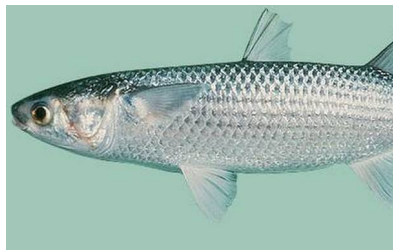


## **EVERYDAY CURRENT AFFAIRS—JANUARY 31, 2021**

### **TAMIL NADU**

- **The public health department - will start vaccinating frontline workers in home department, local administration and revenue department from across the state from February 1, 2021**
- ✓ For the process, the government has roped in nearly 200 private hospitals to start vaccinating in their facilities
- ✓ The state has inoculated less than 20% of its healthcare providers since January 16.
- ✓ Earlier this week, the state had urged the centre to allow simultaneous vaccination of frontline workers.
- ✓ Chief Minister Edappadi K Palaniswami said the government had made arrangements to vaccinate 20% of the population, which is 1.60 crore, this year.
- **In a major breakthrough, the Central Institute of Brackishwater Aquaculture (CIBA) in Chennai - successfully bred a special fish in captivity through an indigenous hatchery technology**



- ✓ The CIBA had captive bred Grey Mullet (Madavai), a high-valued commercial brackish-water fish, for the first time in the country
- ✓ The initiative has been undertaken as per the government's push on increasing fish production under blue revolution mission.
- ✓ Grey Mullet is a highly sought-after brackish-water fish.
- ✓ The success with this breeding technology was officially announced by CIBA in a stakeholder meet organized at Muttukadu Experimental Station, Chennai

- **Isro Chairman K. Sivan – inaugurated the ground stations of UNITYsat - three academic satellites developed by educational institutions – through video conferencing on January 28**



- ✓ These satellites would provide an overview of real space mission and how space players could revolutionise the Indian space sector with faster, better and cheaper access.
- ✓ The ground stations were inaugurated on the premises of Sri Shakthi Institute of Engineering and Technology in Coimbatore, Jeppiaar Institute of Technology in Chennai and GH Rasoni College of Engineering in Nagpur.
- ✓ Isro is expected to launch these satellites in a single deployer in February 2021
- **Two herostones dating back to the 16th century - have been found at Moolipatti near Chenkundrapuram in Virudhunagar district.**
- ✓ The stones were inspected and studied by a team of archaeologists and enthusiasts from Pandiya Nadu Cultural Foundation led by archaeologist D Muneeswaran recently.



- ✓ One of the hero stones with the soldier atop a horse is three feet tall and 1.5 feet wide.
- ✓ The other stone is that of a soldier holding a sharp weapon and measures two feet in height and one foot wide

- ✓ Moolipatti was under chieftain rule and those depicted in the hero stones could have been brave soldiers from their cavalry and army who died defending their chieftain or area.
- ✓ The man on the horse may not be a chieftain as hero stones depicting rulers are much different from those of soldiers and other war heroes in many ways.
- ✓ These two hero stones look like they were worshipped by the villages once.
- ✓ They could stand testimony to the rich culture and heritage of Moolipatti.

## STATES

- **The Gujarat Government – has announced to patent the Dragon Fruit in the name of “Kamalam” recently**



- ✓ Kamalam is also the name of the BJP state party headquarters in Gujarat
  - ✓ The Dragon fruit is a cactus variety fruit.
  - ✓ It is widely cultivated in South East Asia, United States, Australia, India, Caribbean islands and Mesoamerica.
  - ✓ They grow in regions where summer temperatures rise above forty degrees Celsius.
  - ✓ Dragon flowers bloom only at night and it occurs only once in a year.
  - ✓ India imports 95% of its Dragon fruit from Malaysia, Thailand, Vietnam and Sri Lanka.
  - ✓ The farmers in the states of Gujarat, Tamil Nadu, Andhra Pradesh, Karnataka have taken up Dragon Fruit Cultivation only in the recent years.
  - ✓ Vietnam is the largest producer and exporter of Dragon Fruit.
  - ✓ In India, Dragon fruits are consumed for their taste and health benefits.
- **The Karnataka Chief Minister B S Yediyurappa - recently launched Avalokana software.**
  - ✓ The software will enable the state government to access data on expenditures and sanctions incurred on 1,800 government-sponsored programmes.
  - ✓ It is a transparent e-governance tool that will provide assembly constituency wise release of government grants and allocations to various schemes.



- ✓ This will help the government to decide on releasing funds based on the expenditure incurred by the department.

## NATIONAL

- **On January 30, PM Narendra Modi – reiterated at an all-party meeting that the Centre is ready to suspend the new agriculture laws up to 18 months**
- ✓ Meanwhile, the Centre has decided to set up a high-powered committee to look into several farm issues, including minimum support price (MSP) based on comprehensive cost as recommended by M S Swaminathan committee
- ✓ The decision to set up the committee, headed by agriculture minister Narendra Singh Tomar, was hurriedly taken in order to prevent social activist Anna Hazare from going on his scheduled fast on January 30
- ✓ Hazare had called off the fast after the centre assured to look into all his pending demands through the committee
- ✓ The committee would comprise Niti Aayog member Ramesh Chand, MoS agriculture Parshottam Rupala, Agri-trade law and policy expert Vijay Sardana, progressive farmer from Haryana and Padma Shri awardee Kanwal Singh Chauhan and farmer representatives.
- ✓ The committee will finalise its recommendations within six months
- ✓ The unions, however, rejected the proposals, saying they would not end the protests till the farm laws are repealed.
- ✓ Names of farmer representatives for the committee will be finalised soon in consultation with Hazare
- ✓ From the government side, one joint secretary each from the agriculture, commerce and food & consumer affairs ministries would also be in the panel.
- ✓ This committee would work separately from the Supreme Court-appointed panel
- ✓ The SC-appointed panel is expected to submit its report to the apex court within two months after taking views of various stakeholders including individual farmers and state government.
- **The government - is set to introduce the Cryptocurrency and Regulation of Official Digital Currency Bill during the current session of Parliament to ban private cryptocurrencies**

- ✓ Further, a new framework will also be put in place for the launch of a digital currency by the Reserve Bank of India.
- ✓ One of the purposes of the bill is to “prohibit all private cryptocurrencies in India”, while providing certain exceptions to promote the underlying technology.
- ✓ In 2018, Arun Jaitley, then finance minister, had stated the government’s resolve to discontinue the use of bitcoin and other virtual currencies.
- ✓ In April 2018, the RBI had ordered financial institutions to cut all ties with individuals or businesses dealing in virtual currencies such as bitcoin within three months.

<p>➤ A cryptocurrency is a digital or virtual currency, secured by cryptography, which makes it nearly impossible to counterfeit or double-spend. They are generally not issued by any central authority</p>	<p>exceptions to promote blockchain, the underlying technology of cryptocurrency</p>
<p>➤ The proposed law will provide a framework for the creation of an official digital currency to be issued by the RBI and allows certain</p>	<p>➤ Cryptocurrencies face criticism over their use for illegal activities, exchange rate volatility, and vulnerabilities</p> <p>➤ However, they have also been praised for their portability, divisibility, inflation resistance, and transparency</p>

- ✓ However, in March 2020, the Supreme Court allowed banks to handle cryptocurrency transactions from exchanges and traders
  - ✓ The bill is seen to be a continuation of the recommendations of a committee headed by then economic affairs secretary S C Garg with SEBI and RBI officials as its members in Mid-2019.
  - ✓ The panel had proposed a ban on private cryptocurrencies through a legislation
  - ✓ It had proposed a jail term of up to 10 years and heavy fines for anyone dealing in digital currencies.
  - ✓ Further, it had suggested that blockchain and distributed ledger technology be used in financial services for better loan tracking, insurance claims management and fraud detection.
- **The Centre - has released ₹98.5 lakh in aid for transsexual people across the country in the last 10 months.**
- ✓ Union ministry of social justice and welfare transferred a one-time cash assistance of ₹1,500 to 6,940 people in 33 states through the National Backward Class Finance and Development Corporation
  - ✓ Out of the total beneficiaries, nearly one-fifth were from Tamil Nadu (1,036).
  - ✓ West Bengal came next (814), followed by Chhattisgarh (624), Karnataka (561), Maharashtra (510) and Rajasthan (215).

- ✓ In addition, ration supplies were provided to transsexual people in just 5 states — Delhi (720 beneficiaries, the highest), UP (280), Assam (94), Chhattisgarh (72) and Manipur (63).
  - ✓ Earlier, the Centre had tabled the Transgender Persons (Protection of Rights) Bill in 2019 and Transgender Persons Rules 2020.
  - ✓ Later, the ministry had set up an online site for transsexual people to get identity certificates and allowed self-declaration of gender, which could then be used for other official government documents.
- **The Defence Research Development Organisation (DRDO) and the Central Reserve Police Force (CRPF) - recently developed a bike ambulance called “Rakshita”**



- ✓ It was developed on Royal Enfield bikes by INMAS (Institute of Nuclear and Allied Science) operating under DRDO
- ✓ Rakshita will attend the evacuation needs of the CRPF personnel during emergency or to battle injury.
- ✓ It will be of great help in the naxalite-dominated narrow road areas such as Sukma, Bijapur and Dantewada where the CRPF cannot take big vehicles or ambulances inside the jungle.
- ✓ Naxalites are the left-wing extremists who reject parliamentary democracy and wage an armed revolution against the government.
- ✓ It mainly emerged in three areas such as Naxalbari, Khoribari and Phansidewa in West Bengal during the mid 1960s.
- ✓ The term “Naxalism” has originated from “Naxalbari”.
- ✓ The Government of India launched Operation SAMADHAN in 2015 to bring Left Wing Extremists into the main fold
- ✓ Operation SAMADHAN stands for S- Smart Leadership, A- Aggressive Strategy, M- Motivation and Training, A- Actionable Intelligence, D- Dashboard Based KPIs (Key Performance Indicators), H- Harnessing Technology, A- Action plan for each Theatre, N- No access to Financing.

- **The Ministry of Electronics and Information Technology – has decided to establish a Quantum Computing Applications Lab in collaboration with Amazon Web Services**
- ✓ The lab will identify quantum computing problems faced by Central and State Governments and also by the research institutions.
- ✓ The Centre has proposed the implementation of National Mission on Quantum Technology and Applications
- ✓ It is to be implemented by the Department of Science and Technology operating under Ministry of Science and Technology.
- ✓ The mission focuses on fundamental science, technology development and addresses the issues concerning the national priorities.
- ✓ The Union Budget 2020-21 had proposed to spend Rs 8,000 crores on the National Mission on Quantum Technologies and Applications.
- ✓ The Quantum Technology is based on principles of quantum physics
- ✓ It refers to the behaviour of energy and material in atomic and subatomic levels.
- ✓ The major applications of Quantum technology are in the field of communication in linking terrestrial stations and satellites.
- ✓ It will also help in solving fundamental questions related to black hole and gravity
- ✓ With Quantum technology, natural disasters such as tsunamis, drought, earthquakes and floods can be predicted.
  
- **The Union Cabinet - recently approved the Ratle Hydropower Project in River Chenab with 850 MW capacity.**
- ✓ The cabinet has also granted its approval to an investment of Rs 5,281.94 crores for the project.
- ✓ It is a joint venture of Jammu and Kashmir State Power Development Corporation (51%) and National Hydroelectric Power Corporation (49%).
- ✓ The project is to be commissioned within sixty months.
- ✓ The project includes 133 metres tall gravity dam and two power stations.
- ✓ The foundation stone to construct the dam was laid by former Prime Minister Manmohan Singh in 2013.
- ✓ The project did not start till 2015 due to severe objections from Pakistan
- ✓ In 2017, the World Bank allowed India to construct the dam.
- ✓ The Indus Water Treaty was signed on September 19, 1960 after nine years of negotiations between India and Pakistan with the help of World Bank at Karachi.
- ✓ According to Pakistan, the Ratle Hydropower Project violates Indus Water Treaty.
- ✓ According to Indus Water Treaty, the western rivers such as Indus, Chenab and Jhelum were allocated to Pakistan.
- ✓ According to Pakistan, as the project is built across Chenab, it violates the treaty.
- ✓ However, the treaty also says that the waters can be used by India for specified domestic and agricultural use as provided by the treaty.
- ✓ The eastern rivers such as Beas, Ravi and Sutlej are to be used by India.

- ✓ India has constructed Bhakra Dam on Sutlej, Thein on Ravi and Pandoh and Pong dam on Beas.
- **The Government of India - is to use Rapid Assessment System for the feedback on COVID-19 vaccination.**
- ✓ The system sends SMS to people vaccinated in a span of four days after inoculation.
- ✓ The SMS will be sent from ID 'AX-GOVRAS' and asks beneficiaries about feedback on various vaccine-related points
- ✓ It includes whether social distancing was maintained at vaccination sites, if information about adverse effects of vaccination was provided, etc.
- ✓ The information such as names and mobiles numbers of the people vaccinated is received by Rapid Assessment System from Co-WIN platform.
- ✓ If the user does not send feedback through SMS within twenty-four hours, a call is made for assessment.
- ✓ The System was developed by a division of Ministry of Electronics and Information Technology.
- ✓ The SMS are sent in Hindi in and in local languages, including Bengali, Gujarati, Kannada, Marathi, Malayalam, Punjabi, Telugu and Tamil.
- ✓ The CO-WIN is a digital platform used for Covid-19 Vaccine delivery.
- ✓ It records vaccine data collected through CO-WIN mobile application
- ✓ It has five different modules namely administrator module, vaccination module, registration module, beneficiary acknowledgement module and report module.
- ✓ The CO-WIN is based on eVIN (Electronic Vaccine Intelligence Network)
- ✓ eVIN was an indigenously developed technology that digitises vaccine stocks and monitors temperature of cold chain through smartphone applications.
- ✓ It was first launched in twelve states in 2015.
- ✓ eVIN supports the Universal Immunization Programme of Government of India.

## **INTERNATIONAL**

- **China - has launched the Type-054A/P frigate, the second of four “most advanced” warships it is building for Pakistan**
- ✓ Chinese state-owned Hudong Zhonghua Shipyard in Shanghai held the launching ceremony for the frigate
- ✓ The warships are state-of-the-art frigates equipped with modern surface, subsurface and anti-air weapons.
- ✓ They'll also be fitted with a range of electronic warfare, air and surface surveillance and acoustic sensors
- ✓ Costing over \$350 million each, China is expected to deliver all four units to Pakistan's Navy fleet by the end of 2021
- **Japan and UK – to collaborate for the 12 million Euro ‘LongOps’ Project**



- ✓ Under the operation, the scientists from Japan and UK will develop new and safe technologies to dismantle old nuclear facilities
  - ✓ The project will be helpful to dismantle nuclear facilities such as the Fukushima that were severely damaged by tsunamis and earthquakes
  - ✓ The project is to use long-reach robotic arms and hence is called “LongOps Project”.
  - ✓ The project will reduce the risks to human health and will speed up decommissioning of nuclear reactors that are non-operational.
  - ✓ It will also help to improve and dismantle nuclear fusion facilities such as the Joint European Torus.
  - ✓ Joint European Torus is a nuclear fusion experiment located in Culham Centre for Fusion Energy, UK.
  - ✓ It was the first reactor to run on the production fuel of 50-50 mix of tritium and deuterium.
  - ✓ It was shut down in 2009 to adopt concepts used in ITER project.
  - ✓ ITER refers to the International Thermonuclear Experimental Reactor.
  - ✓ Apart from India, the other countries involved in ITER project are China, Russia, Japan, European Union, US and South Korea.
- **Iran and six other countries - have lost their voting rights in the United Nations General Assembly as they had not paid their dues.**
- ✓ The other countries that lost their voting rights were Niger, South Sudan, Zimbabwe, Congo Brazzaville, Central African Republic and Libya.
  - ✓ However, three other countries namely Comoros, Somalia, Sao Tome and Principe will be allowed to vote despite missing their dues.
  - ✓ The action of suspending the member nations from voting has been taken under Article 19 of the United Nations Charter.
  - ✓ The Charter also provides two years of grace period for paying the outstanding dues
  - ✓ Iran, which has been hit hard by US sanctions, owes 16.2 million USD to the United Nations.
  - ✓ The United States is the highest contributor of the UN.
  - ✓ The US contributed 22% of the UN budget, while China contributes 12%, Japan contributes 8.574% and Germany contributes 6.090% of the grants.
  - ✓ These four countries together finance 49% of the entire UN budget.
  - ✓ India is one among the thirty-four United Nations members to pay the budget dues on time.
  - ✓ In January 2020, India paid \$23,396,496 to the United Nations as its contribution.

## **CONFERENCES & SUMMITS**

- **India - will host the IOR defence ministers' conclave, alongside Aero India 2021 in Bengaluru on February 4.**

- ✓ The conclave will be held under the theme 'Enhanced Peace, Security and Cooperation in the Indian Ocean'
- ✓ This year's conclave will witness the participation of strategically significant Madagascar and Comoros Islands in the Indian Ocean region for the first time
- ✓ While Madagascar delegation will be headed by its defence minister Richard Rakotonirina, Comoros will send a defence delegation under its foreign minister Dhoahir Dhoulkamal.
- ✓ This is the first time that a high-level defence delegation will visit India from the archipelago off the east coast of Africa.
- ✓ In 2019, the foreign ministry had included these countries in IOR division that also handles Mauritius, Seychelles, Maldives and Sri Lanka.
- ✓ The conclave aims to promote dialogue in an "institutional and cooperative environment that can foster peace, stability and prosperity in the Indian Ocean region".
- ✓ India had signed a defence MoU with Madagascar in 2018 under which they are discussing several projects for capacity building and training of Madagascar's defence personnel.

## PERSONALITIES

- **The Indian Mountaineering Foundation - recently approved a three-member team of mountaineers led by Arjun Vajpai for winter climbing expedition to Mount Trishul.**

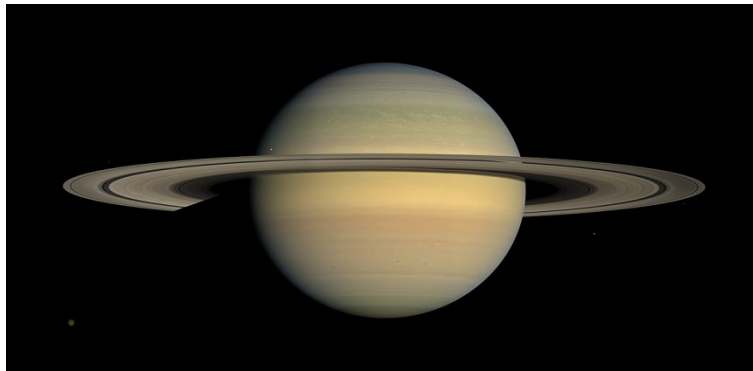


- ✓ For the first time, the Foundation has approved the concept of winter mountaineering.
- ✓ In India, the mountaineering expeditions are usually taken up only during pre-monsoon and post-monsoon period.
- ✓ Arjun Vajpai is the youngest Indian to climb Mount Everest at the age of 16 in 2010.
- ✓ The Mount Trishul is a group of three Himalayan peaks - Trishul I, Trishul II and Trishul III - that form the shape of a trident.
- ✓ It was first scaled by a British mountaineer Tom George Longstaff.
- ✓ The Indian Mountaineering Foundation is the apex body that organises rock climbing and mountaineering at high altitudes in the Himalayas.

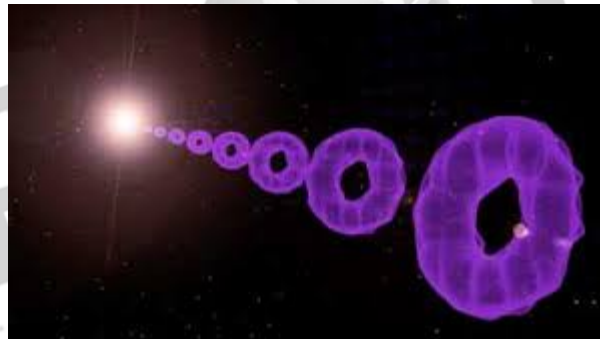
- ✓ It was established in 1957.
- ✓ It is also the regulatory body for the competitive Olympic sport of Sport Climbing.
- ✓ Mount Trishul is located in the western Kumaon of Uttarakhand.
- ✓ The Kumaon region is home to one of the highly decorated and oldest regiments of Indian Army called Kumaon Regiment.
- ✓ The regiment has fought both the world wars, Indo-Pakistan war of 1971, Indo-Pakistan war of 1965 and also Sino-Indian War of 1962.

## **SCIENCE, TECHNOLOGY & ENVIRONMENT**

- **Johnson & Johnson - announced that its single-dose vaccine was 66% effective against Covid-19 in a large trial against multiple variants across three continents.**
  - ✓ The vaccine's efficacy rate dropped from 72% in the US to 57% in South Africa, where a highly contagious variant, known as B.1.351, is widespread
  - ✓ This South Africa variant also blunts the effectiveness of vaccines made by Pfizer-BioNTech, Moderna and Novavax.
  - ✓ The variant has spread to at least 31 countries, including the US.
  - ✓ After 28 days of administering J&J vaccine, none of the participants who developed Covid-19 had to be hospitalised.
  - ✓ J&J is planning to apply for emergency authorisation of the vaccine from the FDA by next week, so that it can receive clearance later in February.
  - ✓ All the four vaccines seem to be less effective against the South Africa variant, known as B.1.351
  - ✓ Besides being a one-dose vaccine, J&J's shot can stay viable in a refrigerator for three months, while Pfizer and Moderna vaccines have to be kept frozen.
  - ✓ For its vaccine, J&J has used an adenovirus — which normally causes the common cold.
  - ✓ Astra-Zeneca and Oxford used a different adenovirus for their vaccine.
  - ✓ J&J's announcement came a day after Novavax said that its two-dose vaccine had an efficacy rate of nearly 90% in UK.
  - ✓ It is the first dose to definitively confirm protection against the UK variant.
  - ✓ Novavax has been running trials in Britain, South Africa, the US and Mexico.
  
- **Scientists – have confirmed that the recent tilt of the rotation axis of the gas giant Saturn may in fact be caused by its moons**
  - ✓ The current tilt of Saturn's rotation axis is caused by the migration of its satellites, and especially by that of its largest moon, Titan.
  - ✓ As per the recent observations, Titan and the other moons are gradually moving away from Saturn much faster than astronomers had previously estimated.
  - ✓ As the satellites move further away, the planet tilts more and more

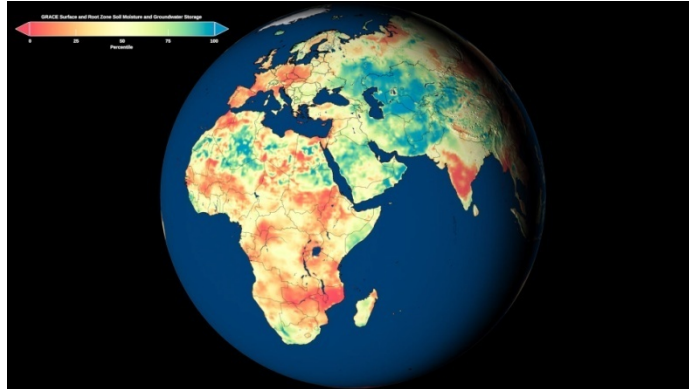


- ✓ Over the next few billion years, the inclination of Saturn's axis could more than double.
- ✓ For over three billion years after its formation, Saturn's rotation axis remained only slightly tilted
- ✓ Saturn's axis interacted with the path of the planet Neptune and gradually tilted until it reached the inclination of 27 degrees observed today
- **The Hum of the Universe - was recently detected by the North American Nanohertz Observatory for Gravitational Waves (NANOGrav).**



- ✓ According to the researchers, the hum was produced by gravitational waves.
- ✓ The Hum of the Universe comes from a type of dead star called a "Pulsar".
- ✓ These stars are basically neutron stars.
- ✓ They are oriented in such a manner that they flash beams of radio waves from their poles as they rotate.
- ✓ This is the first time the humming sound has been heard from a pulsar collision.
- ✓ The humming sound from blackhole mergers were earlier detected by LIGO observatories.
- ✓ LIGO is LASER Interferometer Gravitational Wave Observatory.
- ✓ Similar humming sounds are produced when black holes collide.
- ✓ The main objective of NANOGrav is to detect gravitational waves.
- ✓ The project is implemented by Parkes Pulsar Timing Array, International Pulsar Timing Array and European Pulsar Timing Array.
- ✓ The Pulsar Timing Array is a programme of regular, timing observation of widely distributed array of millisecond pulsars.
- ✓ A millisecond pulsar is a pulsar with rotational period smaller than about ten milli seconds.

- ✓ Indian Pulsar Timing Array is a project of National Centre for Radio Astrophysics, Tata Institute of Fundamental Research.
- ✓ It aims to detect nano-hertz gravitational waves by precision timing
- **NASA - recently released the estimates of soil moisture in the root zone, based on the GRACE-FO satellite data**



- ✓ Accordingly, the Konya Plains in Turkey had the lowest “root zone moisture” in the entire world
- ✓ The Konya Plains received 38% less rainfall in 2020 as compared to 2019.
- ✓ In India, the wetness percentile of Root Zone Moisture in western India was between 80% and 98%.
- ✓ In eastern India, the wetness percentile was between 30% and 70%, while in Northern India it was less than 10%
- ✓ The Surface Soil Moisture along the coasts of Western Ghats was above 95%, while in the rest of the country, it was less than 30%.
- ✓ The South African city of Cape Town witnessed severe droughts recently due to the decline in the root zone moisture levels
- ✓ The water reserves of Istanbul have the lowest volumes of water in fifteen years.
- ✓ The water and moisture in the soil to a depth of 39 inches is called root zone moisture.
- ✓ When there are no rains and surface moisture, the root zone moisture might vanish completely.
- ✓ This eventually will make the soil unfit for cultivation of trees and plants.
- ✓ Root Zone Irrigation is the only solution to soils that have decreased root zone moisture.
- ✓ Currently, root zone irrigation is being used in cultivation of grapes.
- **NASA - recently released the picture of a huge cluster of galaxies called Abell 370.**
- ✓ It is a galaxy cluster located four billion light years away from the earth in the constellation called Cetus.
- ✓ The core of Abell 370 is made of more than hundred galaxies.
- ✓ The Galaxy was catalogued by George Abell and hence the name.

- ✓ The Abell 370 galaxy cluster was first discovered in 2002 using the lensing effect.



- ✓ Cetus constellation is located in the region of the sky where the other constellations such as Pisces, Aquarius and Eridanus are located.
  - ✓ There are fourteen stars in Cetus Constellation.
  - ✓ Mira was the first star discovered in the Cetus constellation.
  - ✓ Abell 370 Galaxy is also nick named as The Dragon by the NASA scientists.
  - ✓ This is mainly because a study on Abell 370 revealed a group of galaxies in the background of the cluster similar to a dragon in the year 2019.
  - ✓ These galaxies were five billion light years away from each other.
- **Virgin Orbit - recently launched its LauncherOne rocket to the orbit, making it the first successful flight of the rocket.**



- ✓ The LauncherOne rocket is carried to the upper atmosphere on Boeing 747 called “Cosmic Girl”.
- ✓ During the first attempt in May 2020, LauncherOne failed to reach the space.
- ✓ LauncherOne is an air-launched liquid fuelled two-stage orbital rocket launch vehicle.
- ✓ It is capable of carrying small satellite payloads up to 300 kilograms and placing them in Sun Synchronous Orbit
- ✓ During the recent second launch, the LauncherOne delivered ten CubeSats to the Low Earth Orbit as part of ElaNa Mission.
- ✓ The Sun synchronous Orbit is nearly a polar orbit around a planet

- ✓ This orbit is generally used for spying and imaging.
  - ✓ The CubeSats are miniature satellites for space research.
  - ✓ They are made of multiple cubic modules that are of 10 cm × 10 cm × 10 cm size.
  - ✓ ElaNa is Educational Launch of Nanosatellites, which was launched in 2011 with three CubeSats.
  - ✓ The mission made partnerships with the universities in the US to launch research satellites called CubeSats.
  - ✓ LauncherOne is the 20<sup>th</sup> mission of ElaNa programme.
- **The United States scientists - have developed a new rapid Covid-19 test to measure mitochondrial DNA in the blood sample of the Covid-19 patients.**
- ✓ The mitochondrial DNA is a unique type of genetic material that normally resides inside the Mitochondria, which are the energy factories of the cells.
  - ✓ However, in Covid-19 patients the mitochondrial DNA is spilling out of the body cells into the bloodstream, causing the cell death.
  - ✓ According to scientists, the spill out of mitochondrial DNA is the main reason for tissue damage and eventual organ failure especially in lungs, kidney and heart in Covid-19 patients.
  - ✓ Mitochondria convert chemical energy in food into Adenosine Triphosphate (ATP), which provides energy for muscle contraction and nerve impulse propagation.
  - ✓ It functions as the digestive system of a cell and promotes growth of new cells and cell multiplication.
  - ✓ It is found in both plant cell and animal cell.

## DEFENCE

- **The Hindustan Aeronautics Limited - recently test fired the SAAW (Smart Anti Airfield Weapon) from Hawk aircraft successfully.**



- ✓ SAAW was developed by Defence Research Development Organisation (DRDO).
- ✓ It is the first smart weapon fired from an Indian Hawk aircraft.
- ✓ SAAW is a long-range precision guided anti-airfield weapon that is capable of engaging ground targets with precision up to a range of hundred kilometres.
- ✓ It is designed to destroy targets such as bunkers, runways, reinforced structures and aircraft hangers.

- ✓ The SAAW project was approved by Government of India in 2013.
- ✓ So far, eight successful tests of SAW have been conducted.
- ✓ In 2020, the Government of India approved SAAW project for Indian Navy and Indian Air Force.
- ✓ Hawk aircraft is a tandem seat aircraft developed by HAL.
- ✓ It has an integrated attack system and radio and inertial navigation system.

## OBITUARY

- **93-year old Krishan Dev Sethi, the last surviving member of the Jammu and Kashmir Constituent Assembly - passed away at his residence on January 28.**



- ✓ The Constituent Assembly, which comprised a body of representatives elected in 1951, had framed the constitution of the erstwhile state of J&K.
- ✓ It was later dissolved in the year 1953
- ✓ Born in Mirpur, now in Pakistan Occupied Kashmir, on January 1, 1928, Sethi was a popular leader.
- ✓ He migrated to Jammu in 1946 and later also represented the Nowshera assembly segment of Rajouri district.

## SPORTS

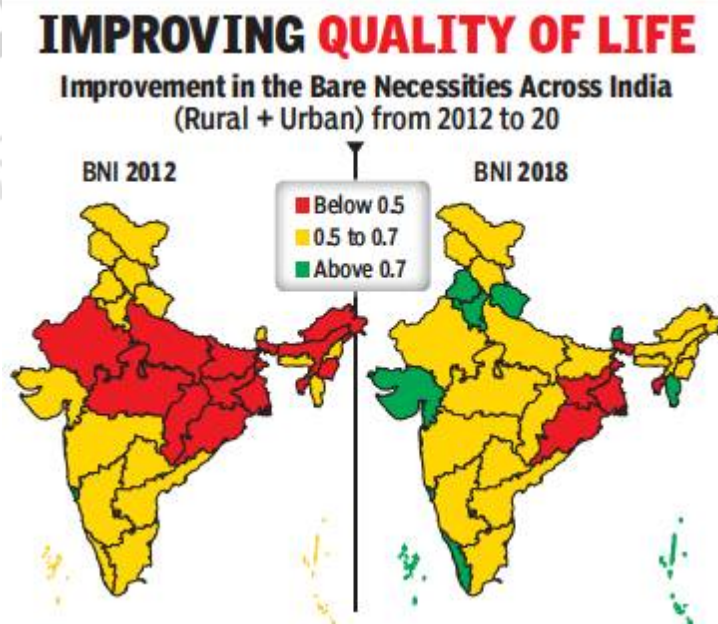
- **The BCCI – has announced that it will conduct the 14th edition of the IPL at home in April 2021**
- ✓ It had recently hosted the Mushtaq Ali T20 tournament successfully, kickstarting the game in the country since March 2020
- ✓ BCCI has also proposed to host the Vijay Hazare trophy and a one-day tournament for women in February and March 2021
- ✓ For IPL, it has earmarked the Wankhede, Brabourne Stadiums, DY Patil Stadium, Reliance Cricket Stadium in Navi Mumbai and the Maharashtra Cricket Association (MCA) Stadium on the outskirts of Pune.
- ✓ The state-of-the-art Sardar Patel Stadium in Motera, Ahmedabad, will also be considered for matches



- ✓ It is more likely to host the knockouts as the tournament moves towards the business end in the last week of May.
- ✓ The 2020 edition of the IPL was held in UAE over 54 days.
- ✓ For the first time in 87 years, the BCCI has decided not to host the Ranji Trophy
- ✓ IPL-2021 is all set to begin in the second week of April, tentatively between April 11 and 14, and conclude in the first week of June, around June 6.

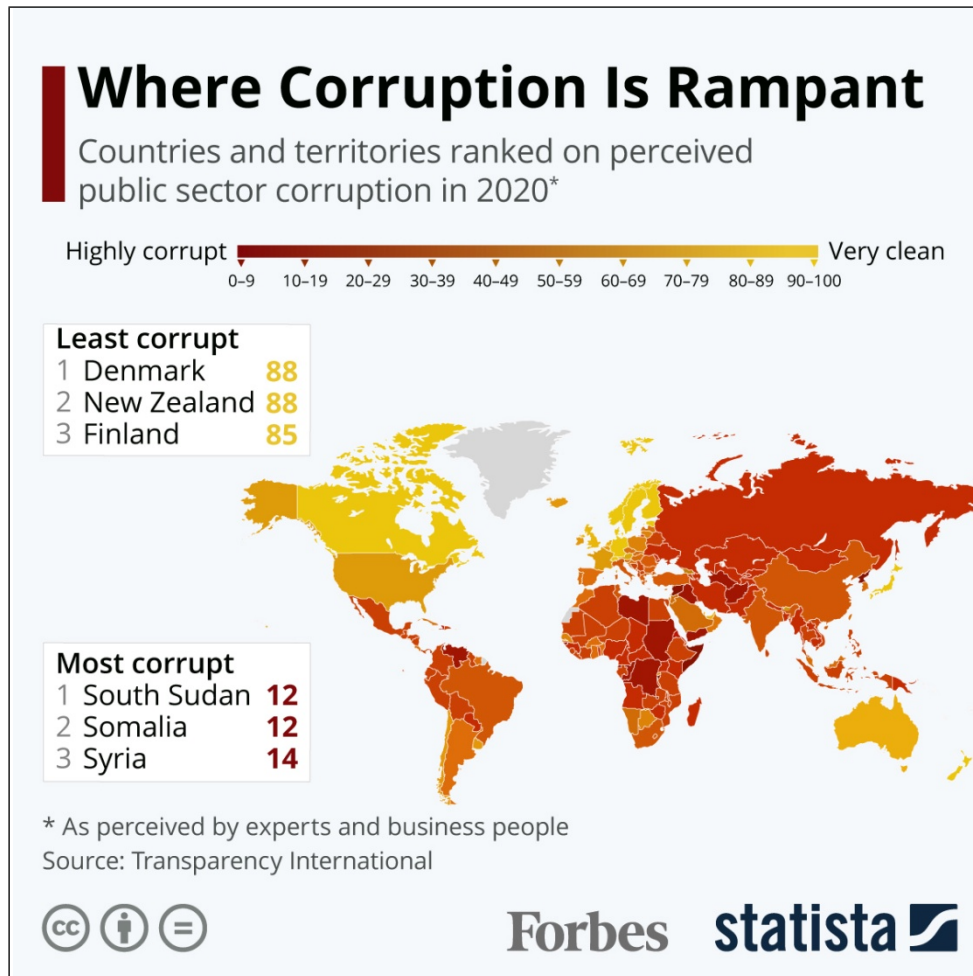
## RANKINGS

- **The government – had released the first ever BNI (bare necessities index), as part of the 2020-21 Economic survey**
- ✓ As per the survey, availability of “bare necessities” such as housing, water, sanitation, electricity and clean cooking fuel has improved across all states in the country in 2018 compared to 2012
- ✓ The access to these is the highest in states such as Kerala, Punjab, Haryana and Gujarat, while it is the lowest in Odisha, Jharkhand, West Bengal and Tripura.
- ✓ The BNI has been developed for rural, urban and all-India level using data from two NSO (rounds 69 and 76) on drinking water, sanitation, hygiene and housing conditions.
- ✓ The index summarises 26 indicators on five dimensions — water, sanitation, housing, micro-environment, and other facilities (assessed using indicators like access to type of kitchen, ventilation of the dwelling unit, access to a bathroom, electricity and type of fuel used for cooking).



- ✓ In rural India, the highest access to bare necessities in 2018 was reported in Punjab, Kerala, Sikkim, Goa and Delhi, while the lowest was in Uttar Pradesh, Madhya Pradesh, Bihar, Jharkhand, West Bengal, Odisha, Assam, Manipur and Tripura.

- ✓ In urban India, no state is showing the lowest level of BNI in 2018, and the states showing improvement over 2012 include Uttarakhand, Jammu & Kashmir, Punjab, Rajasthan, Madhya Pradesh, Maharashtra, Karnataka, Kerala, Tamil Nadu, Arunachal Pradesh and Manipur.
- **India – ranked at 86<sup>th</sup> position in the Corruption Perception Index–2020, released by Transparency International, a global civil society.**




- ✓ The score of the country decreased only by one point to 40 from 41 in 2019, when India was ranked at 80<sup>th</sup> position
- ✓ The annual ranking ranks 180 countries by their perceived levels of public sector corruption according to experts and business people.
- ✓ It uses a scale of zero to 100, where zero signifies the highest level of corruption and 100 is very clean.
- ✓ **Denmark and New Zealand topped the list with scores of 88, followed by Finland, Singapore, Sweden and Switzerland (85 each).**
- ✓ Like in previous years, more than two-thirds of countries scored below 50, with a global average score of just 43.
- ✓ Syria with a score of 14, Somalia and South Sudan with scores of 12 each occupy the bottom slots on the CPI-2020.

- ✓ The average score in the Asia-Pacific region, which encapsulates 31 countries, is 45.
  - ✓ India's score of 40 is below both the global average and the Asia-Pacific average.
  - ✓ It is also lower than that of China, which scored 42 with a rank of 78.
  - ✓ Pakistan fared poorly with a score of 31 and a rank of 124.
  - ✓ In the Asia Pacific region, New Zealand was the top performer.
  - ✓ Other top-scoring countries in this region were Singapore (85), Australia (77) and Hong Kong (77).
  - ✓ In Asia, key economies such as Indonesia and Bangladesh had scores of 37 and 36 respectively
- **Maharashtra - ranked first in the second edition of the India Justice Report (IJR) 2020 released on January 28**
- ✓ The report judges various states in the country based on delivery of justice to people.
  - ✓ Maharashtra retained its number one position among 18 large and mid-sized states — each with a population of over one crore
  - ✓ **It was followed by Tamil Nadu**, which improved its ranking from third position in 2019, and Telangana at the third place.

**TOP 10 AMONG 18 STATES WITH POPN OVER 1 CRORE**

(Score Out of 10)

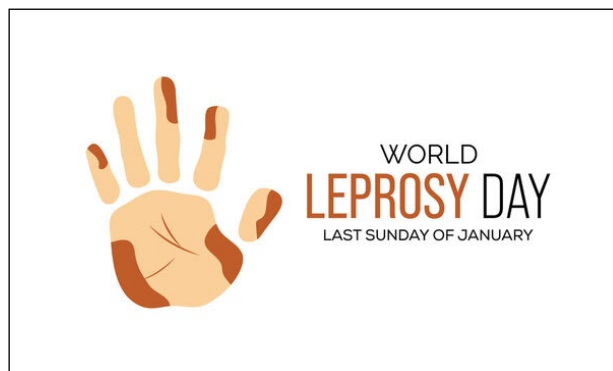
1	Maharashtra	(5.77)	 <p>When it comes to providing legal aid, Maharashtra tops 18 L-M-sized states, while Goa ranks best among 7 small states</p>
2	Tamil Nadu	(5.73)	
3	Telangana	(5.64)	
4	Punjab	(5.41)	
5	Kerala	(5.36)	
6	Gujarat	(5.17)	
7	Chhattisgarh	(5.13)	
8	Jharkhand	(5.12)	
9	Haryana	(4.94)	
10	Rajasthan	(4.93)	

- ✓ The IJR tracked the rise and fall in each state's structural and financial capacity to deliver justice
- ✓ It had used the latest available government figures from budgets, human resources, infrastructure, workload, and diversity across police, judiciary, prisons and legal aid in 25 states.
- ✓ Telangana showed the highest improvement in justice delivery and ranking as it rose to the third position from the 11th in 2019
- ✓ Kerala slipped from the second position in 2019 to fifth in 2020.
- ✓ The list of seven small states (population of less than one crore each) was topped by Tripura (2019: seventh), followed by Sikkim (2019: second) and Goa (2019: third).

- ✓ The report was an initiative of Tata Trusts in collaboration with the Centre for Social Justice, Common Cause, Commonwealth Human Rights Initiative, DAKSH, Tiss-Prayas, Vidhi and How India Live 2020
- ✓ Andhra Pradesh has the highest percentage of women HC judges at 19%, followed by Haryana with 18.2%, and Tamil Nadu in the third place with 16.7%.
- **India – was ranked fourth among 138 countries, as per the Global Firepower Index released recently**
- ✓ The Index ranks the countries based on their potential military strength, evaluated by the prolonged offensive and defensive military campaigns.
- ✓ The United States topped the index with 904 attack helicopters, eleven aircraft carriers, 68 submarines and 40,000 armoured fighting vehicles.
- ✓ It was followed by Russia with 189 fighter aircrafts, 538 attack helicopters, 13,000 tanks and 64 submarines.
- ✓ China was ranked third with 1,200 combat aircrafts, 327 attack helicopters, 79 submarines and 35,000 armoured vehicles.
- ✓ India was ranked fourth with 542 combat aircraft, 17 submarines, 4,730 tanks and 37 attack helicopters.
- ✓ Japan was ranked fifth in the Index with 2 helicopter carriers and 27 destroyers.
- ✓ South Korea was ranked sixth in the world and North Korea was ranked 28<sup>th</sup>.
- ✓ Pakistan was ranked the tenth most powerful country surpassing Israel, Indonesia, Iran and Canada in terms of military power.
- ✓ The Global Firepower Index is calculated using fifty individual factors from geography to logistical capability.

## INTERNATIONAL DAY

- **World Leprosy Day – January 31**



- ✓ The World Leprosy Day is observed every year on the last Sunday of January
- ✓ The observance of the Day aims to raise awareness about leprosy and seeks to highlight the importance of eradicating the disease
- ✓ There were 2,08,619 new leprosy cases globally registered in the year 2018 across 159 countries.

- ✓ In India, the day is being observed on January 30, which marks the death anniversary of Mahatma Gandhi, father of the nation
- ✓ Leprosy, also known as Hansen's disease, is an infectious disease which is caused by a bacillus Mycobacterium leprae.
- ✓ It has been named after Gerhard Henrik Armauer Hansen who was a Norwegian physician.
- ✓ The disease is curable and treatment at the early stage can prevent future disability and progress.
- ✓ It spreads through the droplets either from the nose or mouth when the affected person sneezes or coughs.

