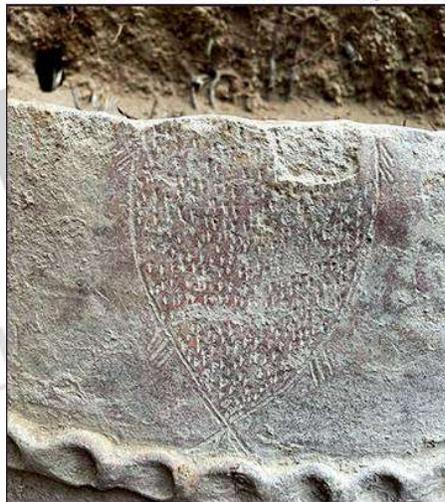


## EVERYDAY CURRENT AFFAIRS—OCTOBER 20, 2021

### TAMIL NADU

- The seventh phase of excavation at Keeladi site – has been completed by the Tamil Nadu State Archaeology Department

K Antony Xavier



- ✓ On October 19, State minister for archaeology Thangam Thennarasu inspected the findings of the seventh phase of excavation at the site
- ✓ After the visit, the Minister said that no decision has been taken on the eighth phase of excavation at Keeladi site
- ✓ The minister climbed down into a 7ft deep quadrant to inspect the artefacts found in various levels of the soil structure.
- ✓ This is the first time that the State Archaeology Department has left the quadrants open without filling it with soil after the excavation ended, as it plans to establish a first-of-its-kind open site museum there.
- ✓ Excavation has been carried out twice in the cluster villages of Konthagai, Manalur and Agaram.
- ✓ The state archaeological department would seek the help of IIT Madras to protect and preserve the brick structures in the quadrants, said the Minister

- ✓ The image of a fish imprinted on a ring well was discovered in the seventh phase at Keeladi, along with engraved coins
- ✓ These findings strengthened the theory that the people who lived there had commercial transactions with other parts of the country, especially north India.
- **Chennai-based NGO, The Banyan - has received the 2021 Dr. Guislain 'Breaking the Chains of Stigma Award'.**



- ✓ The award is named after Belgian psychiatrist Dr Joseph Guislain (1797-1860)
- ✓ The Dr. Guislain Award program is a joint project of the Dr. Guislain Museum and Janssen Research & Development, LLC.
- ✓ The Dr Guislain Award honours an individual, project or organisation that has made an exceptional contribution to reduce the stigma associated with mental illness and associated in the field of mental health care and research.
- ✓ This year, a record number of 85 submissions were received from 27 countries for the prestigious honour
- ✓ The Banyan is the second organisation from India to receive the coveted award
- ✓ Earlier, Bollywood actor Deepika Padukone's 'The Live Love Laugh Foundation' has been honoured with the Dr Guislain 'Breaking the Chains of Stigma' Award for 2019 in Ghent, Belgium

## STATES

- **Telangana government – to conduct a dry run of the first-ever smartphone-based e-voting system in the country on October 20**
- ✓ The system allows voters to cast their ballots through their smartphones from the homes by downloading an Android application from the Google playstore
- ✓ A dummy election will be held to test this application on 20 October in the Khammam Municipal Corporation with a set of 10,000 voters



Languages : తెలుగు | हिंदी



- ✓ All eligible voters from the district are allowed to register on the app from 8 to 18 October.
- ✓ The initiative for the e-voting system was taken by the Telangana State Election Commission (TSEC)
- ✓ It is implemented with support from the Emerging Technologies Wing of the state's IT Electronics and Communications Department, with technical development by the Centre for Development of Advanced Computing (CDAC).
- ✓ The mobile application will carry out a three-factor authentication of valid voters using artificial intelligence
- ✓ This includes matching voters' names to their Aadhaar cards, live detection of individuals and matching their image with the EPIC (electoral photo identity cards) database with records.
- ✓ The dry run will be carried out using the 'TSEC eVote' Android application, which is a "security hardened" app to prevent tampering
- ✓ It also binds the device ID and phone number to a specific citizen during registration to ensure the same device is used for voting to enhance security.
- ✓ The data collected by the app will also be stored in the State Data Centres (SDCs) as an added security consideration
- ✓ The entire process will be monitored and controlled by the admin using a web portal, wherein the generation and access of results is further protected with the requirement of a physical security token-based decryption.
- ✓ The e-voting app was being developed as an alternative to postal votes, and was not extended to general voting.
- ✓ The Election Commission is not connected with the whole exercise

# NATIONAL

- **Nainital district in Uttarakhand – registers a record rainfall of 535mm in 24 hours**
- ✓ At least 34 people have died in unprecedented rain in Uttarakhand over the past three days.

➤ Nainital gets **401mm** (535mm in 1 stn), Pantnagar 403, Mukteshwar 341, breaking **all-time records** for highest 24-hour rainfall

➤ **Kathgodam rail line** washed away, 12 trains cancelled. Many **bridges** down. **12 state, national highways** blocked in Nainital dist

➤ Thousands of people, including **tourists, stranded** in Kumaon. More than 100 stuck at a resort in Ramnagar

➤ **Army, Air Force and NDRF** called in for rescue and relief. 300 rescued from floods in the state so far, says NDRF



- ✓ Nainital's previous highest rainfall was on September 15, 1957, when it received 313mm in 24 hours.
  - ✓ Pantnagar (US Nagar district) and Mukteshwar (Nainital) in the state also witnessed record 403mm and 341mm rainfall, breaking the previous all-time record of 228mm of rain that was witnessed in July 1990.
  - ✓ The Badrinath Char Dham Yatra has been halted as a precautionary measure and passengers en route to Badrinath Temple were stopped in safe places
  - ✓ Prime Minister Narendra Modi spoke to chief minister Pushkar Singh Dhami to review the situation.
  - ✓ Later in the day, Dhami announced an ex gratia of ₹4 lakh to the kin of each of the victims.
- 
- **The Ministry of Textiles - has approved continuation of Comprehensive Handicrafts Cluster Development Scheme (CHCDS) up to March 2026 with a total outlay of Rs 160 crore.**
  - ✓ Under the scheme, infrastructural support, market access, design and technology up-gradation support etc will be provided to handicrafts artisans

- ✓ The main purpose of setting handicrafts clusters is to assist the artisans & entrepreneurs to set up world-class units with modern infrastructure, latest technology, and adequate training and human resource development inputs
  - ✓ The scheme provides skill training, seminars, design workshops, capacity building activities, tool kits etc., to the handicraft artisans
  - ✓ The mega handicraft clusters having more than 10,000 artisans will be selected for overall development under this scheme
- **The government – has decided to establish a ‘National Road Safety Board’, a dedicated agency to oversee the issues related to road safety**
- ✓ The Ministry of Road Transport & Highways has notified constitution of National Road Safety Board.
  - ✓ It shall consist of the Chairman and not less than three, but not exceeding seven Members, to be appointed by the Central Government.
  - ✓ The Head Office of the Board in the National Capital Region and the Board may establish offices at other places in India
  - ✓ The Board will be responsible for promoting road safety, innovation and adoption of new technology, and for regulating traffic and motor vehicles.
  - ✓ Additionally, the board will also comprise of technical committees to look into a variety of aspects of road safety from civil engineering to vehicle construction and safety equipment.
  - ✓ It will act as an advisory body to the Government, providing advice in the formulation of policies and standard or matters pertaining to road safety, vehicle design standards, road construction in hilly regions among others
  - ✓ The creation of a road safety board had been part of the Motor Vehicles (Amendment) Bill 2019.
- **The Civil Aviation Ministry – has recently given the initial clearance to launch the country's latest ultra-low-cost carrier, Akasa Air**



- ✓ SNV Aviation, which will fly under the Akasa Air brand, expects to begin flights across India in the summer of 2022.
- ✓ The airline plans to operate approximately 70 planes in the next four years

- ✓ Akasa Air is backed by ace investor Rakesh Jhunjhunwala, ex-Jet Airways CEO Vinay Dube and Aditya Ghosh, former CEO of IndiGo.
  - ✓ Billionaire investor, Jhunjhunwala invested Rs 247.5 crore in the venture along with the founders of investment fund New Horizon
  - ✓ Stock market investor Rakesh Jhunjhunwala, known as 'India's Warren Buffet', will hold a 40% share in the entity.
  - ✓ After the aviation ministry's nod, the airlines will also need clearance from the Directorate General of Civil Aviation (DGCA).
  - ✓ In the ULCC (ultra low cost carriers ) airline business model, the company focuses on keeping operating costs even lower than typical budget airlines like IndiGo and SpiceJet
  - ✓ In the ultra low-cost model, there is an unbundling of services like checked-in baggage, cabin baggage, eat selection, food and beverages, etc., to minimize cost and ensure profitability
  - ✓ Examples of such terminals are prevalent across Europe, and are used by airlines such as Ryan Air, EasyJet, etc.
  - ✓ Currently, InterGlobe Aviation Ltd-run budget airline IndiGo is India's largest airline with over half the market share in the domestic passenger market followed by Air India, SpiceJet, GoAir, Vistara and AirAsia India.
- **The Centre – has granted the prestigious 'Maharatna' status to the state-owned Power Finance Corporation Ltd (PFC).**



- ✓ In this regard, an order conferring 'Maharatna' status to PFC was issued recently by the Department of Public Enterprises under the Finance Ministry
- ✓ Incorporated in 1986, PFC is the largest Infrastructure Finance Company as on date, exclusively dedicated to Power Sector under the administrative control of the Ministry of Power.
- ✓ The grant of 'Maharatna' status to PFC will grant enhanced powers to the PFC Board while taking operational and financial decisions
- ✓ The Board can also structure and implement schemes relating to personnel and Human Resource Management and Training and can enter into technology Joint Ventures or other strategic alliances among others.

- ✓ The PFC witnessed the highest ever annual sanctions and disbursements to the Power Sector to the tune of Rs.1.66 lakh crore and Rs.88,300 crore during FY 2020-21 and the highest ever profit of Rs.8,444 crore in FY 20210-21.
- ✓ The PFC becomes the 11th public sector enterprise to get the Maharatna status in the country
- ✓ “Maharatna” status is granted to a company which has recorded more than ₹ 5,000 crore of net profit for three consecutive years, an average annual turnover of ₹ 25,000 crore for three years or should have an average annual net worth of ₹ 15,000 crore for three years.
- ✓ The 10 public sector enterprises with the Maharatna status are - Bharat Heavy Electricals Limited, Bharat Petroleum Corporation Limited, Coal India Limited, GAIL (India) Limited, Hindustan Petroleum Corporation Limited, Indian Oil Corporation Limited, NTPC Limited, Oil & Natural Gas Corporation Limited, Power Grid Corporation of India Limited and Steel Authority of India Limited

## INTERNATIONAL

- **Russia - had successfully test launched a ‘Tsirkon’ (Zircon) hypersonic cruise missile recently from a submarine for the first time**



- ✓ As per the Russian defence ministry, the Severodvinsk submarine had fired the missile in the Barents Sea, successfully hitting its chosen target.
- ✓ Russia test fired the Tsirkon missile from a warship in July 2021
- ✓ The missile would be commissioned in to Russian Navy in 2022
- ✓ The 3M22 Zircon or 3M22 Tsirkon missile is a scramjet powered, anti-ship hypersonic cruise missile, which was developed by NPO Mashinostroyeniya.
- ✓ Meanwhile, in another development, China has denied reports that it tested a nuclear-capable hypersonic missile in August and said that it tested only a space vehicle in July
- ✓ India is also working on hypersonic missiles and hopes to develop one by 2025
- ✓ On 7 September 2020, the Defence Research and Development Organisation (DRDO) had successfully test-fired Hypersonic Technology Demonstrator Vehicle (HSTDV)

- ✓ This makes India only the fourth country in the world after the US, China and Russia to develop and test the technology.

## INDIA AND OTHER COUNTRIES

- **India, Israel, the UAE and the US – have agreed to establish an international joint forum for economic cooperation**
- ✓ The first “quadrilateral” meeting of the foreign ministers of India, Israel, the US and the United Arab Emirates (UAE) discussed joint infrastructure projects in the fields of transportation, technology, maritime security, and economics and trade.



- ✓ The meeting also focused on ways to expand economic and political cooperation in the Middle East and Asia and to enhance maritime security.
- ✓ The meeting also deliberated on each country appointing a senior level bureaucrat to be part of a joint working group to materialise these decisions.
- ✓ The meeting was joined by external affairs minister S Jaishankar and Israeli foreign minister Yair Lapid from Jerusalem, US secretary of state Antony Blinken from Washington and UAE foreign minister Sheikh Abdullah bin Zayed Al Nahyan from Abu Dhabi
- ✓ Jaishankar is currently on a five-day bilateral visit to Israel.
- ✓ Israel's foreign minister Yair Lapid and Jaishankar joined the meeting from Jerusalem, while the others attended virtually from their countries.
- ✓ All four ministers promised to meet in person during the Dubai Expo in the coming months.
- ✓ India, Israel and the UAE have already stepped up trilateral cooperation, especially in trade and investment, since the US brokered the Abraham Accords in August 2020.
- ✓ India has backed the Abraham Accords process, following which Israel also normalised relations with Bahrain, Sudan and Morocco
- ✓ India has robust defence, security and trade cooperation with Israel and the US, while the UAE is a key energy partner.

- ✓ In May this year, India, Israel and the UAE concluded the first trilateral partnership whereby an Israel-based company will produce a robotic solar cleaning technology in India for a project in the emirates.
- **India and Croatia – have signed agreement for mutual collaboration for academic research in traditional medicine systems, especially in the field of Ayurveda**



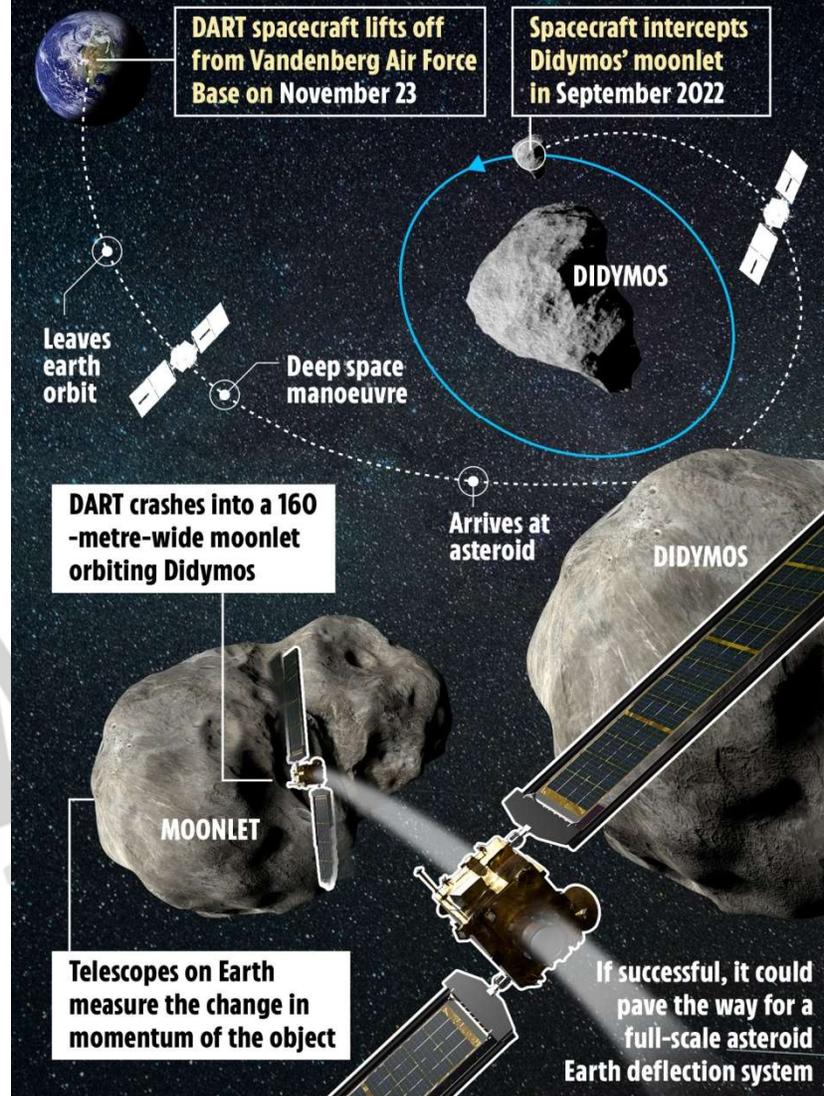
- ✓ The Memorandum of Understanding was signed between All India Institute of Ayurveda (AIIA), an autonomous body under the Ministry of Ayush and Croatia's Kvarner Health Tourism Cluster.
- ✓ The two countries will be working on research, including study design and execution, developing guidelines for integrating Ayurvedic principles and practices with modern medicine, conducting lectures, workshops, seminars and conferences, and other such activities on Ayurveda.
- ✓ Earlier, a six-member delegation led by Special Ayush Secretary Pramod Kumar Pathak, attended the first International Yoga and Ayurveda conference in Croatia during the first week of October

## **SCIENCE, TECHNOLOGY & ENVIRONMENT**

- **NASA - has officially announced that its asteroid-killing 'Double Asteroid Redirection Test' (DART) spacecraft will be launched on November 24, 2021**
- ✓ The spacecraft will be launched aboard Elon Musk-owned SpaceX's Falcon 9 rocket from Vandenberg Space Force Base in California
- ✓ The mission aims to develop advanced technologies in protecting the Earth from hazardous asteroid strikes and asteroid collisions
- ✓ It has to be recalled that it was an asteroid collision that caused the extinction of dinosaurs from the face of our planet 66 million years ago.
- ✓ Under the upcoming mission, the spacecraft will be sent approximately 109.4 crore kilometres away from Earth, towards the Didymos asteroid system that poses a threat to Earth

# NASA'S 'ARMAGEDDON' ASTEROID MISSION

Nasa's Double Asteroid Redirection Test (DART) Mission will crash a spacecraft into an asteroid 11million miles from Earth. It is a test of technologies for preventing an impact of Earth by a killer asteroid.



- ✓ This asteroid system consists of two asteroids - the Didymos and its moonlet, Dimorphos
- ✓ DART will be the first demonstration of NASA's kinetic impactor technique, where one or more high-speed aircraft are sent to intercept the path of an approaching near-Earth object
- ✓ This interception could change the trajectory of the object and hence prevent a collision
- ✓ As per NASA, the suicidal spacecraft has been programmed to collide into the system at a speed of 24,140 kmph
- ✓ After separation from the launch vehicle, DART will cruise for over a year.

- ✓ Then, it will crash Didymos' moonlet in late September 2022 at a speed of approximately 6.6 kilometre per second
- ✓ The DART spacecraft has been developed and built at the Johns Hopkins Applied Physics Laboratory (APL)
- ✓ DART spacecraft comprises of a compact Roll-Out Solar Arrays (ROSA) and a Didymos Reconnaissance & Asteroid Camera for Optical (DRACO) navigation for accomplishing the mission
  
- **Indian scientists – have developed a new biodegradable, environment-friendly and non-toxic polymer material for the packaging industry**
- ✓ The polymer has been produced using guar gum and chitosan, a polysaccharide that is obtained from the hard outer skeleton of shellfish, including crab, lobster, and shrimp.
- ✓ It has been found to have high water stability and mechanical strength, and excellent resistance to harsh environmental conditions.
- ✓ Two Indian scientists, Devashish Chowdhury and Sazzadur Rahman of the Institute of Advanced Study in Science and Technology, Guwahati, have developed the new material
- ✓ Polysaccharides are biopolymers with high potential for use in the synthesis of packaging material.
- ✓ However, they are not preferred as they have several drawbacks such as low mechanical properties, high water-solubility, and low barrier properties.
- ✓ The scientists have overcome these challenges by fabricating a cross-linked polysaccharide with the help of a technique called the solution casting method

## DEFENCE

- **On October 12, Iran - kicked off a massive two-day air defence drill, Velyat in its extensive central desert region**



- ✓ The Iranian Army's air defense force has tested its new missile system 'Joshan' during the "Guardians of Velayat Sky-1400" annual joint air defense exercises held in central Iran
- ✓ Joshan is an "improved version" of the Khordad 15 missile system equipped with a passive radar system.
- ✓ The homegrown long-range pulse-array radar 'Quds' developed by the Islamic Revolution Guards Corps (IRGC) Aerospace Force came into operation during the drills on October 13.
- ✓ The radar system can detect targets at a range of above 500 kilometers and altitudes of over 90,000 feet
- ✓ The military drill involved the deployment of indigenous missile, radar, reconnaissance, electronic warfare, communication systems, and visual surveillance network
- ✓ Both the army and the paramilitary Revolutionary Guard took part in the annual maneuvers

## AWARDS

- **Bengaluru's Vidyun R Hebbar - won the first prize in the '10 Years and Under' category of the Natural History Museum's 'Wildlife Photographer of the Year' competition for his photo of a tent spider**



- ✓ Titled 'Dome Home', Vidyun, a Class V student of BGS National Public School in Bengaluru has won the prestigious award, which is described as the Oscar of wildlife photography.
- ✓ One of his other photographs of a butterfly taken in his school garden won him a commendation.
- ✓ Vidyun was 10 years old when he sent his entries last December and has turned 11 now
- ✓ He will receive a certificate and a portfolio book which has the pictures of the winners and 1000 British pound sterling (₹1 lakh).

- ✓ French underwater photographer and biologist Laurent Ballesta won the overall first prize.
  - ✓ The award ceremony was held virtually from the museum this year due to the pandemic.
  - ✓ The organisers receive almost 50,000 entries from 96 countries every year.
- **Defence Minister Rajnath Singh - felicitated the winners of 'Dare to Dream 2.0' Contest recently in New Delhi**



- ✓ The Minister gave away awards to 40 winners with 22 in Individual category and 18 in Startup category.
- ✓ He also launched 'Dare to Dream 3.0' to promote innovators & startups and provide a platform for the young ignited minds in the country.
- ✓ During the event, the Minister gave away DRDO Young Scientists awards to 16 DRDO scientists for the year 2019 in recognition of their outstanding contribution
- ✓ Defence Research and Development Organisation (DRDO) has launched its innovation contest 'Dare to Dream 2.0' on the fifth death anniversary of former President and acclaimed scientist Dr APJ Abdul Kalam on July 27, 2021
- ✓ The scheme is being launched for emerging technologies to promote the individuals & startups for innovation in defence and aerospace technologies in the country

