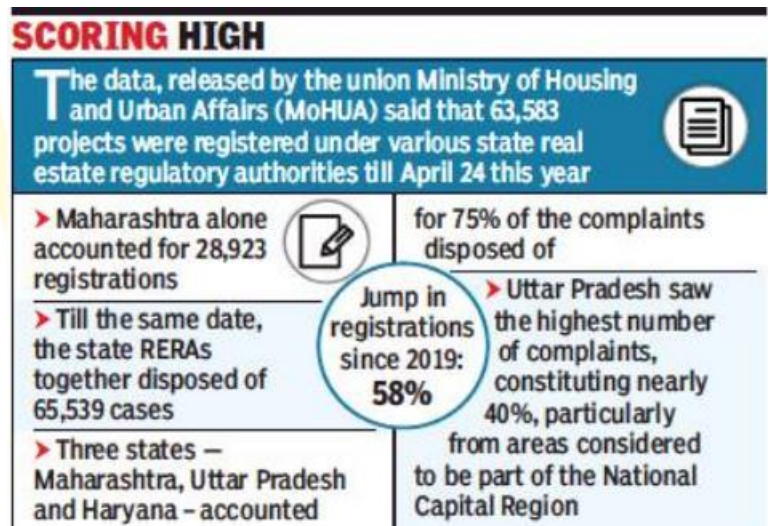
Real Estate Regulation Act (RERA)

(Source: [Times of India](https://timesofindia.com))

Context: Maharashtra accounts for nearly half of the 63,000-odd projects registered under various state real estate regulatory authorities since 2017. The state also ranks third in terms of the number of complaints disposed of.

Details:

- The data, released by the Union ministry of housing and urban affairs, said that 63,581 projects were registered till April 24 this year, with a 58% jump in registrations since 2019.
- Till the same date, the state Reras together disposed of 65,539 cases. Three states—Uttar Pradesh, Haryana, and Maharashtra—accounted for 75% of the complaints disposed of.
- In all, 63,583 projects were registered in all notified Reras since 2017. Of these, Maharashtra alone had 28,923 registrations, constituting around 45% of all new projects in that period.
- UP saw the highest number of complaints, constituting nearly 40%.



Real Estate (Regulation & Development) Act, 2016

- The Real Estate (Regulation and Development) Act, 2016 came into force on May 1, 2016. The Central and state governments are liable to notify the Rules under the Act within a statutory period of six months.
- **Land, Rights over Land, Land Improvements** – Fall under the ‘**State List**’ (Under 7th schedule) of the constitution.
- **Regulating contracts and transfer of property** – Fall under ‘**Concurrent List**’ (Under 7th schedule) of the constitution. The above act deals with this.

Aim:

- Bring about transparency in the real estate sector, thereby encouraging investments by foreign and domestic financial institutions and protecting the interests of home buyers

Key Issues in the Real Estate Sector:

- 1). The lengthy approval process for project clearances
- 2). Lack of clear land titles
- 3). Prevalence of **black money**
- 4). Diversion of funds received by the developer towards one project to more lucrative ones
- 5). Construction work has come to a standstill or the developer has left without completing the project
- 6). Developer changes the layout or building plans after purchase
- 7). Legal disputes (It had to be settled in the courts)
- 8). Endemic issues – For Ex recessive conditions in the past few years.
- 9). The distress caused by two drought years has also cut demand in the rural and semi-urban segment.

Provisions under the Act:

- **Mandatory Registration:**
 - Property transactions will now be subject to a regulator — the state-level **Real Estate Regulatory Authority (RERA)**.
 - **RERAs are intended to perform the same role for your property transactions as the SEBI does for security transactions in the capital markets.**
 - Every developer launching any residential project with an area of over 500 square metres or eight apartments, has to register it with RERA and upload all the project details to the RERA site before he initiates any sale.
 - The details uploaded by the developer must include the number and types of homes for sale, site and layout, payment schedules, schedule of completion and quarterly updates on the status of the project too. Thus, RERA maintains comprehensive records for every project across the entire chain, from the conceptualization of the project to its completion. Real estate agents dealing in these projects also need to register with RERAs.
 - This will provide greater **transparency** in project-marketing and execution
 - **Real Estate Appellate Tribunal** (Will handle appeals from RERA) (Have to adjudicate cases within 60 days)
 - **RERA (Real Estate Regulatory Authority)** (Have to dispose complaints within 60 days)
 - The RERA and the Appellate Tribunals have to be set up within 1 year.
- Developers to deposit 70 per cent of the sums received from buyers, in a separate bank account (Escrow Account) earmarked for each project.
 - It must only be used for the construction of that project. Any amount from the account can only be withdrawn after it is certified by an engineer, an architect and a chartered accountant that the withdrawal is in proportion to the stage of completion of the project.

- Builders will have to quote prices based on **carpet area** and not **super built-up area**, while carpet area has been clearly defined in the Act to include usable spaces like kitchen and toilets.
- It will help the home buyers get a clearer picture of the space.
 - Act now has a clear definition of the carpet area: "...the net usable floor area of an apartment, excluding the area covered by the external walls, areas under services shafts, exclusive balcony or verandah area and exclusive open terrace area, but includes the area covered by the internal partition walls of the apartment."
- In case the builder would like to change the layout or plans after the sale, he will need the approval of two-thirds of the buyers in that project, to make such tweaks.
- **Penalties:** Both the buyer and the promoter have to pay penal interest at similar rates, for missed payment obligations or delayed completion. Incorrect or incomplete disclosure will attract a penalty of 5% of the project cost. In fact, the project may even be cancelled if rules are regularly flouted. In case developers renege on any of their commitments, buyers can complain to the RERAs for redress.
- In case a developer leaves a project half way, the association of allottees will have the right to refuse and get back their money along with interest. The allottees can also demand that a government authority get the project completed either through another developer or some other means.
- Every state will have to form its own rules and regulator (RERA), based on the Act's guidelines

Pangolins

(Source: [The Hindu](#))

Context: Pangolins, despite being listed in Schedule I of Wildlife (Protection) Act, 1972 continue to be the world's most trafficked mammal. The primary demand for its scales in the making of traditional East Asian medicines has led to an estimated illegal trade worth \$2.5 billion every year. To enforce the appropriate national and international laws and to track the decline of the species, researchers of Zoological Survey of India (ZSI), Kolkata, have now developed tools to tell apart the scales of Indian pangolin (*Manis crassicaudata*) and Chinese pangolin (*Manis pentadactyla*).

Details:

- They characterised the morphological features and investigated genetic variations between the two species by sequencing 624 scales of pangolins and comparing the sequences with all eight pangolin species.
- Based on the size, shape, weight and ridge counts on the scales, the team was able to categorise the two species.
- When scales are confiscated, the wildlife officers just weigh and estimate how many pangolins might have been killed.
- This needs revision as the dry weight of the scales from one single mature Chinese pangolin is roughly about 500 to 700 grams. However, in the case of Indian pangolin it goes up to 1.5 kg to 1.8 kg.
- According to the International Union for Conservation of Nature, Indian pangolins are endangered and the Chinese pangolins are critically endangered.
- Therefore, it is important to develop protocols that can readily identify species and the number of individuals poached in seizures.
- Though the Chinese pangolin is distributed mostly in Vietnam, Thailand, Cambodia, the northeastern part of our country is also its home. The population is already limited as it has a limited geographical range, low fecundity with just one offspring a year. It is also facing pressure due to habitat degradation and is prone to local extinction.

About Pangolin

- **IUCN status: Endangered**

- India is home to two species of pangolin.
- While the Chinese Pangolin (*Manis pentadactyla*) is found in northeastern India, the Indian Pangolin is distributed in other parts of the country as well as Sri Lanka, Bangladesh and Pakistan.
- Both these species are protected and are listed under the Schedule I Part I of the Wild Life (Protection) Act, 1972 and under Appendix I of the Convention on International Trade in Endangered Species (CITES).
- Commonly known as ‘scaly anteaters’, the toothless animals are unique, a result of millions of years of evolution.
- Pangolins evolved scales as a means of protection. When threatened by big carnivores like lions or tigers they usually curl into a ball.
- The scales defend them against dental attacks from the predators.

Pangolin in China

- Pangolin meat is considered a delicacy in China and Vietnam.
- Their scales which are made of keratin, the same protein present in human nails — are believed to improve lactation, promote blood circulation, and remove blood stasis.
- These so-called health benefits are so far unproven.

What makes pangolins the most trafficked animals in the world?

- Their alleged health benefits in traditional Chinese medicines prompted a booming illicit export of scales from Africa over the past decade.
- Officials quote trafficking price of Pangolin and its scale anywhere between Rs 30,000 and Rs 1 crore for a single animal.
- Conservation of pangolins received its first shot in the arm when the 2017 Convention on International Trade in Endangered Species (CITES) enforced an international trade ban.

Hakki-Pikki tribe

(Source: [The Hindu](#))

Context: Covid-19 reaches the Hakki Pikki tribe of Karnataka.

Hakki-Pikki Tribe

- The Hakki Pikkis are a **nomadic tribe based largely in Karnataka**.
- They were rehabilitated in the 1970s once their trade of bird hunting was banned.
- They now live in villages in Karnataka.
- The origin of Hakki-pikki tribal communities have got a rich history and they are said to have ancestral relations with the **legendary Ranapratap Singh**.
- They are said to have **migrated to southern India after their defeat with the Mughal king**.



Great Nicobar plan

(Source: [The Hindu](#))

Context: *The Environment Appraisal Committee (EAC) – Infrastructure I of the Ministry of Environment, Forest and Climate Change (MoEFCC) has flagged serious concerns about NITI Aayog’s ambitious project for Great Nicobar Island.*

Details:

- The committee has recommended it for grant of terms of reference (TOR) for Environmental Impact Assessment (EIA) studies.
 - This will include baseline studies over three months.
- The committee has asked for an independent evaluation for the suitability of the proposed port site with a specific focus on Leatherback Turtle, Nicobar Magapod and Dugong.
- The pre-feasibility report ‘Holistic Development of Great Nicobar Island at Andaman and Nicobar Islands’ is prepared for the NITI Aayog by a Gurugram-based consulting agency.
 - The proposal includes an international container trans-shipment terminal, a greenfield international airport, a power plant and a township complex spread over 166 sq. km. (mainly pristine coastal systems and tropical forests), and is estimated to cost ₹75,000 crore.

Concerns on Site:

- The discussion on the proposal was deferred as the committee had procedural and substantive concerns.
- The document did not include the details of the township to be developed, seismic and tsunami hazards, freshwater requirement details and details of the impact on the Giant Leatherback turtle.
- The committee also noted that there were no details of the trees to be felled.
 - The project area has some of the finest tropical forests in India.
- The committee noted that the site selection for the port had been done mainly on technical and financial criteria, ignoring the environmental aspects.

Action points:

- The committee has highlighted the need for an independent assessment of terrestrial and marine biodiversity, a study on the impact of dredging, reclamation and port operations, including oil spills, the need for studies of alternative sites for the port with a focus on environmental and ecological impact especially on turtles, analysis of risk-handling capabilities, a disaster management plan, an assessment of the cumulative impact, and a hydro-geological study to assess the impact on ground and surface water regimes.

Black fungus

(Source: [Indian Express](#))

Context: *A rare but serious fungal infection, known as mucormycosis and colloquially as “black fungus”, is being detected relatively frequently among Covid-19 patients in some states. The disease often manifests in the skin and also affects the lungs and the brain.*

What is the disease?

- Although rare, it is a serious infection. It is caused by a group of moulds known as mucormycetes present naturally in the environment.
- It mainly affects people who are on medication for health problems that reduces their ability to fight environmental pathogens, say experts from the Covid-19 task force task force.



- Sinuses or lungs of such individuals get affected after they inhale fungal spores from the air. Doctors in some states have noted a rise in cases of mucormycosis among people hospitalized or recovering from Covid 19, with some requiring urgent surgery. Usually, mucormycetes does not pose a major threat to those with a healthy immune system.
- Warning signs include pain and redness around the eyes or nose, with fever, headache, coughing, shortness of breath, bloody vomits, and altered mental status.

How can one prevent it?

- One should remember that it is a rare disease.
- However, some groups of people are more vulnerable than others. What predisposes patients is uncontrolled diabetes mellitus, immunosuppression by steroids, prolonged ICU stay, and comorbidities — post transplant/malignancy, voriconazole therapy.
- Experts advise that you use masks if you are visiting dusty construction sites.
- Wear shoes, long trousers, long-sleeved shirts and gloves while handling soil (gardening), moss or manure.
- Maintain personal hygiene including a thorough scrub bath.

Article 311 (2)

(Source: [Indian Express](#))

Context: *Suspended police officer **Sachin Waze**, arrested by the National Investigation Agency (NIA) in connection with the Mukesh Ambani terror scare case, **was dismissed from service by Mumbai Police Commissioner under Article 311 (2) (b) without a departmental enquiry.***

What are the safeguards that article 311 provides civil servants?

- Article 311 says that no government employee either of an all India service or a state government shall be dismissed or removed by an authority subordinate to the one that appointed him/her.
- Section 2 of the article says that no civil servant shall be dismissed or removed or reduced in rank except after an inquiry in which s/he has been informed of the charges and given a reasonable opportunity of being heard in respect of those charges.

What is the process of a departmental enquiry?

- In a departmental enquiry, after an enquiry officer is appointed, the civil servant is given a formal chargesheet of the charges. The civil servant can represent himself/herself or choose to have a lawyer.
- Witnesses can be called during the departmental enquiry following which the enquiry officer can prepare a report and submit it to the government for further action.

Are there other exceptions where a person can be dismissed without departmental enquiry?

- Yes. As per Article 311 subclause 2 provision a, if a government employee is convicted in a criminal case, he can be dismissed without DE.
- Apart from this, under 311 (2) (c), a government employee can be dismissed when the President or the Governor, as the case may be, is satisfied that in the interest of the security of state it is not expedient to hold such an enquiry, the employee can be dismissed without DE.

Are 311 (2) sub sections used frequently?

- They are invoked in exceptional circumstances. But the Jammu & Kashmir administration recently set up a Special Task Force (STF) to “scrutinise cases of employees suspected of activities requiring action under article 311(2)(c).
- The order dated April 21 further tasks the STF headed by ADG (CID) J&K to “compile records of such employees, wherever necessary and to the committee constituted by the government”.
- Three government employees, including two teachers, have already been fired. The move has been opposed by rights activists.

Can the dismissal under section 311 (2) be challenged by the government employee?

- Yes, the government employee dismissed under these provisions can approach either tribunals like the state administrative tribunal – in Waze’s case it would be the Maharashtra Administrative Tribunal — or Central Administrative Tribunal (CAT) or the courts.

DETER committees of Bengaluru

(Source: [Indian Express](#))

Context: As Bengaluru continues to witness a daily surge in fresh Covid-19 infections and related fatalities, the state government has decided to manage pandemic at the local level. On the orders of the state government, Decentralized Triage and Emergency Response (DETER) Committees at ward-levels are being formed in the Karnataka capital, which will be overseen by the Bruhat Bengaluru Mahanagara Palike.

What are DETER committees?

- Decentralized Triage and Emergency Response (DETER) committees have been formed across 198 wards in Bengaluru with the objective to strengthen government response and management of the coronavirus pandemic.
- Also known as WDCs (Ward-level DETER Committees), these teams will emphasise on the distribution of localised action in a decentralised system of disaster response.
- They will be run in synergy with BBMP officials, ward committee members, government officers, representatives of the peoples, volunteers from resident welfare associations, civil society organisations, and disaster-support initiatives.
- This is expected to improve supervision for better ward-level Covid governance. WDCs will function on open-source technology with a suitable online platform identified by the BBMP for the same.

What will be the major responsibilities of WDCs?

- WDCs will emerge as the first-point contact for those infected with Covid-19.
- These committees will also be entrusted with the responsibility to provide timely and accurate information to citizens on appropriate actions and behaviours that need to be taken at each stage of the Covid lifecycle.
- WDCs will also share information on triaging — the process by which the need of patients whether to be in home isolation or to be admitted to stabilisation centres, hospitals and then whether to access hospital beds with/without oxygen or ventilators is determined — and take appropriate steps to enable contact tracing and testing.
- Further, those in home isolation will be supported in a bid to minimise the burden to hospitals. Further, grievance redressal and escalate citizen needs, if any, and mobilisation of resources and essential medical supplies in the ward will also be carried out by the WDCS.
- While achieving universal vaccination in an efficient manner is another responsibility, in an event of death, WDCs are expected to help families connect with the hearse van and the crematorium team (or volunteers at burial grounds).

Cyclone Tauktae

(Source: [Down to Earth](#))

Context: *The first cyclone of 2021 may be here, and quite a storm it can be. Cyclone Tauktae is likely to form May 16, 2021 in Arabian Sea.*

Details:

- IMD has forecast that the track of the cyclone will take it in the north-north eastward direction till the evening of May 14 and in a north north-westward direction after that, towards the Gujarat coast.
- Many of the weather models predict that the track of the cyclone will be really close to the coast which means that coastal areas of Kerala, Karnataka, Goa and Maharashtra will experience heavy rainfall beginning May 14 and continuing over the weekend.
- The frequency and intensity of cyclones in the Arabian Sea have increased in the recent years. This is because of the rapid warming that has made the relatively cooler Arabian Sea (compared to the Bay of Bengal) a warm pool region that can actively support cyclone formation.
- Scientists from the National Oceanic and Atmospheric Administration and Princeton University in the United States and University of East Anglia in the United Kingdom analysed 90 peer reviewed articles to understand the impact of a changing climate on tropical cyclones — a combined named used for hurricanes, cyclones and typhoons.
- They concluded that there could be a five per cent increase in maximum cyclonic wind speeds if the world warms by two degrees celsius by 2100.
- Ocean warming has made some new challenges also.
- Cyclones are now intensifying rapidly since warm ocean waters act as a fuel for them. Extremely severe cyclones like Fani and Amphan intensified from a weak to severe status in less than 24 hours due to warm ocean conditions.
- State-of-the-art cyclone models are unable to pick this rapid intensification because they do not incorporate the ocean dynamics accurately.
- Rapid intensification happens when there is an increase of maximum sustained winds of a cyclone by at least 55 kilometre per hour within 24 hours.
- All these conditions are true for Tauktae as well.

INTERNATIONAL

NASA's OSIRIS-REx

(Source: [Indian Express](#))

Context: *On May 11, NASA's Origins, Spectral Interpretation, Resource Identification, Security, Regolith Explorer (OSIRIS-REx) spacecraft will depart asteroid Bennu, and start its two-year long journey back to Earth. OSIRIS-REx is NASA's first mission to visit a near-Earth asteroid, survey its surface and collect a sample from it.*

Details:

- In October 2020, the spacecraft briefly touched **asteroid Bennu**, from where it collected samples of dust and pebbles.
- Bennu is considered to be an ancient asteroid that has not gone through a lot of composition-altering change through billions of years, which means that below its surface lie chemicals and rocks from the birth of the solar system.
- Therefore, scientists and researchers are interested in studying this asteroid as it might give them clues about the origins of the solar system, the sun, the Earth and the other planets.

What is asteroid Bennu?

- Asteroids are rocky objects that orbit the Sun, much smaller than planets. They are also called minor planets.
- According to NASA, 994,383 is the count for known asteroids, the remnants from the formation of the solar system over 4.6 billion years ago.
- Bennu is an asteroid about as tall as the Empire State Building, located about 200 million miles away from the Earth.
- Scientists study asteroids to look for information about the formation and history of planets and the sun since asteroids were formed at the same time as other objects in the solar system. Another reason for tracking them is to look for potentially hazardous asteroids.

Why is the asteroid named "Bennu"?

- Bennu is named after an Egyptian deity. The name was suggested by a nine-year-old boy from North Carolina in 2013, who won NASA's "Name that Asteroid" competition.
- The asteroid was discovered by a team from the NASA-funded Lincoln Near-Earth Asteroid Research team in 1999.
- So far, we know that Bennu is a B-type asteroid, implying that it contains significant amounts of carbon and various other minerals.
- Because of its high carbon content, the asteroid reflects about four per cent of the light that hits it, which is very low when compared with a planet like Venus, which reflects about 65 per cent of the light that hits it. Earth reflects about 30 per cent.
- Around 20-40 percent of Bennu's interior is empty space and scientists believe that it was formed in the first 10 million years of the solar system's creation, implying that it is roughly 4.5 billion years old.
- As per high-resolution photographs taken by the spacecraft, the surface of the asteroid is covered in massive boulders, making it more difficult to collect samples from its surface.
- There is a slight possibility that Bennu, which is classified as a Near Earth Object (NEO), might strike the Earth in the next century, between the years 2175 and 2199. NEOs are comets and asteroids nudged

by the gravitational attraction of nearby planets into orbits which allow them to enter the Earth's neighbourhood.

- Bennu is believed to have been born in the Main Asteroid belt between Mars and Jupiter and because of gravitational tugs from other celestial objects and the slight push asteroids get when they release absorbed sunlight, the asteroid is coming closer to Earth.

What is the OSIRIS-REx mission?

- This is NASA's first mission meant to return a sample from the ancient asteroid. The mission is essentially a seven-year-long voyage and will conclude when at least 60 grams of samples are delivered back to the Earth.
- As per NASA, the mission promises to bring the largest amount of extraterrestrial material back to our planet since the Apollo era.
- The mission was launched in 2016, it reached its target in 2018 and since then, the spacecraft has been trying to match the velocity of the asteroid using small rocket thrusters. It also utilised this time to survey the surface and identify potential sites to take samples.
- The spacecraft contains five instruments meant to explore Bennu including cameras, a spectrometer and a laser altimeter.

FATF

(Source: [The Hindu](#))

Context: *Pakistan, keen to exit from the grey list of the FATF, is set to introduce new rules relating to anti-money laundering cases and change the prosecution process to meet its remaining tough conditions.*

Details:

- Pakistan was put on the grey list by the Paris-based Financial Action Task Force (FATF), the global watchdog for money laundering and terror financing in June 2018 and the country has been struggling to come out of it.
- This is part of two sets of rules, including the AML (Forfeited Properties Management) Rules 2021 and the AML (Referral) Rules 2021 under the "National Policy Statement on Follow the Money" approved by the federal Cabinet meeting a few days ago, the report said.
- These rules and related notifications for certain changes in the existing schedule of Anti-Money Laundering Act 2010 (AMLA) would come into force immediately, to be followed by the appointment of administrators and special public prosecutors for implementation.
- Based on these measures, the FATF would conclude if Pakistan has complied with three outstanding benchmarks, out of 27, that blocked its exit from the grey list in February this year.

About FATF:

- The Financial Action Task Force (FATF) is an inter-governmental body established in 1989 on the initiative of the G7.
- It is a **"policy-making body"** which works to generate the necessary political will to bring about national legislative and regulatory reforms in various areas.
- The FATF Secretariat is housed at the OECD headquarters in Paris.

Roles and functions:

- Initially it was established to examine and develop measures to combat money laundering.
- In October 2001, the FATF expanded its mandate to incorporate efforts to combat terrorist financing, in addition to money laundering.
- In April 2012, it added efforts to counter the financing of proliferation of weapons of mass destruction.

Composition:

- The FATF currently comprises 37 member jurisdictions and 2 regional organisations, representing most major financial centres in all parts of the globe. It also has observers and associate members.

Israel's Iron Dome

(Source: [Indian Express](#))

Context: *In the conflict between Israel and Palestine, both sides have taken to air strikes and rocket attacks. Videos on social media showed rockets fired from Gaza being intercepted by the Israeli Iron Dome air defence system. It appeared that the rockets were hitting an invisible shield.*

What is the Iron Dome?

- It is a short-range, ground-to-air, air defence system that includes a radar and Tamir interceptor missiles that track and neutralise any rockets or missiles aimed at Israeli targets.
- It is used for countering rockets, artillery & mortars (C-RAM) as well as aircraft, helicopters and unmanned aerial vehicles.
- The genesis of the Iron Dome goes back to the 2006 Israeli-Lebanon war, when the Hezbollah fired thousands of rockets into Israel.
- The following year, Israel announced that its state-run Rafael Advance Systems would come up with a new air defence system to protect its cities and people. It was developed with Israel Aerospace Industries.
- The Iron Dome was deployed in 2011. While Rafael claims a success rate of over 90%, with more than 2,000 interceptions, experts agree the success rate is over 80%.
- Rafael says on its website that it can “protect deployed and manoeuvring forces, as well as the Forward Operating Base (FOB) and urban areas, against a wide range of indirect and aerial threats”.

How does it work, and what makes it so effective?

- The Iron Dome has three main systems that work together to provide a shield over the area where it is deployed, handling multiple threats.
- It has a detection and tracking radar to spot any incoming threats, a battle management and weapon control system (BMC), and a missile firing unit. The BMC basically liaises between the radar and the interceptor missile.
- It is capable of being used in all weather conditions, including during the day and night.
- Once the missile is fired, it “should be able to manoeuvre, should be able to see the small target on her own and thereafter go and shoot”.
- But it is impossible to hit the target directly each time, which is why “there is something in each missile called proximity fuse” which is a “laser-controlled fuse”.
- When passing within ten metres of the target, this activates and blasts the missile with shrapnel that destroys the target.

Wolf hunting banned in Slovakia

(Source: [Down to Earth](#))

Context: *The wolf (Canis lupus) will become a fully protected species in the eastern European country of Slovakia from June 1, 2021, according to a press statement by the World Wildlife Fund May 11.*

Details:

- The decision followed a massive campaign by 31 non-profits for according full protection to wolves, including WWF-Slovakia. A joint petition to stop wolf hunting received more than 51,000 signatures.
- Slovakia's agriculture ministry usually grants quotas to hunt wolves. For the 2020-2021 season (November 1-January 15), the ministry had approved the hunting of 50 wolves. The quota for the previous year was 35 individuals.
- Wolves, as top predators, play a vital role in keeping nature in balance. If we really want to protect wolves, we must protect them along with their habitats and movement routes.
- It reduces the population of deer, prevents damage of young trees and supports restoration of natural forests. There is no reason for wolf hunting in our country.
- The European Commission had launched an infringement process against Slovakia in 2013 for breaching the obligations of the Habitats Directive on the conservation of natural habitats and of wild fauna and flora.
- The Habitats Directive is a directive adopted by the European Community in 1992 as a response to the Berne Convention. It ensures the conservation of a wide range of rare, threatened or endemic animal and plant species.
- The infringement process resulted in a wolf hunting ban in Natura 2000 sites. Natura 2000 is a network of nature protection areas in the territory of the European Union.
- Slovakia is part of the Danube-Carpathian Region that is also known as the 'Green Heart of Europe'. The region is home to some two-thirds of Europe's populations of large carnivores, including brown bears, wolves and lynx.
- There are approximately 12,000 wolves in Europe (excluding Russia), of which 1,000-1,800 are found in Slovakia.

Mains

GS II

Ladakh crisis

(Source: [The Hindu](#))

Context: After over a year, the stand-off between Indian and Chinese troops in eastern Ladakh shows no signs of resolution. Disengagement has stalled, China continues to reinforce its troops, and talks have been fruitless.

Background

- More broadly, the India-China bilateral relationship has ruptured. Political relations are marked by hostility and distrust.
- Reversing a long-held policy, New Delhi will no longer overlook the problematic border dispute for the sake of a potentially lucrative wider relationship; now, as India's External Affairs Minister S. Jaishankar has made clear, the relationship is conditional on quietude on the border.
- Even if — a big if — disengagement continues, the relationship will remain vulnerable to destabilising disruptions. On the Line of Actual Control (LAC) and beyond, India's military and political leaders will need to learn the right lessons from Ladakh, to ensure they are better postured to meet the challenge of Chinese coercion.

Revamping strategies

- First, military strategies based on denial are more useful than strategies based on punishment. The Indian military's standing doctrine calls for deterring adversaries with the threat of massive punitive retaliation for any aggression, capturing enemy territory as bargaining leverage in post-war talks. But this did not deter China from launching unprecedented incursions in May 2020, and the threat lost credibility when retaliation never materialised.
- In contrast, the Indian military's high-water mark in the crisis was an act of denial — its occupation of the heights on the Kailash Range on its side of the LAC in late August.
- This action served to deny that key terrain to the Chinese People's Liberation Army (PLA), and gave the Indian Army a stronger defensive position from which it could credibly defend a larger segment of its front line.
- A doctrinal focus on denial will give the Indian military greater capacity to thwart future land grabs across the LAC.
- By bolstering India's defensive position, rather than launching an escalatory response, such a strategy is also more likely than punishment to preserve crisis stability. Over time, improved denial capabilities may allow India to reduce the resource drain of the increased militarisation of the LAC.

Political costs

- The second key lesson of Ladakh is that China is more likely to be deterred or coerced with the threat of political costs, rather than material costs. Admittedly, the Chinese military's deployment to the LAC was also large and extremely expensive.
- But China's defence budget is three to four times larger than India's (<https://bit.ly/3ydmVgK>), and its Western Theatre Command boasts over 200,000 soldiers (<https://bit.ly/3bhOWK9>). The material burden of the crisis would not disrupt its existing priorities.



- In contrast, India successfully raised the risks of the crisis for China through its threat of a political rupture, not military punishment. A permanently hostile India or an accidental escalation to conflict were risks that China, having achieved its tactical goals in the crisis, assessed were an unnecessary additional burden while it was contending with the instability of its territorial disputes and pandemic response.
- The corollary lesson is that individual powers, even large powers such as India, will probably struggle to shift Beijing's calculus alone. To the extent that China adjusted its position in the Ladakh crisis, it did so because it was responding to the cumulative effect of multiple pressure points — most of which were out of India's control. Against the rising behemoth, only coordinated or collective action is likely to be effective.

Indian Ocean Region is key

- The third lesson of Ladakh — and possibly the hardest to address — is that India should consider accepting more risk on the LAC in exchange for long-term leverage and influence in the Indian Ocean Region. From the perspective of long-term strategic competition, the future of the Indian Ocean Region is more consequential and more uncertain than the Himalayan frontier.
- At the land border, the difficult terrain and more even balance of military force means that each side could only eke out minor, strategically modest gains at best. In contrast, India has traditionally been the dominant power in the Indian Ocean Region and stands to cede significant political influence and security if it fails to answer the dizzyingly rapid expansion of Chinese military power.
- The Ladakh crisis, by prompting an increased militarisation of the LAC, may prompt India to defer long-overdue military modernisation and maritime expansion into the Indian Ocean. To keep its eyes on the prize, New Delhi will have to make tough-minded strategic trade-offs, deliberately prioritising military modernisation and joint force projection over the ground-centric combat arms formations required to defend territory.
- This will be a politically formidable task — blood has now been spilled on the LAC, and for domestic political reasons, India cannot be seen to be passive on the border. Rebalancing India's strategic priorities will require the central government, through the Chief of Defence Staff, to issue firm strategic guidance to the military services.
- This response will be a test not only of the government's strategic sense and far-sightedness, but also of the ability of the national security apparatus to overcome entrenched bureaucratic and organisational-cultural biases.

Conclusion

- As these three lessons show, the future of the strategic competition is not yet written. Thus far, India has suffered unequal strategic costs from the Ladakh crisis.
- Chinese troops continue to camp on previously Indian-controlled land, and worse, India may jeopardise its long-term leverage in the more consequential Indian Ocean Region.
- But if India's leaders honestly and critically evaluate the crisis, it may yet help to actually brace India's long-term position against China.

The SC ruling on identifying backward classes

(Source: [The Hindu](#))

Context: *In the judgment that declared the Maratha reservation unconstitutional, a Constitution Bench of the Supreme Court dealt with another issue. By a 3:2 majority, it ruled that after the passage of the 102nd Constitution Amendment Act in 2018, the States do not have any power to identify 'socially and educationally backward' (SEBC) classes. The Union government argued that it was never its intention to*



deprive State governments of their power to identify SEBCs, but the Court interpreted the bare text of the Amendment to the effect that only the President can publish a list of backward classes in relation to each State and that only Parliament can make inclusions or exclusions in it.

What does the 102nd Amendment say?

- The Amendment established a National Commission for Backward Classes by adding Article 338B to the Constitution.
- The five-member Commission was tasked with monitoring safeguards provided for socially and educationally backward classes, giving advice on their socio-economic development, inquiring into complaints and making recommendations, among other functions. Significantly, it was laid down that the Centre and the States shall consult the Commission on all policy matters concerning the SEBCs.
- The Amendment also added Article 342A, under which the President shall notify a list of SEBCs in relation to each State and Union Territory, in consultation with Governors of the respective States.
- Once this 'Central List' is notified, only Parliament could make inclusions or exclusions in the list by law.
- This provision is drafted in exactly the same word as the one concerning the lists of Scheduled Castes and Scheduled Tribes.
- Further, a definition of 'SEBCs' was added to the Constitution — 'SEBC' means "such backward classes as are so deemed under Article 342A for the purposes of this Constitution".

Why did this Amendment come up for judicial interpretation?

- The reservation for the Maratha community was challenged in the Bombay High Court on various grounds.
- One of the grounds was that the Act creating the Maratha quota through a new category called 'SEBC' was unconstitutional because after the introduction of the 102nd Amendment, the State legislature had no power to identify any new backward class.
- Separately, a writ petition was also filed in the Supreme Court questioning the validity of the Amendment as it violated the federal structure and deprived the States of their powers. In this context, the court had to examine the validity of the Amendment.

What were the rival contentions?

- The crux of the issue was whether the State government's role in identifying backward classes had been denuded by the Amendment.
- The Union government said Parliament's intent was only to create a Central List that would be applied only in the Central government and its institutions. It had nothing to do with the State Lists of backward classes or the State governments' powers to declare a community backward.
- Those who questioned it contended that the effect of the Amendment was that only the President, or the Union government, was authorised to make a list in relation to each State, and thereafter, any change in it would be made only by Parliament.

How did the Supreme Court reach these conclusions?

- Justice S. Ravindra Bhat, with two others concurring with him, adopted a literal interpretation of the 102nd Amendment, holding that there was no ambiguity in its drafting that warranted a "purposive interpretation". Writing for them, Justice Bhat cited three main reasons.
 - One, the text was clear that the President alone could notify the list, and subsequent changes could be made only by Parliament by law.
 - Two, the text was identical to the provisions governing the National Commission for Scheduled Castes and the procedure to identify SCs was exactly the same, which led to the conclusion that Parliament intended to "replicate" the same process for backward classes, too.
 - Third, a definition clause was added to the effect that only a class found in the list notified by the President under Article 342A was an SEBC. Further, the definition was for "the purposes of the

Constitution”, which meant that it was to apply to the Constitution as a whole, including Article 15(4) and Article 16(4), which enable special provisions for backward classes, including reservation in public services, and are also implemented by the States.

- The Supreme Court's judgment also drew on deliberations before a Rajya Sabha Select Committee that showed that the Centre had rejected suggestions from members who demanded that a specific clause be added saying that States would continue to have the power to identify SEBCs.
- Justice Ashok Bhushan, with another judge agreeing with him and constituting the minority on this point, accepted the Union government's position that it was never its intention to deprive the States of their powers.
- They held that the 'Central List' was only for use by the Centre in reservations for jobs and institutions under the Union government, and will not apply to States.

Way Forward

- The Supreme Court has directed the Centre to notify the list of SEBCs for each State and Union territory, and until it is done, the present State Lists may continue to be in use.
- The Centre may either comply with this or seek to further amend the Constitution to clarify the position that the 102nd Amendment was not intended to denude the States of their power to identify SEBCs.

IP rights and vaccines

(Source: [The Hindu](#))

Context: *Breaking with a long-held position, the U.S. Trade Representative, Katherine Tai, announced that the Biden administration would support waiving trade-related aspects of intellectual property rights (TRIPS) for the production of COVID-19 vaccines. The news was welcomed by liberal activists and some global leaders, given that the United States was until now a major World Trade Organization (WTO) member blocking such a proposal, framed by India and South Africa. The proposal, if passed by the WTO with the support of the European Union (EU), could dramatically alter how pharmaceutical companies worldwide access proprietary trade know-how for the production of leading vaccines. However, questions remain regarding whether the easing of TRIPS rules for COVID-19 vaccines will lead to a greater supply of efficacious vaccines in countries where they are the most needed, or if less circuitous options to boost supply are more relevant in the present scenario.*

What is the argument in favour of relaxing TRIPS rules?

- The broader context for emergency action aimed at rapidly increasing vaccine availability across the world is the sharp surge in COVID-19 cases in India and Brazil.
- Global concern also stems from the risk that the Indian variant, believed to be driving a second wave of devastating intensity in the country, could potentially fuel second or third waves across the world, causing a setback to the progress made in controlling transmission across the U.S. and EU.
- Additionally, the Brazil and South African variants still pose a threat in some pockets. Across many affected nations, vaccine availability has emerged as a bottleneck impeding progress.
- In this context, a fierce debate has been underway, pitting global-vaccine-access advocates against vaccine developers and pharmaceutical firms that rely on patented technology, usually of a highly specialised nature, to produce vaccines.
- The latest step by the U.S. to declare its support for TRIPS waivers for such vaccines stems from the promise Joe Biden made during his election campaign, to “absolutely positively” commit to sharing vaccine technology if elected.

Can a waiver resolve the vaccine shortage?

- This is a complex question to which there is, so far, no clear answer. On the one hand, it is undeniable that intellectual property rights are a part of the problem of worldwide vaccine shortages — the logic of a wider production base globally leading to an exponential increase in vaccine production is undeniable.
- However, several caveats remain.
 - First, there may be serious issues associated with manufacturing vaccines, for example, with those based on messenger RNA (mRNA) technology, if there is just an easing of the associated intellectual property rights rules but no further support to generic pharmaceutical firms in countries such as India and South Africa. This is because a “tech transfer” is also needed for the latter to actually commence production, especially for mRNA vaccines, including the ones produced by Moderna and Pfizer along with BioNTech. To illustrate, Pfizer has pointed out that its vaccine requires the use of 280 components from 86 suppliers and highly specialised manufacturing equipment.
 - Second, there is a strong likelihood that it will take a considerable amount of time, even several years, for generic producers’ plants to become operational at optimal capacity. This raises the question of whether today’s vaccines would even be relevant at that point in time, especially if new variants prove resistant to vaccine formulations currently available.
 - Finally, there is the classic counter-argument to calls for patent relaxations, that such policies could discourage pharmaceutical companies from investing in producing next-generation vaccines. Though many, including Mr. Biden, have argued that humanitarian need trumps the profit motive during a pandemic, the decision to waive all TRIPS rules should be preceded by a rigorous analysis of the effects such a policy would have on the biotechnology sector and global supply chains for its products.

What actions are likely?

- No significant steps forward will be possible until other major member nations of the WTO sign on, including the EU. The speed of potential action will also be dampened by the fact that in parallel to the waivers, a transfer of personnel, raw materials and equipment to developing nations will be necessary.
- However, there is another possibility: Mr. Biden may either intend to release more of the existing U.S. vaccine stockpile to other countries to meet emergency needs and seek the cooperation of pharmaceutical companies in that mission, or he may be using the threat of the TRIPS waivers to nudge U.S. vaccine producers to ramp up their production and donate more doses to countries like India and Brazil.
- Either way, it would be unwise for countries like India to rely on this initiative for an increase in vaccine supply.

A national health service in India

(Source: [The Hindu](#))

Context: *The responses to the worsening COVID-19 crisis are, nevertheless, not free of tensions. Some private healthcare providers have objected to public authorities’ orders on widened patient access, and the Supreme Court’s call for a national supply plan has been publicly criticised in the political sphere. Some of the problems have occurred on previous occasions. At least one private hospital chain has lost a court action over its failure to treat a government-specified quota of poorer patients; the quota was a condition of help with land allocation to build a hospital.*

System under strain



- Yet the current crisis may well redirect national attention to what is only barely recognisable as a system of healthcare.
- India's fragmented, often corrupt, urban-centred, elite-focused and wretchedly underfunded agglomeration of clinics, hospitals, and variably functional primary health centres can look like no more than an accidental collection of institutions, staff, and services. India's public spending on health is set to double in the 2021-22 financial year, but that is from a figure that has long been only a little over 1% of GDP. In certain rural areas, the doctor-population ratio is over 1:40,000.
- India's healthcare providers, however, have the task of serving 1.4 billion people, for the overwhelming majority of whom sickness or serious injury of any kind is a matter of lifelong dread.
- Medical expenses constitute the major reason for personal debt in India, whether the causes are episodic afflictions or, for example, those caused by environmental conditions which none can escape, such as air pollution (which the journal Lancet Planetary Health says this accounted for 1.7 million deaths in India in 2019; the annual business cost of air pollution is currently estimated at \$95 billion, which is about 3% of India's GDP).

An idea whose time has come

- In effect, COVID-19 may bring about serious consideration of an Indian national health service. National public discussion of that would be almost unprecedented in India, but the idea itself is not new.
- In 1946, the civil servant Sir Joseph Bhore submitted to the then government a detailed proposal for a national health service broadly modelled on the British National Health Service or NHS, which was on the way towards legislative approval in Britain.
- Bhore went further by recommending that preventive and curative medicine be integrated at all levels. The British plan had been drafted in the 1930s, as problems worsened in healthcare services.
- The fact of the Second World War, in the darkest hours of which a plan was prepared to transform Britain into a post-war social democracy with a comprehensive welfare state and a universal free public health service supporting a mixed economy, may therefore have been catalytic rather than decisive in the creation of the NHS.
- The result is a mighty achievement in public policy, politics, and the provision of top-class universal healthcare, including training, research, and changing engagement with the public as society changes.
- The service is funded entirely from general taxation. The budget includes payment to general practitioners, most of whom remain private providers but are paid by the state for treating NHS patients.
- Items listed in general practitioners' prescriptions incur no charges in the devolved regions of Scotland, Wales, and Northern Ireland, and in practice only a proportion of patients in England have to pay for prescription items.
- All hospital treatment and medicines are free, as are outpatient and follow-up appointments. The British public share the costs through their taxes, and almost without exception receive treatment solely according to their clinical needs.
- With about 1.1 million staff, the NHS is the largest employer in the U.K. Its current budget is about 7.6% of GDP, but despite its size and scale, it provides highly localised access to care.

Problems in the NHS

- Of course, problems have arisen. Among them are largely unintended inequalities in the time and attention given to patients of different social classes (this discovery resulted in substantial changes), huge and frequent reorganisations imposed by Central government, and often ideologically driven underfunding.
- Nevertheless, many senior hospital consultants who were opposed to a public health service when the NHS started have declared unreserved support for it in at least one national conference resolution. An authority on the NHS has said that it is the most loved and trusted institution in the country and is held in even higher regard than the monarchy.
- India now faces a very serious health crisis, possibly the worst since Independence. By all accounts, several areas of the Indian healthcare provision are under severe strain.

- The precise structure envisaged by Bhore may need some adaptation for today's society and conditions but dealing effectively with the pandemic may itself require the urgent creation of an Indian National Health Service.

Mucormycosis risk mitigation in the COVID

(Source: [The Hindu](#))

Context: *The COVID-19 pandemic continues to play havoc all over the world and India is no exception to this. While 70%-80% of those affected with COVID-19 recover without many side-effects, about 20%-30% of patients affected with symptomatic COVID-19 might require hospitalisation — here, a minority can get worse and require treatment in an intensive care unit (ICU). Ever since the COVID-19 pandemic was first described from Wuhan in China, it is quite clear that it is people with comorbidities such as being of an older age, obese, having uncontrolled diabetes, heart or respiratory diseases and malignancies, who fare badly.*

New worry

- The new fear after the treatment of COVID-19, especially in an ICU setting, is contracting a severe disease known as mucormycosis.
- This is a serious, but rare, fungal infection caused by a group of fungi known as mucormycetes. Mucormycosis usually affects people who have poor immunity, and those with uncontrolled diabetes have the highest risk of developing it.
- Other risk factors of mucormycosis include steroid treatment, those who have malignancies, HIV/AIDS and those who have been treated with medicines such as deferoxamine for iron overload conditions.
- When the COVID-19 infection takes a more serious turn, heavy doses of steroids are given to the patient as a life-saving measure.
- Unfortunately, this can precipitate new onset diabetes in those who do not have diabetes, or substantially raise blood glucose levels in those persons who already have diabetes. This sets the scene for the development of mucormycosis.

Types and diagnosis

- Mucormycosis is of several types, of which the commonest is rhino-orbital-cerebral mucormycosis. This starts as a common cold or sinusitis, but soon spreads to the eyes producing redness of the eyes, and later bulging of the eyes known as proptosis.
- It may eventually lead to paralysis of some of the eye muscles, or even to blindness. It can also spread to the brain, and if this occurs, the prognosis is very grave.
- Other forms of mucormycosis include the pulmonary form in which the lungs are mainly involved and less common cutaneous mucormycosis or disseminated mucormycosis, where it spreads throughout the body. The last two are also associated with very poor prognosis.
- A very high index suspicion of mucormycosis is needed by the clinician treating COVID-19 cases, particularly in the setting of diabetes and steroid use. If the condition is diagnosed early and aggressive treatment given, the prognosis is good.
- Antifungal drugs such as Amphotericin B are used, but they are quite toxic and also expensive. If the involvement is extensive, radical surgery may be needed as a lifesaving measure in some cases, including removal of the jaw or the eye.

Sugar control, steroid use

- It is very important for those with diabetes to keep their sugar levels under very good control. The dose of antidiabetic drugs will have to be adjusted and, in most cases, insulin would be needed to keep the sugars under control throughout the day.
- If steroids have to be used, their judicious use is recommended. For e.g., steroids should be given only at the appropriate stage of the disease, in optimal doses, and for as short a period of time as possible.
- Meticulous hygiene and care of the equipment inside the ICU including oxygen tubes and ventilators should be done in order to reduce the risk of fungal and other infections. In the case of mucormycosis, the adage 'prevention is better than cure' could not be more true.
- It is worth emphasising the point that steroids do not have any role in the prophylaxis or the prevention of COVID-19. Indeed, steroids reduce one's immunity and may actually increase the risk of developing COVID-19.
- Also, in the initial phase of viremia (medical term for viruses present in the bloodstream), the use of steroids can actually disseminate the virus widely, thereby worsening the COVID-19 infection.
- It is only when the cytokine storm is suspected, (which usually occurs in the second week of the COVID-19 infection) that steroids should be used, and that too with discretion.

GS III

Not all crises are opportunities for reforms

(Source: [The Hindu](#))

Context: *This year marks 30 years of the landmark economic reforms that permanently altered the production and distribution structures of the Indian economy. Swayed by the success of the 1991 reforms, albeit, at the macroeconomic level, there has been a growing clamour from economic commentators for some more doses of reforms in 2021. Both 1991 and 2021 have one thing in common: an economy facing a severe growth crisis. This raises two fundamental questions. First, is crisis a prerequisite for reforms? Second, given the magnitude of economic contraction, in 2021, are reforms capable of rejuvenating the economy or will they push the economy towards growth fatigue?*

Crises and reforms

- It is not very common to depart from initiating incremental policy changes to making fundamental shifts in economic policy. Big-bang policy reforms often face hurdles in terms of rules and routines. Overcoming these requires effort and conviction.
- Crises provide opportunities for radical changes as they break down the legitimacy of existing policy approaches.
- Crises thus create a space for new proposals and possibilities, which could have far-reaching consequences for the economy and society. Viewed from a sectoral perspective, during a crisis, the services delivered by some sectors do not meet societal expectations, which in turn sets the stage for institutional reforms to enhance the credibility and legitimacy of those sectors.
- For the policymaker, crises can generate increased demand for change and that could be the opportunity for which they would have been waiting. However, not all crises create conditions for widespread acceptance of reforms, as they could generate other by-products.
- Thus, to posit a linear causal relationship between crises and reforms could be erroneous.



- Crises cause the breakdown of established structures leading to instability. They create uncertainty as the prevailing behaviour and choices of actors change. This combination of uncertainty and instability sets the stage for a reorientation of policies, packaged and delivered under the banner of reforms.
- The argument for converting a crisis into an opportunity to reform arises due to three factors.
 - First, during a crisis, group relations and modes of interactions change, which sets a suitable background for change.
 - Second, at times of crises, authority replaces rules, which makes it easier to push the policies in a short time span.
 - Third, during periods of crisis, the legitimacy of prevailing rules and routines diminish, which makes it easier for actors to depart from them.

2021 is not 1991

- The character and consequences of the crisis of 1991 and 2021 are different. In 1991, the crisis of the economy was the product of endogenous factors, that is, factors which were operating within the economic system.
- The crisis of 2021 is different, as it is the product of a pandemic, which is exogenous to the economic system. The cause-and-effect relations are entirely different in the latter, as the cause originates from outside the economic system and the economy is forced to adjust to this external shock.
- Further, in 1991, the crisis was limited to the Indian economy, while the present calamity has engulfed most global economies with varying intensities.
- This makes policy responses very challenging. In the former case, we could have India-specific policies, assuming that there would not be drastic changes in the rest of the world, while in the latter case, India-specific policies will have to be tempered with the dynamics of the rest of the world, as all affected economies are formulating policy responses at the same time.
- The availability of a semi-fixed template for reforms eased the matter in 1991. The template, which had some generic measures for all the economies experiencing external sector imbalances, was a tried and tested one.
- This gave policymakers some headroom to anticipate the likely consequences in the post-implementation phase.

Two uncertainties

- However, in 2021, the challenge is to evolve a country-specific package. Two uncertainties pose serious problems in charting such a set of measures.
 - The first is the uncertainty with regard to the government's own revenues which would limit the policy space for interventions. Expenditure reduction is not a viable strategy for expanding the scale and scope of policies in a situation of demand contraction due to the pandemic.
 - The second is the unpredictability of global factors, as India's dependence on the global economy increased manifold after the 1991 reforms. Both these have the potential to jeopardise the effective implementation of strategic changes.
- The magnitude and intensity of the crisis of 2021 is manifold compared to that of 1991. There is also a lag effect in the unravelling of the scale and extent of the crisis, which is surfacing slowly.
- The enormity of the crisis is appropriately captured in the research cited above, which throws light on the circumstances of 2021 and its non-suitability as a year for radical reforms.
- All crises do not inevitably lead to possibilities for reforms, even though some do create opportunities for fundamental changes. However, to gauge whether a crisis can be turned into an opportunity for reforms requires an in-depth understanding of the factors that led to the crisis.
- Further, all the three clusters of actors who are crucial agents in the policy process — political leaders, policymakers and implementers, and the relevant stakeholders — need to have a shared vision.
- In 2021, the call for reforms leaves out the stakeholders, which might undermine the very purpose of reforms itself.

A TRIPS waiver is useful but not a magic pill

(Source: [The Hindu](#))

Context: *The United States has finally relented and declared its support for a temporary waiver of the Trade-Related Aspects of Intellectual Property Rights (TRIPS) agreement for COVID-19 vaccines at the World Trade Organisation (WTO). In October 2020, India and South Africa, at the WTO, proposed waiving Sections 1, 4, 5, and 7 of Part II of the TRIPS agreement (covering copyrights, industrial designs, patents, and undisclosed trade information) related to the prevention, containment, or treatment of COVID-19.*

Devil in the details

- While the U.S.'s decision is to be welcomed, the devil would be in the details. The countries would now negotiate on the text of the waiver at the WTO.
- If the experience of negotiating such waivers, especially on TRIPS, were anything to go by, it would be too early to celebrate.
- In the aftermath of the HIV/AIDS crisis in Africa in the 1990s, the WTO adopted a decision in 2003 waiving certain TRIPS obligations to increase the accessibility of medicines in countries that lacked manufacturing capability.
- Specifically, the obligation contained in Article 31(f) of TRIPS (<https://bit.ly/3vMmfwC>) that medicines produced under a compulsory licence are predominantly for the domestic market of that country was waived, paving the way for the export of such medicines to a country that lacked manufacturing capability.
- However, this waiver (later incorporated as Article 31 bis in the TRIPS agreement;) was subject to several stringent requirements such as the drugs so manufactured are to be exported to that nation only; the medicines should be easily identifiable through different colour, or shape; only the amount necessary to meet the requirements of the importing country are to be manufactured; the importing country has to notify to the WTO's TRIPS Council, etc,. Given these cumbersome requirements, hardly any country, in the last 17 years, made effective use of this waiver.

Developing world must watch

- The statement issued by Katherine Tai, the U.S. Trade Representative (<https://bit.ly/3hbtpXl>), states that the negotiations on the text of the waiver will 'take time' given the WTO's consensus-based decision-making process and the complexity of the issues involved.
- This signals that the negotiations on the waiver are going to be difficult. While the U.S. would not like to be seen as blocking the TRIPS waiver and attracting the ire of the global community, make no mistake that it would resolutely defend the interests of its pharmaceutical corporations.
- The developing world should be conscious to ensure that a repeat of 2003 does not happen.
- Ms. Tai's statement also reveals that the U.S. supports waiving intellectual property (IP) protections on COVID-19 vaccines.
- However, India and South Africa proposed a waiver not just on vaccines but also on medicines and other therapeutics and technologies related to the treatment of COVID-19.
- So, the U.S. has already narrowed down the scope of the waiver considerably by restricting it to vaccines. Medicines useful in treating COVID-19 and other therapeutics must be also included in the waiver.

Overcoming key obstacles

- While the TRIPS waiver would lift the legal restrictions on manufacturing COVID-19 vaccines, it would not solve the problem of the lack of access to technological ‘know-how’ related to manufacturing COVID-19 vaccines.
- Waiving IP protection does not impose a legal requirement on pharmaceutical companies to transfer or share technology. While individual countries may adopt coercive legal measures for a forced transfer of technology, it would be too draconian and counterproductive.
- Therefore, governments would have to be proactive in negotiating and cajoling pharmaceutical companies to transfer technology using various legal and policy tools including financial incentives.
- Finally, while a TRIPS waiver would enable countries to escape WTO obligations, it will not change the nature of domestic IP regulations.
- Therefore, countries should start working towards making suitable changes in their domestic legal framework to operationalise and enforce the TRIPS waiver. In this regard, the Indian government should immediately put in place a team of best IP lawyers who could study the various TRIPS waiver scenarios and accordingly recommend the changes to be made in the Indian legal framework.
- Notwithstanding the usefulness of the TRIPS waiver, it is not a magic pill.
- It would work well only if countries simultaneously address the non-IP bottlenecks such as technology transfer, production constraints, and other logistical challenges such as inadequacy of supply chains and unavailability of raw materials to manufacture vaccines and medicines.

Decoding inequality in a digital world

(Source: [The Hindu](#))

Context: *Virginia Eubanks’ widely acclaimed book, Automating Inequality, alerted us to the ways that automated decision-making tools exacerbated inequalities, especially by raising the barrier for people to receive services they are entitled to. The novel coronavirus pandemic has accelerated the use of digital technologies in India, even for essential services such as health and education, where access to them might be poor.*

Details:

- Economic inequality has increased: people whose jobs and salaries are protected, face no economic fallout.
- The super-rich have even become richer (the net worth of Adani has increased;
- The bulk of the Indian population, however, is suffering a huge economic setback. Several surveys conducted over the past 12 months suggest widespread job losses and income shocks among those who did not lose jobs.
- Worse than the immediate economic setback is that well-recognised channels of economic and social mobility — education and health — are getting rejigged in ways that make access more inequitable in an already unequal society.

The switch in learning

- For a few, the switch to online education has been seamless. Notwithstanding the Education Minister’s statement in Parliament that no one had been deprived of education because of online learning, at least two young students took their own lives because they could not cope — a college student studying in Delhi and a 16-year-old in Goa whose family could not afford to repair the phone he used.
- According to National Sample Survey data from 2017, only 6% rural households and 25% urban households have a computer. Access to Internet facilities is not universal either: 17% in rural areas and 42% in urban areas.

- Sure, smartphones with data will have improved access over the past four years, yet a significant number of the most vulnerable are struggling.
- Surveys by the National Council of Educational Research and Training (NCERT), the Azim Premji Foundation, ASER and Oxfam suggest that between 27% and 60% could not access online classes for a range of reasons: lack of devices, shared devices, inability to buy “data packs”, etc. Further, lack of stable connectivity jeopardises their evaluations (imagine the Internet going off for two minutes during a timed exam).
- Besides this, many lack a learning environment at home: a quiet space to study is a luxury for many. For instance, 25% Indians lived in single-room dwellings in 2017-19. If between two and four people share a single room, how can a child study? For girls, there is the additional expectation that they will contribute to domestic chores if they are at home.
- Peer learning has also suffered. When students who did not study in English-medium schools come to colleges where English is the medium of instruction, they struggled.
- Yet, surrounded by English speakers, however falteringly, many managed to pick up the language. Such students have been robbed of this opportunity due to online education.
- While we have kept a semblance of uninterrupted education, the fact is that the privileged are getting ahead not necessarily because they are smarter, but because of the privileges they enjoy.

Need a bed? Have an app

- Something similar is happening with health care. India’s abysmally low public spending on health (barely 1% of GDP) bears repetition.
- Partly as a result, the share of ‘out of pocket’ (OOP) health expenditure (of total health spending) in India was over 60% in 2018. Even in a highly privatised health system such as the United States, OOP was merely 10% .
- Moreover, the private health sector in India is poorly regulated in practice. Both put the poor at a disadvantage in accessing good health care.
- Right now, the focus is on the shortage of essentials: drugs, hospital beds, oxygen, vaccines. In several instances, developing an app is being seen as a solution for allocation of various health services. It is assumed that these will work because of people’s experience with platforms such as Zomato/Swiggy and Uber/Ola.
- We forget that those work reasonably well because restaurants/food and taxis/drivers are available for these platforms to allocate effectively.
- Patients are being charged whatever hospitals like, and a black market has developed for scarce services (such as oxygen). The sensible response to such corrupt practices would be to clamp down on the handful who indulge in them. Instead, those in power are looking for digital options such as making Aadhaar mandatory.
- Digital “solutions” create additional bureaucracy for all sick persons in search of these services without disciplining the culprits. Along with paper work, patients will have to navigate digi-work. Platform- and app-based solutions can exclude the poor entirely, or squeeze their access to scarce health services further.
- In other spheres (e.g., vaccination) too, digital technologies are creating extra hurdles. The use of CoWIN to book a slot makes it that much harder for those without phones, computers and the Internet. There are reports of techies hogging slots, because they know how to “work” the app. The website is only available in English.

Online sharks

- It is also alarming if the pandemic is being used to create an infrastructure for future exploitation of people’s data. The digital health ID project is being pushed during the pandemic when its merits cannot be adequately debated.



- Electronic and interoperable health records are the purported benefits. For patients, interoperability (i.e., you do not have to lug your x-rays, past medication and investigations) can be achieved by decentralising digital storage (say, on smart cards) as France and Taiwan have done.
- Yet, the Indian government is intent on creating a centralised database. Given that we lack a data privacy law in India, it is very likely that our health records will end up with private entities without our consent, even weaponised against us (e.g., private insurance companies may use it to deny poor people an insurance policy or charge a higher premium).
- There are worries that the government is using the vaccination drive to populate the digital health ID database (for instance, when people use Aadhaar to register on CoWIN). No one is asking these questions because everyone is desperate to get vaccinated. The government is taking advantage of this desperation.
- The point is simple: unless health expenditure on basic health services (ward staff, nurses, doctors, laboratory technicians, medicines, beds, oxygen, ventilators) is increased, apps such as Aarogya Setu, Aadhaar and digital health IDs can improve little.
- Unless laws against medical malpractices are enforced strictly, digital solutions will obfuscate and distract us from the real problem. We need political, not technocratic, solutions.
- More than 10 years ago, we failed to heed warnings (that have subsequently come true) about exclusion from welfare due to Aadhaar.
- Today, there is greater understanding that the harms from Aadhaar and its cousins fall disproportionately on the vulnerable. Hopefully, the pandemic will teach us to be more discerning about which digital technologies we embrace.

Renewable energy in India: Capacity addition halved in 2020

(Source: [Down to Earth](#))

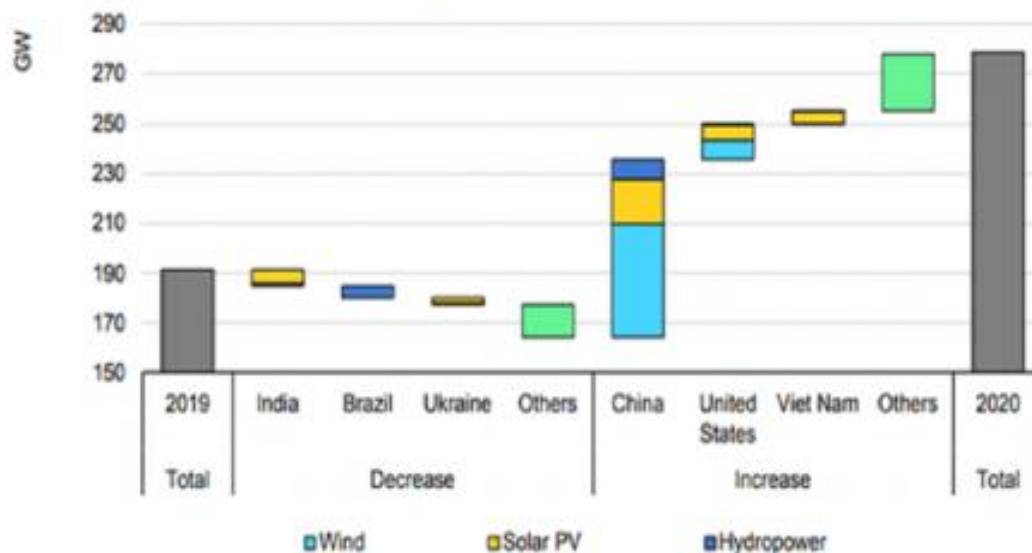
Context: India's renewable energy capacity addition in 2020 declined by more than 50 per cent since 2019, primarily due to construction delays brought on by the novel coronavirus disease (COVID-19) pandemic, according to International Energy Agency's (IEA) Renewable Energy Market Update. The challenges of integrating renewable energy into the grid also acted as an impediment.

Details:

- The country, however, may set new records for renewable energy capacity expansion in 2021 and 2022, since the delayed projects from previous competitive auctions have been commissioned.
- Photovoltaic (PV) capacity addition is expected to be three times in 2021 compared with 2020, as delayed large-scale utility projects become operational, the report said.
- Globally, annual renewable capacity additions increased 45 per cent in 2020 to almost 280 gigawatt (GW). It is the highest year-on-year rise since 1999, according to IEA.
- This has been attributed mainly to capacity expansion for solar and wind energy, which amounted to 135GW and 115GW respectively. A 20GW capacity of hydropower and about 10GW of other renewable energy, led by bioenergy, also contributed to the growth, the report noted.



Renewable capacity addition changes from 2019 to 2020

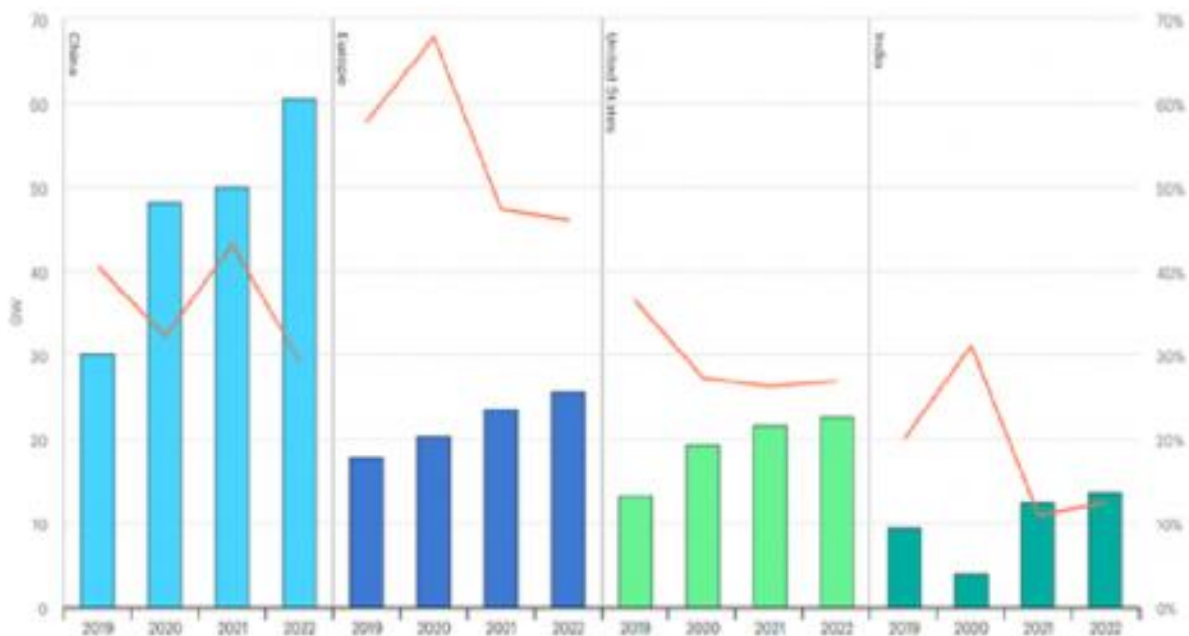


- The Government of India awarded 27 GW of photovoltaics in central and state auctions in 2020, which is expected to drive growth in solar energy capacity this year and the next.
- But distributed PV expansion (residential installations) remained sluggish due to administrative and regulatory challenges in multiple states, IEA noted. This was also flagged in the *State of India's Environment Report, 2020* by the *Centre for Science and Environment* (CSE), a Delhi-based non-profit.
- IEA has raised concerns over the financial health of power distribution companies (discom) too. It remains the primary challenge to renewable energy deployment in India. The central government proposed reforms worth \$41 billion (around Rs 3 lakh crore) to improve discom operations.
- Solar installed capacity addition in 2021-22 has been projected to be on recovery path, primarily based on the post-COVID-19 (1st phase) recovery and basic customs duty of 40 per cent holiday till April 2022, which leads to lots of import procurements been initiated.
- But with the sudden onset of severe Covid 2nd wave in India, the actual implementation would miss its projection. The very neglected solar rooftop segment got some positive vibe due to the discom reform programme announced in this budget. Its impact may not be visible within this financial year.
- The second wave of COVID-19 infections in April 2021 has created a short-term forecast uncertainty for the year.

Why 2020 saw global boom

- New installations in China, the United States, Vietnam and various European nations, especially in December 2020, have led to this surge, said the IEA report. China alone was responsible for over 80 per cent of the increase.
- This was primarily due to onshore wind and solar projects commissioned under the former feed-in tariff scheme and awarded in previous auctions being connected to the grid by the end of 2020.
- In the US, wind developers rushed to complete their projects before the expiration of the production tax credit, although it was extended for another year. In Vietnam, phase-out of the feed-in tariff for solar PV projects led to an unprecedented rush in commercial and residential installations.

Annual solar PV capacity additions in selected countries, 2019-2022



- The report predicted that solar PV additions will be 50 per cent higher than pre-pandemic level of 2019 but market for roof-top solar panels may decline.
- Globally, the growth is most likely to be sustained as 270GW of renewables is likely to become operational in 2021 and 280GW in 2022, according to IEA.
- Around 90 per cent of the new power capacities across the world in 2021 and 2022 will be of renewable energy.
- Amongst these, solar and wind energy will continue to dominate. The hydroelectric capacity is estimated to reach 30-35GW in 2021 and 2022, and other renewable sources may stay around the 10GW mark.

Future in green energy

- After 2022, the annual growth in China will slow down, the report forecast. However the rest of the world will continue to see a growth in the renewables.
- In Europe, for example, renewable energy will see expansion due to favourable policies, including the decline in costs of photovoltaics.
- Renewable energy in US will also see further expansion due to the new US emissions reduction targets and the new infrastructure bill, if passed, said IEA.
- Wind, too, will continue to dominate in the near future but the pace of growth will be slower in 2021 and 2022. It is expected to decline to around 85GW in 2021 and below 80GW in 2022. However, it is still 50 per cent higher than the 2017-2019 average.
- IEA has asked governments to prioritise policies that encourage greater investment in solar and wind energy.
- They must focus on the additional grid infrastructure they will require and in other renewable technologies such as hydropower, bioenergy and geothermal energy, the agency said.

GS IV

EdTech needs an ethics policy

(Source: [The Hindu](#))

Context: *The lack of a regulatory framework in India along the lines of the General Data Protection Regulation (GDPR) in Europe could impinge on the privacy of students who now use educational technology (EdTech) apps for learning. Since the onset of the pandemic, online education has replaced conventional classroom instruction. This has spawned several EdTech apps which have become popular. Schools and colleges have been able to move their content delivery, engagement and evaluation from offline to online and ensure minimal academic disruption. This exercise has forced teachers to become facilitators in learning rather than being content providers. The EdTech apps have the advantage of being able to customise learning to every student in the system.*

Storing the smallest details

- To perform the process of learning customisation, the apps collect large quantities of data from the learners through the gadgets that the students use. These data are analysed in minute detail to customise learning and design future versions of the app.
- The latest mobile phones and hand-held devices have a range of sensors like GPS, gyroscope, accelerometer, magnetometer and biometric sensors apart from the camera and microphones.
- These provide data about the learner's surroundings along with intimate data like the emotions and attitudes experienced and expressed via facial expressions and body temperature changes. In short, the app and device have access to the private spaces of the learner that one would not normally have access to.
- Researchers dealing with human subjects need to comply with ethics rules that committees of their respective research organisations formulate, along with global standards. One of the cardinal rules that should never be broken is informed consent.
- Before any research on human subjects is undertaken, researchers have to submit detailed proposals to their respective ethics committees and obtain their permissions. Those proposals and permissions are subject to transparent external reviews.
- Further, a researcher working with children, for example, would also have to convince schoolteachers, parents, and school managements about the nature of the research to be undertaken, type of data to be collected, method of storage, the potential harmful effects of such data, etc.
- All this should be done in writing, while giving the learner the option to opt out of the study at any point of time without any repercussions.

Minimal safeguards

- However, in the EdTech industry, where investments are pouring in, researchers and app developers are being pushed to be as intrusive as possible. The safeguards that traditional researchers are subject to are either missing or minimal in research that the EdTech industry promotes.
- Children use these apps without parent or adult supervision. Intrusion of privacy can happen unnoticed. The concept of informed consent is not meaningful since there are no proper primers to explain to stakeholders the intricacies in layperson terms. Further, there is no option to stop using the app without some repercussions.



- Since India does not have protection equivalent to the GDPR, private data collected by an EdTech company can be misused or sold to other companies with no oversight or protection.
- It is prudent to remember the 2014 study titled ‘Experimental evidence of massive-scale emotional contagion through social networks’, wherein Facebook manipulated the emotions of 7,00,000 users by changing the type of posts that were shown to the user.
- Given these realities, it is necessary to formulate an ethics policy for EdTech companies through the active participation of educators, researchers, parents, learners and industry experts. Such a policy draft should be circulated both online and offline for discussions and criticism.
- Issues of fairness, safety, confidentiality and anonymity of the user would have to be dealt with. EdTech companies would have to be encouraged to comply in the interest of a healthier learning ecosystem.



Current Affairs Quiz

1. Consider the following statements with respect to 2-deoxy-D-glucose (2-DG):

1. It is an anti-COVID drug developed by Central Council for Research in Ayurvedic Sciences (CCRAS).
2. The drug comes in powder form in sachet, which is taken orally by dissolving it in water.

Which of the statements given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : b

It is an anti-COVID-19 therapeutic application developed by Institute of Nuclear Medicine and Allied Sciences (INMAS), a lab of Defence Research and Development Organisation (DRDO), in collaboration with Dr Reddy's Laboratories (DRL), Hyderabad.

2. Which one of the following statements is incorrect regarding Gopal Krishna Gokhale?

- a. He was a mentor to both Mahatma Gandhi and Mahadev Govind Ranade
- b. He established the Servants of India Society at Pune, Maharashtra in 1905
- c. He launched the English weekly newspaper Hitavada in 1911
- d. He played a leading role in bringing about Morley-Minto Reforms, the beginning of constitutional reforms in India

Answer : a

MG Ranade was his mentor.

3. Hakki Pikki tribal community belongs to

- a. Goa
- b. Manipur
- c. Karnataka
- d. Lakshadweep Islands

Answer : c

4. Consider the following statements with respect to Long March 5B Rocket:

1. It is a heavy weight launch vehicle developed by Roscosmos State Corporation for Space Activities (ROSCOSMOS) by Russia.
2. It is the launch vehicle designed to use exclusively non-hypergolic liquid propellants.

Which of the statements given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : b

China launched the Long March 5B' rocket and prototype spacecraft in 2020 .

5. Global Methane Assessment is recently released by-

- a. Green Peace International
- b. Food and Agriculture Organization
- c. United Nations Development Programme
- d. Climate and Clean Air Coalition

Answer : d

The report was released by the Climate and Clean Air Coalition and the United Nations Environment Programme (UNEP).

6. Regulations Review Authority (RRA 2.0) has been recently constituted by-
- National Green Tribunal
 - Reserve Bank of India
 - Central Pollution Control Board
 - Central Pollution Control Board

Answer : b

Reserve Bank of India (RBI) has constituted an Advisory Group to assist the second Regulations Review Authority (RRA 2.0).

7. Which of the following statements is/are correct with respect to *Jal Jeevan Mission (JJM)*?
- It is a flagship programme of the Union Government, which aims to provide tap water connection to every rural household of the country by 2024.
 - Puducherry is the first State/UT to provide assured tap water supply to every rural home under Jal Jeevan Mission.

Select the correct answer code:

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Answer : a

Puducherry has recently become 'Har Ghar Jal' Union Territory (UT) by ensuring that every rural home in the Union Territory gets a household tap connection.

With this, the UT becomes the *fourth State/UT after Goa, Telangana and Andaman & Nicobar Islands* to provide assured tap water supply to every rural home under Union Government's flagship programme, Jal Jeevan Mission.

8. Consider the following statements with respect to *National Horticulture Board (NHB)*
- It was established on the basis of recommendations of the Group on Perishable Agricultural Commodities, headed by Dr M. S. Swaminathan.
 - It is an autonomous organization under the administrative control of Ministry of Agriculture and Farmers Welfare.
 - The main objective of the NHB is to improve integrated development of Horticulture industry and to help in sustaining the production and processing of fruits and vegetables.

Which of the statements given above is/are correct?

- 2 only
- 1 and 2 only
- 2 and 3 only
- 1, 2 and 3

Answer : d

9. Consider the following statements with respect to *C - reactive protein (CRP) Test*:

- It is a blood test and it tells about inflammation level in the body during any ailment and indicates about the infection level.
- It is a type of diagnostic test which helps to detect the presence of SARS-CoV 2 in humans.

Which of the statements given above is/are incorrect?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Answer : b

C-reactive protein (CRP) test, is mainly conducted for patients who are hospitalised for Covid virus treatment.

10. Paediatric Task Force is recently constituted by -

- a. Tamil Nadu
- b. Gujarat
- c. Kerala
- d. Maharashtra

Answer : d

Recently, the Maharashtra government has constituted a nine-member committee called Paediatric Task Force.

The special paediatric task force will be responsible for procuring medicines for children, paediatric ventilators and building Covid-19 care centres for children.

11. Consider the following statements with respect to NASA's Artemis mission:

1. It aims to send humans to Mars for exploring "Life on Mars".
2. It will deploy the Star ship lander and launch vehicle for this mission built by Space X organization.

Which of the statements given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : b

The Artemis Program is a United States-led international human spaceflight program launched in 2017 to return humans to the Moon, specifically at the lunar South Pole region, in the mid-2020s (not Mars).

12. Great Nicobar Development Plan was envisaged by -

- a. NITI Aayog
- b. Ministry of Tribal Affairs
- c. Ministry of Housing and Urban Affairs
- d. Ministry of Environment, Forest and Climate Change

Answer : a

13. Which of the following statements is/are correct with respect to Galathea National Park?

1. It is located on the island of Great Nicobar in the Andaman & Nicobar Islands.
2. It is an iconic nesting site in India of the enigmatic Giant Leatherback, the world's largest marine turtle.
3. The park is home to the indigenous Shompen community.

Select the answer code:

- a. 1 and 2 only
- b. 1 and 3 only
- c. 2 and 3 only
- d. 1, 2 and 3

Answer : d

14. Which of the following statements is/are correct with respect to Uranium?

1. It is listed under minor mineral, the rulemaking powers on uranium have been delegated to the States through Mines & Minerals (Development and Regulation) Act.

2. Significant quantity of Uranium reserves were available in parts of Andhra Pradesh and Telangana between Seshachalam forest and Sresailam.

Select the correct answer code:

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : b

Since Uranium is a major mineral, it is managed by the Union Government under provisions of Mines and Minerals (Development and Regulation) Act, 1957.

15. Consider the following statement with respect to Small Galaxies:

- 1. High-energy light from small galaxies may have had a crucial role in the early evolution of the Universe.
- 2. POX 186 is a dwarf galaxy that is still forming, it is located in the constellation Virgo which is believed to play a role in evolution of universe.

Which of the statements given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : c

16. With respect to Mucormycosis, consider the following statements:

- 1. It is a serious but rare bacterial infection caused by a group of molds called mucormycetes.
- 2. The bacteria that causes mucormycosis are present throughout the environment and are more common in soil than in air.

Which of the statements given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : d

Mucormycosis is also called Black Fungus or Zygomycosis and is a serious but rare fungal infection. It is caused by a group of molds called mucormycetes.

Mucormycetes, the group of fungi that cause mucormycosis, are present throughout the environment, particularly in soil and in association with decaying organic matter, such as leaves, compost piles, and animal dung.

17. Which of the following statements is/ are correct with respect to Foreign Contribution (Regulation) Amendment Act (FCRA)?

- 1. It seeks to prohibit public servants from receiving any foreign funding.
- 2. Under the act NGO's can open bank accounts in any nationalised bank anywhere in India for receiving foreign funds.

Select the correct answer code:

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : a

Foreign Contribution (Regulation) Amendment Act

The amendments to the Foreign Contribution Regulation Act (FCRA) enacted in 2020 made it compulsory for NGOs to open a bank account in Delhi.

18. Which of the following statements is/ are correct with respect to Asteroid Bennu?

1. It is a B-type asteroid, implying that it contains significant amounts of carbon and various other minerals.
2. OSIRIS REX Mission is NASA's first mission meant to return a sample from Asteroid Bennu.

Select the correct answer using the codes given below:

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : c

19. Consider the following statements with respect to Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) Scheme:

1. It is a central sector scheme, launched by the Ministry of Agriculture, for small and marginal farmers who owns less than 2 hectares of land.
2. The scheme guarantees direct income support of Rs.6,000 for farmers to help them meet farm inputs and other costs during the crop season.

Which of the statements given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : b

PM Kisan Maan Dhan Yojana is a central sector and pension scheme for only small and marginal farmers who own less than 2 hectares of land. (while PM-KISAN is for all farmers)

20. Which of the following statements is/ are correct with respect to Socially and Educationally Backward Classes (SEBC)?

1. Centre alone is empowered to identify SEBC for claiming reservation benefits.
2. States could only make suggestions to the President for inclusion, exclusion or modification of castes and communities to be included in the List.

Select the correct answer using the codes given below:

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : c