

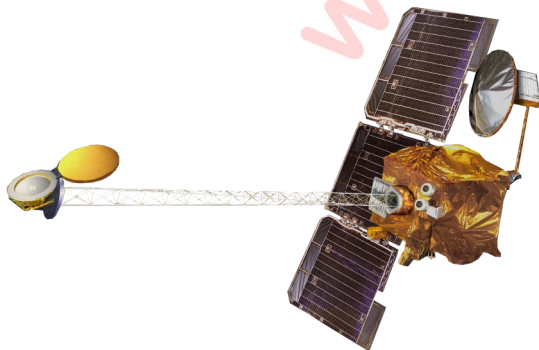
10.04.21

FREEDOM OF NAVIGATION OPERATION (FONOP)



- India has protested the U.S. decision to conduct a patrol in the Indian Exclusive Economic Zone (EEZ) in the western Indian Ocean, rejecting the U.S.'s claim that its domestic maritime law was in violation of international law.
- In a rare and unusual public statement, the U.S. Navy announced that its ship, USS John Paul Jones, had carried out Freedom of Navigation Operation (FONOP) in the Indian EEZ, adding that its operations had “challenged” what the U.S. called India’s “excessive maritime claims”.
- USS John Paul Jones asserted navigational rights and freedoms approximately 130 nautical miles west of the Lakshadweep Islands, inside India’s exclusive economic zone, without requesting India’s prior consent, consistent with international law, the U.S. Navy’s 7th fleet said
- The Government of India’s stated position on the United Nations Convention on the Law of the Sea (UNCLOS) is that the Convention “does not authorise other States to carry out in the EEZ and on the continental shelf, military exercises or manoeuvres, in particular those involving the use of weapons or explosives, without the consent of the coastal state.
- While India ratified UNCLOS in 1995, the U.S. has failed to do so far.

2001 MARS ODYSSEY



- NASA's Mars Odyssey spacecraft launched 20 years ago on April 7, has made it the oldest spacecraft still working at the Red Planet.
- The orbiter, which takes its name from Arthur C. Clarke's classic sci-fi novel "2001: A Space Odyssey", was sent to map the composition of the Martian surface in 2001 .
- Project Scientist Jeffrey Plaut of NASA's Jet Propulsion Laboratory in Southern California said that before Odyssey, we didn't know where water was stored on the planet.
- The feasibility of humans traveling to Mars was also the focus of an instrument aboard Odyssey that measured how much space radiation astronauts would have to contend with before it stopped working in 2003.

- The most complete global maps of Mars were made using Odyssey's infrared camera, called the Thermal Emission Imaging System, or THEMIS.

ONLINE DISPUTE RESOLUTION (ODR)



- NITI Aayog—in association with Agami and Omidyar Network India and with the support of ICICI Bank, Ashoka Innovators for the Public, Trilegal, Dalberg, Dvara, NIPFP—will launch the first-of-its kind Online Dispute Resolution (ODR) handbook in India.
- The handbook is an invitation to business leaders to adopt ODR in India.
- It highlights the need for such a mechanism, the models of ODR that businesses can adopt and an actionable pathway for them.
- ODR is the resolution of disputes outside courts, particularly of small and medium-value cases, using digital technology and techniques of alternate dispute resolution (ADR), such as negotiation, mediation, and arbitration.
- While courts are becoming digitized through the efforts of the judiciary, more effective, scalable, and collaborative mechanisms of containment and resolution are urgently needed.
- ODR can help resolve disputes efficiently and affordably.

NanoSniffer



- Union Education Minister Ramesh Pokhriyal 'Nishank' launched NanoSniffer, the world's first Microsensor based Explosive Trace Detector (ETD).
- This home-grown Explosive trace detector device (ETD) - NanoSniffer can detect explosives in less than 10 seconds and it also identifies and categorizes explosives into different classes.
- It detects all classes of military, conventional and homemade explosives. It gives visible & audible alerts with sunlight-readable color display.
- NanoSniffer is a 100% Made in India product in terms of R&D and manufacturing.
- It has been developed by NanoSniff Technologies, an IIT Bombay incubated startup and has been marketed by Vehant Technologies, a spin-off from a former IIT Delhi incubated startup Kritikal Solutions.
- This affordable device will reduce India's dependence on imported explosive trace detector devices.

INDIA-NETHERLANDS VIRTUAL SUMMIT



- Prime Minister Narendra Modi and Mark Rutte, Prime Minister of the Netherlands held a Virtual Summit.
- It was the first high level Summit attended by PM Rutte after the general elections held in March 2021.
- Prime Minister Modi congratulated PM Rutte on his election victory and on becoming the Prime Minister of the Netherlands for the fourth consecutive term.
- During the Summit, the two leaders exchanged views on further expanding the relationship in trade and economy, water management, agriculture sector, smart cities, science & technology, healthcare and space.
- The two Prime Ministers also agreed on instituting a 'Strategic Partnership on Water' to further deepen the Indo-Dutch cooperation in the water related sector, and upgrading the Joint Working Group on water to Ministerial-level.
- Prime Minister Modi thanked the Netherlands for their support to International Solar Alliance (ISA) and Coalition for Disaster Resilient Infrastructure (CDRI). PM Modi also welcomed the Netherlands' Indo-Pacific Policy.

Teeka Utsav



- Prime Minister Narendra Modi on Thursday said states should observe a 'vaccine festival' or 'Tika Utsav' between April 11-14 to inoculate the maximum number of eligible beneficiaries against COVID-19. PM Modi also urged the chief ministers to bolster their anti-Covid efforts for the next 2-3 weeks to control the spread of the virus.

Pradhan Mantri Mudra Yojana completes six years



- Pradhan Mantri MUDRA Yojana has completed six years.
- It is a scheme under which loans of upto 10 Lakh rupees are provided to the non-corporate, non-farm, small and micro enterprises.
- Pradhan Mantri MUDRA Yojana was launched on 8th April 2015.

- In these years, More than 28 crore 68 lakh loans have been sanctioned.
- The amount of these loans is around 15 lakh crore rupees with about 52,000 rupees being the average ticket size of the loans.
- Under this scheme almost 24percent of loans have been given to New entrepreneurs, about 68 percent of loans have been given to women entrepreneurs and about 51percent of loans have been given to SC, ST and OBC borrowers
- This yojana has helped in generation of 1 crore 12 lakh net additional employment from 2015 to 2018. Women have accounted for 62 percent of this estimated increase in employment.

PRE-PACKAGED INSOLVENCY RESOLUTION PROCESS (PPIRP)



- The Insolvency and Bankruptcy Code (Amendment) Ordinance, 2021 promulgated on 4th April, 2021 provides for pre-packaged insolvency resolution process (PPIRP) for corporate debtors classified as micro, small and medium enterprises.
- The Insolvency and Bankruptcy Board of India notified the Insolvency and Bankruptcy Board of India (Pre-packaged Insolvency Resolution Process) Regulations, 2021 (PPIRP Regulations) to enable operationalisation of PPIRP.
- The PPIRP Regulations detail the Forms that stakeholders are required to use, and the manner of carrying out various tasks by them as part of the PPIRP.

These provide details and manner relating to:

- Eligibility to act as resolution professional, and his terms of appointment;
- Eligibility of registered valuers and other professionals;
- Identification and selection of authorised representative;
- Public announcement and claims of stakeholders;
- Information memorandum;
- Meetings of the creditors and committee of creditors;
- Invitation for resolution plans;
- Competition between the base resolution plan and the best resolution plan;
- Evaluation and consideration of resolution plans;
- Vesting management of corporate debtor with resolution professional;
- Termination of PPIRP.

Red Sea



- Recently, An Iranian cargo ship to be a base for the paramilitary Islamic Revolutionary Guard Corps (IRGC) and anchored for years in the Red Sea off Yemen has been attacked.
- Red Sea, Arabic Al-Baḥr Al-Aḥmar, narrow strip of water extending southeastward from Suez, Egypt, for about 1,200 miles (1,930 km) to the Bab el-Mandeb Strait, which connects with the Gulf of Aden and thence with the Arabian Sea.
- Geologically, the Gulfs of Suez and Aqaba (Elat) must be considered as the northern extension of the same structure.
- The sea separates the coasts of Egypt, Sudan, and Eritrea to the west from those of Saudi Arabia and Yemen to the east.
- With its connection to the Mediterranean Sea via the Suez Canal, it is one of the most heavily traveled waterways in the world, carrying maritime traffic between Europe and Asia.
- Its name is derived from the colour changes observed in its waters. Normally, the Red Sea is an intense blue-green; occasionally, however, it is populated by extensive blooms of the algae *Trichodesmium erythraeum*, which, upon dying off, turn the sea a reddish brown colour.

Physiography

- The Red Sea lies in a fault depression that separates two great blocks of Earth's crust—Arabia and North Africa.
- At its northern end the Red Sea splits into two parts, the Gulf of Suez to the north-west and the Gulf of Aqaba to the northeast.
- topography of the trough becomes more rugged, and several sharp clefts appear in the seafloor
- The sill (submarine ridge) separating the Red Sea and the Gulf of Aden at the Bab el -Mandeb Strait.
- At the bottom of these areas are unique sediments, containing deposits of heavy metal oxides from 30 to 60 feet thick.

Geology

- The Red Sea occupies part of a large rift valley in the continental crust of Africa and Arabia.
- This break in the crust is part of a complex rift system that includes the East African Rift System, which extends southward through Ethiopia, Kenya, and Tanzania and northward from the Gulf of Aqaba to form the great Wadi Aqaba–Dead Sea–Jordan Rift; the system also extends eastward from the southern end of the Red Sea to form the Gulf of Aden.

- The Red Sea is considered a relatively new sea, whose development probably resembles that of the Atlantic Ocean in its early stages

Hydrology

- No water enters the Red Sea from rivers, and rainfall is scant; but the evaporation loss—in excess of 80 inches per year—is made up by an inflow through the eastern channel of the Bab el-Mandeb Strait from the Gulf of Aden.
- A total of 6 countries of Asia and Africa, border the Red Sea. The countries of Yemen and Saudi Arabia border the Red Sea to the east. The Red Sea is bordered by Egypt to the north and west, and by Sudan, Eritrea, and Djibouti to the west.

G-SAP 1.0



- Recently, RBI announced a Government Security Acquisition Programme, GSAP 1.0. Under the programme, the central bank will purchase government bonds of worth Rs 1 trillion (or one lakh crores of rupees).
- The first purchase of Rs 25,000 crore is to be made on April 15, 2021.
- The GSAP 1.0 will provide more comfort to the bond market.
- Borrowing of the Government increased this year, So RBI has to ensure there is no disruption in the Indian market.
- In the fiscal year 2021, RBI purchased Rs 3.13 trillion worth bonds from the secondary market, in an ad hoc manner.
- Help to reduce the spread between repo rate and the ten-year government bond yield.
- Help to reduce the aggregate cost of borrowing for the centre and states in fiscal year 2022.

SARTHAQ



- Recently, Education minister released an indicative and suggestive implementation plan for school education called 'Students' and Teachers' Holistic Advancement through Quality Education or SARTHAQ.
- In pursuance of the goals and objectives of the National Education Policy (NEP) 2020 issued on 29th July, 2020 and to assist States and UTs in this task.

- The Department of School Education and Literacy has developed an indicative and suggestive Implementation Plan for School Education, called 'Students' and Teachers' Holistic Advancement through Quality Education (SARTHAQ)'.
- This implementation plan was released by the Education Minister as a part of the celebrations leading to the AmritMahotsav on 75 years of Indian independence.
- The plan keeps in mind the concurrent nature of education and adheres to the spirit of federalism.
- States and UTs are given the flexibility to adapt this plan with local contextualization and also modify as per their needs and requirements.
- This implementation plan delineates the roadmap and way forward for implementation of NEP, 2020 for the next 10 years, which is very important for its smooth and effective implementation.
- SARTHAQ has been developed through a wide and intensive consultative process with States and UTs, Autonomous bodies and suggestions received from all stakeholders; around 7177 suggestions/inputs were received from them.
- The major focus of SARTHAQ is to define activities in such a manner which clearly delineate goals, outcomes and timeframe i.e., it links recommendations of NEP with 297 Tasks along with responsible agencies, timelines and 304 outputs of these Tasks.
- Attempts have been made to propose activities in a manner, such that it will be built upon the existing structure rather than creating new structures.
- SARTHAQ has also been prepared as an evolving and working document and is broadly suggestive/indicative in nature and will be updated from time to time based on the inputs/feedback received from the stakeholders.
- SARTHAQ will pave the way for our children and youth to meet the diverse national and global challenges of the present and the future and help them to imbibe 21st century skills along with India's tradition, culture and value system as envisioned in National Education Policy 2020.
- Implementation of SARTHAQ would benefit all stakeholders including 25 crore students, 15 lakh schools, 94 lakh teachers, Educational Administrators, Parents, and community as education is the backbone of an equitable and just society.

Robo Plant



- The scientists from Singapore have developed a technology to interact with Plant named “Robo Plant”.
- Remote-controlled Venus flytrap “robo-plants” and crops that tell farmers when they are hit by disease could become reality after scientists developed a high-tech system for communicating with vegetation.
- Researchers in Singapore linked up plants to electrodes capable of monitoring the weak electrical pulses naturally emitted by the greenery.
- The scientists used the technology to trigger a Venus flytrap to snap its jaws shut at the push of a button on a smartphone app.
- They then attached one of its jaws to a robotic arm and got the contraption to pick up a piece of wire half a millimetre thick, and catch a small falling object.
- The technology is in its early stages, but researchers believe it could eventually be used to build advanced “plant-based robots” that can pick up a host of fragile objects which are too delicate for rigid, robotic arms.
- By monitoring the plants’ electrical signals, we may be able to detect possible distress signals and abnormalities.
- Farmers may find out when a disease is in progress, even before full-blown symptoms appear on the crops.
- Technology could be particularly useful as crops face increasing threats from climate change.
- In 2016, a Massachusetts Institute of Technology team turned spinach leaves into sensors that can send an email alert to scientists when they detect explosive materials in groundwater. The team embedded carbon nanotubes that emit a signal when plant roots detect nitroaromatics — compounds often found in explosives.
- The signal is then read by an infrared camera that sends out a message to the scientists.

Sadabahar mango



- Shrikishan Suman, a farmer from Kota, Rajasthan, has developed an innovative mango variety which is a regular and round-the-year dwarf variety of mango called Sadabahar, which is resistant to most major diseases and common mango disorders.
- Sadabahar mango variety as the name suggests a regular and continuous fruit bearing variety, means it blooms throughout the year
- The fruits are sweeter in taste and it is developed as a dwarf variety which is suitable for kitchen gardening and can be grown in pots for some years. Besides, the flesh of the fruits, which is bourn round the year, is deep orange with sweet taste, and the pulp has very less fiber content which differentiates it from other varieties.
- The bountiful of nutrients packed in mango are immensely good for health.
- The innovative attributes of the variety have been verified by the National Innovation Foundation (NIF), India, an autonomous institution of the Department of Science & Technology
- NIF also facilitated an on-site evaluation of the variety through ICAR – Indian Institute of Horticultural Research (IIHR), Bangalore, and a field testing at SKN Agriculture University, Jobner (Jaipur), Rajasthan.
- It is in the process of being registered under the Protection of Plant Variety and Farmers Right Act and ICAR-National Bureau of Plant Genetic Resources (NBPGR), New Delhi.
- NIF has also facilitated the plantation of Sadabahar mango variety in the Mughal Garden at Rashtrapati Bhawan in New Delhi.
- For this evergreen variety developed, Shrikishan Suman was conferred the NIF's 9th National Grassroots Innovation and Traditional Knowledge Award and subsequently recognised at various other fora.

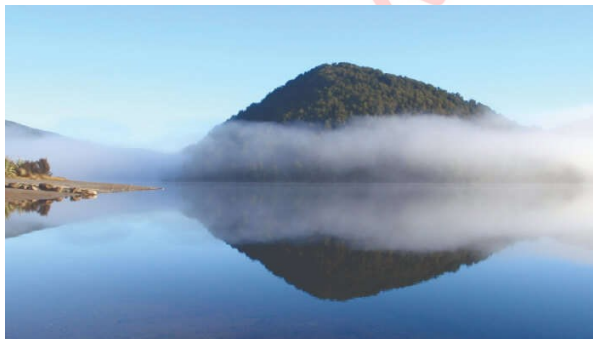
Non-uniformity of Himalayas foresees significantly large earthquake events



- Scientists have found that the Himalayas are not uniform and assume different physical and mechanical properties in different directions – a property present in crystals called anisotropy which could result in significantly large earthquake events in the Himalayas.

- The NW region of India, an area covering Garhwal and Himachal Pradesh, has been hit by four destructive moderate to great earthquakes since the beginning of the 20th century -- the Kangra earthquake of 1905, the Kinnaur earthquake of 1975, the Uttarkashi earthquake of 1991, and the Chamoli earthquake of 1999.
- These seismic activities manifest large-scale subsurface deformation and weak zones, underlining the need for deeper insights into the ongoing deformation beneath these tectonically unstable zones.
- Researchers from Wadia Institute of Himalayan Geology (WIHG), Dehradun, an autonomous institute under the Department of Science and Technology, Government of India, & Indian Institute of Technology Kharagpur (IIT KGP), namely Dr. Sushil Kumar, Scientist 'G', WIHG; Shubhasmita Biswal, Researcher, WIHG & IIT KGP; William Mohanty, Professor, IIT KGP, and Mahesh Prasad Parija, Ex-Researcher, WIHG used the data from WIHG to show that The North-West Himalayan region exhibits a peculiar characteristic present in crystals.
- The joint study using seismic waves from 167 earthquakes recorded by 20 broadband seismic stations deployed in the Western Himalaya suggested that the major contribution of the anisotropy is mainly because the strain induced by the Indo-Eurasia collision (going on since 50 million years) and deformation due to the collision is found to be larger in the crust than in the upper mantle.
- It has been recently published in 2020 in the Journal 'Lithosphere (GSA)'.
- The inhomogeneity along the Himalayas influences the stressing rate is because of variation in the geometry of the Main Himalayan Thrust (MHT) system, and it controls the rupture size during the earthquake.
- This lack of homogenous physical and mechanical properties of the Himalayas could help explore new perspectives about deformations taking place at the Himalaya-Tibet crustal belt involved in the formation of the Himalayan Mountains.

Water in most lakes is unfit for drinking



- A report on the quality of water in 106 lakes in Bengaluru Urban and Rural districts published by non-government organisation ActionAid India found that the water in none of the lakes sampled was fit for drinking or bathing.
- ActionAid consolidated and analysed lake sample collection findings by the Karnataka State Pollution Control Board (KSPCB) for a 24-month period between January 2019 and December 2020.
- The data was consolidated on the basis of Water Quality Index (WQI) under different classes. Most of the lakes fell either in Class 'D' category, which is fit for propagation of wildlife and fisheries, and others in 'E' category, where the water can only be used for irrigation and industrial cooling purposes.

- The top five lakes under the category of better performers were Devarakere Tank, Annaiappa Tank, Lalbagh Tank, Yedyur Lake and Kempambudhi Lake.
- Twelve lakes fell under the category of worst performers, including Shivapura Tank and Karihobanahalli Lake in Peenya, Gangondanahalli Lake and Chikkabanavara Lake in Dasarahalli, and Viswaneedam Lake.

The Toto tribe



- The Toto is a primitive and isolated tribal group residing only in a small enclave called Totopara in the Jalpaiguri of West Bengal, India.
- Totopara is located at the foot of the Himalayas just to the south of the borderline between Bhutan and West Bengal (on the western bank of Torsa river). Geographically the location is 89° 20'E 26° 50'N
- Totos were nearly becoming extinct in the 1950s, but recent measures to safeguard their areas from being swamped with outsiders have helped preserve their unique heritage and also helped the population grow.
- The total population of Totos according to 1951 census was 321 living in 69 different houses at Totopara.
- Anthropologists agree that the Toto culture and language is totally unique to the tribe, and is clearly distinguished from the neighbouring Rajbongshis tribes.
- The Totos are considered as Mongoloid people, with flat nose, small eye, broad and square cheeks, thick lips and small eyes and black iris.
- Their complexion is rather on the darker side, which reflects their nearness to the equator.
- They are generally endogamous and marry within their own tribe.
- They are generally divided into 13 exogamous clans or groups of families from which they choose to marry.
- They do not marry anyone related to them through their paternal uncles or maternal aunts.
- Toto language belongs to Tibeto-Burman family of sub-Himalayan group, as classified by Hodgson and Grierson.
- They do not have any script. Most of the young members can speak Bengali and Nepali, which are the mediums of instruction in the local schools.
- The area of entire Toto country called Totopara is 1,996.96 acres (8.0814 km²). It lies 22 km from Madarihat, the entrance of the famous Jaldapara National Park.
- The Toto localities of the village are sub-divided into six segments - Panchayatgaon, Mandolgaon, Subbagaon, Mitranggaon, Pujagaon and Dumchigaon. Totopara also has a settlement of Nepali-speaking people.

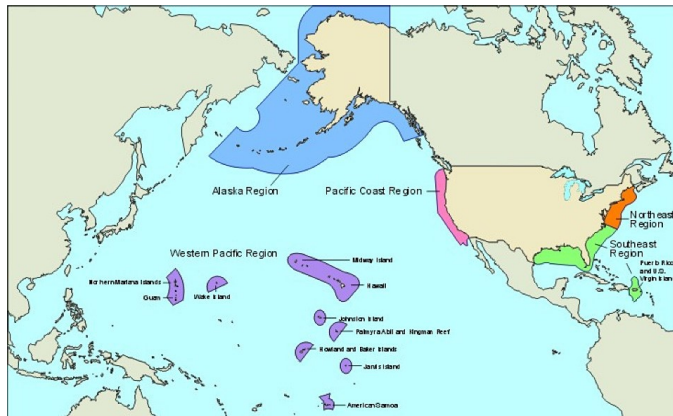
- Toto family is patrilocal in nature dominated by nuclear type.
- However, joint family is not rare. Monogamy is common form of marriage among the Toto but polygamy is not prohibited.
- If a man's wife dies, he may marry the deceased wife's younger sister, but a woman cannot marry her deceased husband's brother.
- On the death of a spouse, the husband or wife must remain single for twelve months before he or she is free to remarry.
- There are various ways of acquiring mates viz., (1) marriage by negotiation (Thulbehoea), (2) marriage by escape (Chor-behoea), (3) marriage by capture (Sambehoea) and (4) love marriage (Lamalami). There is no custom of divorce among the Totos.
- They define themselves as Hindus, but the Totos have two main gods whom they worship:
 - Ishpa - He is supposed to live in the Bhutan hills, and causes sickness when displeased.
 - The Totos offer him animal sacrifices and Eu.
 - Cheima - She keeps the village and its people safe from troubles and sicknesses.
 - She is also offered rice, fowls and Eu.
 - The Totos have no priests and offer their worship and sacrifices on their own.
 - Ishpa is worshipped in the open outside the house and Cheima inside the house.

7th FLEET



- It is the largest of the US Navy's forward deployed fleets. According to its website, "at any given time there are roughly 50- 70 ships and submarines, 150 aircraft, and approximately 20,000 Sailors in Seventh Fleet", which is commanded by a 3-star Navy officer.
- India had a close encounter with the 7th fleet during the 1971 war with Pakistan.
- According to military historian Srinath Raghavan, US President Richard Nixon and Henry Kissinger "believed that there was an outside chance for a cease fire before the Pakistan army caved in on the eastern front".
- Nixon instructed his Chief of Navy "to assemble an impressive naval taskforce and move it off the coast of South Vietnam, in to the Malacca Straits, and onward to the Bay of Bengal".
- Task Group 74 included the largest aircraft carrier in the US navy, the USS Enterprise

Exclusive economic zone (EEZ)



- According to UNCLOS, the EEZ “is an area beyond and adjacent to the territorial sea, subject to the specific legal regime” under which “the rights and jurisdiction of the coastal State and the rights and freedoms of other States are governed by their respective provisions of this Convention”.
- As per India’s Territorial Waters, Continental Shelf, Exclusive Economic Zone and Other Maritime Zones Act, 1976, the EEZ of India “is an area beyond and adjacent to the territorial waters, and the limit of such zone is two hundred nautical miles from the base line”.
- India’s “limit of the territorial waters is the line every point of which is at a distance of twelve nautical miles from the nearest point of the appropriate baseline”.
- Under the 1976 law, “all foreign ships (other than warships including sub-marines and other under water vehicles) shall enjoy the right of innocent passage through the territorial waters”, innocent passage being one that is “not prejudicial to the peace, good order or security of India.”