Current Events

September 2022

The download for Current Affairs for Recruitment Test (RTs) exams of UPSC, including ALC, LEO, APFC, EPFO EO/AO, Admin Officer, Store Officer, Deputy Director, and Investigator Grade-I is available.

The Current Events are tailored to the latest RTs trends and requirements of UPSC. To optimize exam performance, focus on the following key points:

- Cover current events from the past 18 months only, up to the date of the exam. For periodic events, such as the Budget, Economic Survey, Nobel Prize, or Tournaments, refer to only the latest ones. For instance, for an April 2023 exam, study the 2023 budget, not the 2022 budget.
- The UPSC RT exam is factual, so don't delve into details or implications.
- The Return on Investment (ROI) for studying current affairs is generally low. Therefore, devote an appropriate amount of time to them while prioritizing other topics that have a higher ROI. For instance, studying 100 pages of current affairs may result in solving only 5 questions, while studying 100 pages of Polity could yield 14-15 questions.
- A few questions will always be unsolvable, no matter how much you've studied. Don't get discouraged by them, as they won't affect your selection.
- Based on experience, you can expect to answer approximately 60-70% of question in exam, from these concise current affairs booklets.
- Current affairs for UPSC RT exams are purely factual, so self-study is better than coaching classes. In fact, coaching classes are counterproductive, as a teacher may only cover 10 events in 60 minutes, while you can cover 35-40 events in the same time frame.

Finally, note that these files are specifically prepared for RT exams of UPSC and should not be used for Civil Services Preliminary exam (GS Paper 1).

If you want to report any correction/error/feedback, you are welcome at **contact@humanperitus.com.** We will check and respond within 1 working day.

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1. Sports and Games

US Open 2022 Winners
Tennis Tournament US Open 2022 has been concluded. US Open is a hard-court tennis Grand Slam tournament that is held once every year. It was founded in 1881.

List of the winners are given below:

Category	Winner	Runner Up
Men's Singles	C. Alcaraz Garfia (*Spain*)	C. Ruud (*Norway*)
Women's Singles	I. Świątek (*Poland*)	O. Jabeur (*Tunisia*)
Men's Doubles	R. Ram & J. Salisbury	W. Koolhof & N. Skupski
Women's Doubles	K. Siniaková & B. Krejčíková	C. McNally & T. Townsend
Mixed Doubles	S. Sanders & J. Peers	K. Flipkens & É. Roger-Vasselin

Anishka Biyani wins Gold medal in Rapid Chess Championship held in Kuala Lumpur
6-year-old Anishka Biyani has won gold medal in the Malaysian Age Group Rapid Chess Championship at Kuala Lumpur, Malaysia.

Suresh Raina has announced his retirement from all formats of Cricket
Indian cricketer Suresh Raina has announced his retirement from all forms of cricket.

Neeraj Chopra wins prestigious Zurich Diamond League Final 2022 in Switzerland
Tokyo Olympics javelin throw champion Neeraj Chopra has become the first Indian to win the prestigious Zurich Diamond League Final 2022 in Switzerland with best throw of 88.44m. Jakub Vadlejch from Czech Republic was the runner up.

Sikkim is set to host its first ever Ranji Trophy Match
Sikkim State is set to host its first ever Ranji Trophy match after receiving the go-ahead from the BCCI. It has received BCCI approval to host Ranji Trophy matches in Sikkim, after having met the standards required for hosting the first-class tournament.

The *Ranji Trophy* is a domestic first-class cricket championship played in India between multiple teams representing regional and state cricket associations. The Ranji Trophy is founded by the Board of Control for Cricket in India (BCCI), was named after one of India's first test cricketer, Ranjitsinhji, who played for England and Sussex. Note that, Ranjitsinhji known as 'Father of Indian cricket', never actually played for India. Note that, Madhya Pradesh won the 2021–22 Ranji Trophy.

Other Domestic Cricket Tournaments
- *Duleep Trophy:* Named after Kumar Shri Duleepsinhji of Nawanagar, the Duleep Trophy is a domestic first-class cricket competition in India whose first edition was played in 1961-62.
- *Vijay Hazare Trophy:* Vijay Hazare Trophy is a limited overs domestic competition that involves different state teams from India to fight against each other for the title and is named after Prominent Indian Batsman-Vijay Hazare.
- *Deodhar Trophy:* The Deodhar Trophy is a List-A domestic fifty-over competition annually conducted in India, having first started in the 1973-74 season.

- *Irani Cup:* On completion of 25 years of the Ranji Trophy Championship, The BCCI inaugurated the Irani Trophy in the name of Late Z.R. Irani in 1960. Irani Cup sees a match annually between the Ranji Trophy champions of the preceding year and rest of Indian team.
- *Syed Mushtaq Ali Trophy:* Introduced in the year 2008-09, the Syed Mushtaq Ali Trophy is a Twenty-20 cricket domestic championship, organized by BCCI, among the teams from Ranji Trophy.

India won the South Asian Football Federation (SAFF) U-17 Championship
The Indian football team has won the South Asian Football Federation (SAFF) U-17 Championships title (held in Colombo, Sri Lanka) by defeating Nepal. The SAFF Championship, also called the South Asian Football Federation Cup is the main football competition of the Men's national football teams governed by the South Asian Football Federation.

Roger Federer announced his retirement from Tennis
Switzerland Tennis player Roger Federer has announced his retirement from the sport. He is popularly known as GOAT of the Sports, i.e., '*Greatest of All Time*'. His 20 titles break down as follows: 8 at Wimbledon, 6 at the Australian Open, 5 at the US Open, and 1 at the French Open. He won 5 straight US Open titles – no one else, man or woman, has done so in singles in the Open Era. He also won 5 consecutive Wimbledon crowns from 2003 to 2007. He was the Gold medallist at 2008 Beijing Olympics.

Bajrang Punia wins bronze medal at World Wrestling Championships
Indian wrestler Bajrang Punia has won a bronze medal in the Men's 65 kg in the World Wrestling Championships 2022 held in Belgrade, Serbia. This was his 4th medal at the world championships. Also, Commonwealth Games champion Vinesh Phogat won a bronze medal in Women's 53kg.

United World Wrestling (UWW) is the international governing body for the sport of '*amateur wrestling*'; its duties include overseeing wrestling at the Olympics.

India to host first MotoGP World Championships race in 2023
India will host its first MotoGP World Championships race at the Buddh International Circuit in Greater Noida in 2023. The track has already hosted Formula -1 Indian Grand Prix, held for three consecutive years from 2011 till 2013, before it was discontinued due to financial, tax and bureaucratic hurdles. *Moto GP* is the premier motorcycle racing event held on road circuits under the Fédération Internationale de Motocyclisme (FIM).

The FIM, founded in 1904, is the governing body for motorcycle sport and the global advocate for motorcycling. The FIM is an independent association formed by 103 National Federations throughout the world. It is recognised as the sole competent authority in motorcycle sport by the International Olympic Committee (IOC). The FIM was the first international sports federation to impose an Environmental Code in 1994.

2. Science and Technology

XR Technology

Ministry of Electronics and Information Technology (MeitY) Startup Hub and US Company Meta have collaborated to accelerate XR technology Startups in India. MeitY Startup Hub is a national platform focused on promoting technology innovation, Startups, and creation of intellectual properties.

- *Extended Reality*, or XR refers to all real-and-virtual combined environments and human-machine interactions generated by computer technology. XR is an umbrella term that covers Virtual Reality (VR), Augmented Reality (AR), Mixed Reality (MR).
- *Augmented Reality (AR):* In augmented reality, virtual information and objects are overlaid on the real world. This experience enhances the real world with digital details such as images, text, and animation. You can access the experience through AR glasses or via screens, tablets, and smartphones. This means users are not isolated from the real world and can still interact and see what's going on in front of them. The most well-known examples of AR are the Pokémon GO.
- *Virtual Reality (VR):* In contrast to augmented reality, in a virtual reality experience, users are fully immersed in a simulated digital environment. Individuals must put on a VR headset or head-mounted display to get a 360 -degree view of an artificial world that fools their brain into believing they are, e.g., walking on the moon, swimming under the ocean or stepped into whatever new world the VR developers created.
- *Mixed Reality (MR):* In mixed reality, digital and real-world objects co-exist and can interact with one another in real-time. This is the latest immersive technology and is sometimes referred to as hybrid reality. It requires an MR headset and a lot more processing power than VR or AR. For example, Microsoft's HoloLens allows you to place digital objects into the room you are standing in and give you the ability to spin it around or interact with the digital object in any way possible.

Government approves Tejas Mark-2 Project

The Cabinet Committee on Security (CCS) has approved Tejas Mark-2 Project. It is an advanced version of Tejas Light Combat Aircraft (LCA) – Tejas 2.0.

Tejas is a single engined, light weight, highly agile, multi-role supersonic fighter jet designed by Aeronautical Development Agency under DRDO and Hindustan Aeronautics Limited. Tejas Mark-2 has been described as a 4.5-generation machine that will have 70% indigenisation. It will be fitted with more powerful GE-414 engines, giving it a longer combat range and greater capacity to carry weapons than existing the Tejas Mark-1.

Indian Navy commissions INS Vikrant – India's first indigenous Aircraft Carrier

Indian Navy has commissioned the country's first indigenous aircraft carrier Indian Naval Ship (INS) Vikrant at Cochin Shipyard Limited (CSL). With the commissioning, India has entered into a select band of Nations having niche capability to indigenously design and build an Aircraft Carrier and real testimony to the Nation's resolve for self-reliance and 'Make in India'.

INS Vikrant is designed by Indian Navy's in-house Warship Design Bureau (WDB) and built by Cochin Shipyard Limited, a Public Sector Shipyard under the Ministry of Ports, Shipping & Waterways, Vikrant has been built with state-of-the-art automation features and is the largest ship ever built-in maritime history of India.

Indian Navy also unveiled new Naval Ensign (*Nishaan*), doing away with the colonial past and befitting the rich Indian maritime heritage. The new ensign is dedicated to Chhatrapati Shivaji. An *Ensign* is a national flag which

is displayed on ships and aircraft, often with the special insignia of a branch or unit of the armed forces. The present ensign carries the Saint George's Cross with the Tricolour in the canton (top left corner of flag).

DRDO conducts test flights of VSHORADS Missile successfully
DRDO has conducted two successful test flight of Very Short-Range Air Defence System (VSHORADS) missile from a ground based portable launcher at the Integrated Test Range, Chandipur, off the coast of Odisha.

VSHORADS is a Man Portable Air Defence System (MANPAD) designed and developed indigenously by DRDO. It can neutralise low altitude aerial threats at short ranges. It is propelled by a dual thrust solid motor and incorporates miniaturized Reaction Control System (RCS) and integrated avionics.

ISRO plans to launch 200th Rohini Sounding Rockets – use for atmospheric studies
ISRO is looking forward for the 200th successful launch of the Rohini RH-200 sounding rocket in a row. The Rohini sounding rocket family is used by the ISRO for atmospheric studies. RH-200 is a two-stage rocket capable of climbing to a height of 70 km bearing scientific payloads. The '*200*' in the name denotes the diameter of the rocket in mm. Other operational Rohini variants are RH-300 Mk-II and RH-560 Mk-III.

Sounding rockets are one or two stage solid propellant rockets used for probing the upper atmospheric regions and for space research. Sounding rockets take their name from the nautical term "to sound," which means to take measurements.

NITI Aayog releases ACC Energy Storage in India Report
NITI Aayog has released the "Need for Advanced Chemistry Cell (ACC) Energy Storage in India" Report. This is the last in a 3-report series designed to build awareness of India's supportive programme on ACC battery storage, most importantly the PLI scheme for battery cell manufacturing.

Ethereum blockchain upgrade to software 'Merge' to reduce energy usage
Ethereum blockchain has been upgraded to a software called '*Merge*' aimed at drastically reducing its energy usage. It is the crypto world's biggest and most ambitious software upgrade to date. It is an update to the Ethereum blockchain, which moves it from the current proof-of-work (PoW) consensus mechanism to the more environment-friendly proof-of-stake (PoS) system.

Ethereum is a technology for building apps and organizations, holding assets, transacting and communicating without being controlled by a central authority, i.e., decentralized approach. Ethereum was conceived in 2013 by programmer Vitalik Buterin. Ethereum has its own cryptocurrency, *Ether*, which is used to pay for certain activities on the Ethereum network.

A *blockchain* is a database of transactions that is updated and shared across many computers in a network. Every time a new set of transactions is added, it is called a "block" – hence the name blockchain. Most blockchains are public, and you can only add data, not remove.

China successfully cloned wild Arctic Wolf first time in the world
China has successfully cloned a wild Arctic Wolf for the first time in the world. The Arctic wolf (white wolf or polar wolf) is native to the High Arctic tundra of Canada's Queen Elizabeth Islands.

Cloning is the process of producing genetically identical copies of a biological entity (*genes, cells, tissues and even entire organisms*). The copied material, which has the same genetic makeup as the original, is referred to as a clone. Despite having the same genetic material clones do not always look identical. This is because the environment also plays a role in deciding the physical feature of an organism. In mammals including humans, identical twins (*monozygotic twins*) are natural clones. These twins are produced when a fertilized egg splits, creating two or more embryos that carry almost identical genetic material.

Quantum Networks
The IIT Madras has joined the IBM Quantum Network and has become the first Indian institute to do so. This network aims to advance quantum computing (computing based on principles of quantum theory) skills development and research in India.

Quantum Networks also known as the quantum internet is an internet network that makes use of the properties of photons to transmit data. It allows quantum devices to exchange information within a particular environment that harnesses the principles of quantum mechanics.

India's First Lithium Cell Plant Manufacturing Facility launches in Tirupati
India's first Lithium Cell Plant manufacturing facility will be launched in Tirupati, Andhra Pradesh. This state-of-the-art facility has been set up by the Chennai based Munoth Industries Limited. The facility is located in one of the two Electronics Manufacturing Clusters set up in Tirupati, Andhra Pradesh.

India's largest lithium-ion battery plant is in Gujarat, and it started production in May 2022. It produces batteries for automobiles and energy storage applications.

CAR-T Cell therapy to treat Cancer
Researchers have concluded the first phase of clinical trials on patients of the indigenously developed CAR-T technology for blood cancer treatment. The trials began in May 2021 at the Tata Memorial Centre (TMC). Note that, this is the first time that gene therapy indigenously developed by researchers at the Indian Institute of Technology (IIT), Bombay, was tested on patients in India. Research is funded under National Biopharma Mission (NBM) by Biotechnology Industry Research Assistance Council (BIRAC).

CAR-T therapy is a way to get immune cells called T cells (a type of white blood cell that attacks foreign pathogens) to fight cancer by editing them in the lab so they can find and destroy cancer cells. T cells are taken from patient's blood and are changed in lab by adding a gene for a man-made receptor (called CAR).

Conversion Therapy
The National Medical Commission, apex regulatory body of medical professionals, has declared Conversion Therapy to be counted among professional misconduct. Note that, based on Madras High Court order, it is enlisted under the Indian Medical Council (Professional Conduct Etiquettes and Ethics) Regulations, 2003.

Conversion Therapy, also known as Reparative therapy, covers the emotional or physical therapy used to "cure" or "repair" a person's attraction to the same sex, or their gender identity and expression. But it lacks medical evidence and can turn dangerous, targeting the LGBTQ+ youth. This can lead to depression, anxiety, drug use, homelessness, and suicide.

ISRO successfully tested IAD Technology for application in Planet Entry
The Indian Space Research Organization (ISRO) has successfully tested the Inflatable Aerodynamic Decelerator (IAD) that will be used for landing payloads on Mars or Venus in the future. The IAD is being developed for aerodynamically decelerating an object descending through the atmosphere. The technology was folded and kept inside the payload bay of a sounding rocket that was launched from TERLS Thumba.

President inaugurates ISRO's Cryogenic Manufacturing Facility in Bengaluru
President of India has inaugurated Hindustan Aeronautics Limited's state-of-the-art Integrated Cryogenic Engine Manufacturing Facility (ICMF) in Bengaluru. The facility will cater to the entire Rocket Engine Manufacturing under one roof for ISRO. The facility will boost self-reliance in manufacturing of Hi-thrust Rocket engines.

Cryogenics is the study of the production and behaviour of materials at extremely low temperatures (below -150 degree C) to lift and place heavier objects in space. A cryogenic engine provides more force with each kilogram of cryogenic propellant it uses compared to other propellants, such as solid and liquid propellant rocket engines, and is more efficient.

Cryogenic Fuels: Fuels that are required to be stored at extremely low temperatures in order to maintain them in a liquid state are Cryogenic Fuels. These fuels are used in machinery that operates in space (e.g., rocket ships and satellites) because ordinary fuel cannot be used because of the very low temperatures often encountered in space, and due to the absence of an environment that supports combustion (on Earth, oxygen is abundant in the atmosphere, whereas human-explorable space is a vacuum where oxygen is virtually non-existent). Cryogenic fuels most often constitute liquefied gases such as liquid hydrogen.

Government launches indigenously developed special aviation fuel – AVGAS 100 LL
The Central Government has launched indigenously developed AVGAS 100 LL, a special aviation fuel, meant for piston engine aircraft and unmanned ariel vehicles. The fuel has been developed by Indian Oil Corporation.

AVGAS 100LL: Avgas or aviation gasoline is an aviation fuel that powers spark-ignited combustion engines in aircraft. It is different from conventional gasoline (petrol) used in motor vehicles as it contains Tetraethyl Lead, which is a highly toxic substance used to prevent engine knocking (*premature detonation*).

China successfully tested first fully solar-powered semi-satellite Drone
China's first fully solar-powered unmanned aerial vehicle (Named the "*Qimingxing-50*", or "*Morning Star-50*") has successfully completed its maiden test flight with all onboard systems functioning optimally. Drone can operate in near-space – 20 km to 100 km above the Earth's surface – making them capable of carrying out satellite-like functions.

Reliance develops cutting-edge Algae to Fuel Technology
Reliance Industries Limited, at its Jamnagar facility (GJ), has developed cutting-edge algae-to-fuel technology.

Algae can be used to synthesize large volumes of oil (20 times more than that of mustard per acre), grow fast (10 times quicker than terrestrial plants) and capture Carbon dioxide (CO_2). It used catalytic hydrothermal liquefaction technology to convert algae biomass to bio-oil.

Hydrothermal Liquefaction Technology: Reliance has been successfully running large algae raceway ponds to convert sunshine, CO_2 and seawater into bio-oil. It also displayed the utilisation of catalytic hydrothermal liquefaction technology to convert algae biomass to oil. Under this process, water is used as solvent under high temperature and pressure to extract oil from the biomass. The benefits of this technology include direct utilisation of wet biomass without any need for drying and conversion of every organic fragment of biomass into oil and without any wastage.

UIDAI introduces fingerprint liveliness security
The Unique Identification Authority of India (UIDAI) has introduced a new security feature to the Aadhaar Enabled Payment System (AEPS). The security feature called *'fingerprint liveliness'* is expected to help prevent the use of fake fingerprints to withdraw money through AEPS.

Liveness detection in biometrics is the ability of a system to detect if a fingerprint or face (or any other biometrics) is real (from a live person present at the point of capture) or fake (from a spoof artefact or lifeless body part).

Aadhaar Enabled Payment System (AePS) is a bank led model which allows online interoperable financial inclusion transaction at Point-of-Scale (MicroATM) through the business correspondent of any bank using the Aadhaar authentication. The only inputs required for a customer to do a transaction under this scenario are: Bank Name; Aadhaar Number; Fingerprint captured during enrollment

AePS allows you to do 6 types of transactions – (a) Cash Deposit/Withdrawal, (b) Balance Enquiry, (c) Mini Statement, (d) Aadhaar to Aadhaar Fund Transfer, (e) Authentication and (f) BHIM Aadhaar Pay.

eSIM
eSIMs have come again in the news as the new Apple iPhone 14 will be completely dependent on eSIMS in the US.

An *eSIM* is an embedded SIM, essentially the same hardware as a regular SIM card chip, but now a permanently embedded part of the motherboard of a watch or smartphone. eSIMs were first established in 2012, but despite their futuristic use cases, have not completely made physical SIMs obsolete yet.

IDRBT develops LoRa technology to provide last mile access to banking services
Institute for Development and Research in Banking Technology (under the RBI) has developed a new low-cost financial network to take banking to remote areas by using Long Range Radio technology (LoRa technology). Note that, IDRBT is the first in the world to develop this network based on LoRa (Long Range Radio) technology.

LoRa technology is a wireless modulation technique in the physical layer, allowing long-range communication. The technology uses dedicated radios, which are not usually present in end-user devices, limiting interferences from other devices. Banks can use this as their own dedicated private network instead of using a third-party network which is presently based either on a satellite link or wired (fibre). The technology is useful to provide accessibility of banking services to remote hilly and forest areas without satellite signal.

DGCA raises concerns over 5G C-Band Spectrum to interferes with radio altimeter
India's Aviation safety regulator, Directorate General of Civil Aviation, has written to the Telecom Department flagging concerns over the likely interference of the 5G C-Band spectrum with aircraft radio altimeters.

A *radio altimeter* is an instrument used in aviation that provides information on the distance between the ground and the aircraft. The altimeters also operate in C-Band spectrum. The high bandwidth assured by C-Band offers a convenient spot for rolling out 5G services.

Coffee-Ring Effect
A Study published in the journal '*Soft Matter*' talks about Coffee-ring effect when applied to the drying of biologically relevant fluids like blood can help diagnose anaemic and hyperlipidaemic conditions.

Coffee-Ring Effect: It occurs when a drop of spilt coffee dries up, the outermost edge of the dried drop is a little darker than the centre, forming a darker 'ring'. This is caused by the outward drift of suspended coffee particles from the centre, causing a denser, darkened rim. Researchers from the IIT Madras, have shown that after reaching the rim, as the drop dries, some of the particles undergo an inward drift too. This research has applications in agriculture, forensic science and even disease diagnosis.

Toyota launches India's Flex Fuel Vehicle (FFVs)
Toyota has launched India's first 'flex fuel' car. A *flexible-fuel* vehicle is an internal combustion engine capable of operating on gasoline as well as a blend of gasoline and ethanol. It means they are not confined to a certain kind of fuel and can flexibly run on a blend of petrol and ethanol up to 83%. As of now, Flex Fuel Vehicles are available in USA, Brazil, and Canada.

DST to set up first-of-its-kind Dark Sky Reserve in Hanle, Ladakh
In a first-of-its-kind initiative, the Department of Science & Technology (DST) has announced the setting up of India's first Dark Sky Reserve in Hanle, Ladakh. This will be done through the partnership of Ladakh Autonomous Hill Development Council (LAHDC), Leh, and the Indian Institute of Astrophysics (IIA), Bengaluru. It will be one of the world's highest-located sites for optical, infra-red, and gamma-ray telescopes.

A *dark-sky reserve* is an area, usually surrounding a park or observatory, that restricts artificial light pollution. The purpose of the dark-sky movement is generally to promote astronomy and avoid interference during astronomical observations. It is the International Dark Sky Association, a U.S.-based non-profit organization, that designates places as International Dark Sky Places, Parks, Sanctuaries and Reserves, depending on the criteria they meet. This will be the first such sight in India.

Einstein Ring
James Webb Space Telescope has taken a picture of the 'Einstein Ring'. The image was captured using the Telescope's MIRI (Mid-Infrared Instrument). An "*Einstein Ring*" is created when the light from a galaxy or star passes by a massive object en-route to the Earth. Due to the effects of gravitation (called *gravitational lensing*), the light is diverted, which makes it seem to come from different places. If the light source, lens, and observer are all in perfect alignment, the light appears as a ring. The first example of an "Einstein Ring" was discovered in 1988. The bending of light was predicted by Alert Einstein. An "Einstein Ring" is a special case of gravitational lensing.

NASA's Sonification Project
NASA is translating the images and data obtained using James Web Space Telescope into Sound. The process is called Sonification. With this technique, astronomers can translate data — ranging from stars' brightness to the strength of gravitational waves — into sound. The technique vitally makes such information accessible to those who are blind or have low vision. NASA did so for Cosmic Cliffs in the Carina Nebula.

HCI with ISRO launches India's first Commercial Satellite Broadband Service

Hughes Communications India (HCI), in collaboration with the Indian Space Research Organization (ISRO), has officially launched its first High Throughput Satellite (HTS) broadband internet service in the country.

High-Throughput Satellite (HTS) differs from a conventional satellite in the sense that it increases capacity when using the same amount of orbital spectrum while simultaneously reducing the cost per bit. HTS uses spot-beam to perform its operations, unlike traditional satellites which use a broad single beam or few beams. Spot beam technology allows focus on a limited area and provides seamless and fast connectivity.

India's Regional Navigation Satellite System – NavIC

Government of India is pushing tech giants to make smartphones compatible with India's NavIC navigation system. It is India's Regional Navigation Satellite System (IRNSS) similar to US GPS operationalized in 2018. It provides accurate domestic navigation services to a 1500 Km radius over the sub-continent. IRNSS consists of eight satellites, three satellites in geostationary orbit and five satellites in geosynchronous orbit.

Navigation with Indian Constellation (NavIC): IRNSS (Indian Regional Navigation Satellite System) is an independent Regional Navigation Satellite System being developed by India. It is designed to provide accurate position information service to users in India as well as the region extending up to 1500 km from its boundary, which is its primary service area. It provides 2 types of services, namely, Standard Positioning Service (SPS) which is provided to all the users and Restricted Service (RS), which is an encrypted service provided only to the authorized users. The satellite is functional since April 2018.

NISAR: ISRO and NASA are working together to launch a joint radar satellite for Earth observation named NISAR (*NASA-ISRO Synthetic Aperture Radar*). The NISAR mission will collect data vital to tackling the climate crisis. ISRO has been getting Deep Space Network Antenna support from NASA in its Missions such as Chandrayaan-1, Mars Orbiter Mission (MOM) and Chandrayaan-2 mission and will continue availing support for our Chandrayaan-3 mission.

CERT-In issues safety advisory against – Trojan virus – SOVA

The Indian Computer Emergency Response Team (CERT-In) has issued a detailed safety advisory against a new mobile banking 'Trojan' virus, SOVA, prowling in Indian cyberspace, which stealthily encrypts an android phone for ransom. This malware captures user credentials when users access their bank accounts through net banking applications. This version of SOVA is targeting over 200 mobile applications and its attacks can result in 'large-scale' financial fraud.

CERT-In is an organisation of the Ministry of Electronics and Information Technology with the objective of securing Indian cyberspace. It was established in 2004. It is the nodal agency which deals with cybersecurity threats like hacking and phishing. The Information Technology (Amendment) Act 2008 designated CERT-In to serve as the national agency to perform certain functions.

3. Environment

Govt. sets new target of 40% reduction in PM2.5 concentration under NCAP
The Central Government has set a new target of a 40% reduction in particulate matter concentration in cities covered under the National Clean Air Programme (NCAP) by 2026, updating the earlier goal of 20 to 30% reduction by 2024.

PM2.5 are fine inhalable particles, with diameters that are generally 2.5 micrometers and smaller, and pose the greatest risk to health. The acceptable annual standard for PM2.5 is 40 micrograms per cubic metre.

NCAP: It was launched in 2019 to prepare a comprehensive mitigation action for prevention, control and abatement of air pollution. Under NCAP, city-specific action plans have been prepared which include measures for strengthening the air quality monitoring network, reducing vehicular and industrial emissions, increasing public awareness, etc. Note that, there are 131 non-attainment cities covered under the NCAP.

Swachh Vayu Sarvekshan: Ministry of Environment, Forest and Climate Change has launched Swachh Vayu Sarvekshan under National Clean Air Programme (NCAP). It will rank 131 cities in the country for implementing City Action Plans prepared under NCAP for reducing air pollution upto 40% by 2025-26. For this purpose, 131 cities are categorized into 3 groups based on population (population > 10 lakh, population between 3 to 10 lakh and population < 3 lakh).

African Cheetah to be introduced in Kuno National Park, MP
8 wild African Cheetahs (*5 Female and 3 Male*) from Namibia, were introduced in Kuno National Park (KNP), Madhya Pradesh under Project Cheetah. The information was given by the Cheetah Conservation Fund (CCF), an international not-for-profit organisation headquartered in Namibia.

Project Cheetah is world's first inter-continental large wild carnivore translocation project and is a part of the centrally Sponsored Scheme- 'Project Tiger' of India. It aims to introduce African cheetah in India.

Kuno National Park is in Sheopur district of Madhya Pradesh. It lies in North-West of Madhya Pradesh close to state border with Rajasthan thus effect of Rajasthan vegetation can be experienced in the forest of Kuno.

India hosts 9th Session of ITPGRFA
India has hosted the 9th Session of the Governing Body (GB9) of the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA). The governing body is the highest organ of ITPGRFA and composed of representatives of all contracting parties. Its basic function is to promote the full implementation of the Treaty.

International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA): ITPGRFA, also known as Seed Treaty, is a major international agreement to conserve, use and manage Plant Genetic Resources for Food and Agriculture (PGRFA) around the world for benefit of people everywhere. It is a legally binding agreement that was adopted by the 31st session of Food and Agriculture Organization (FAO) in 2001 and entered into force in 2004.

Plant Genetic Resources for Food and Agriculture (PGRFA): Plant genetic resources are any plant materials, such as seeds, fruits, cuttings, pollen, and other organs and tissues from which plants can be grown. PGRFA include the traditional crop varieties and their wild relatives, modern cultivars, breeding lines etc. which provide food, feed for domestic animals, fibre, clothing, shelter, medicine and energy.

FAO releases document titled – Blue Transformation – Roadmap 2022-2030
The Food and Agriculture Organization (FAO) has released a document titled 'Blue Transformation - Roadmap 2022-2030. The document outlines a roadmap for the transformation of aquatic food systems, providing a compass for the FAO's work on aquatic food systems for the period 2022–2030. It aligns with the 2021 Declaration for Sustainable Fisheries and Aquaculture of the Committee on Fisheries (COFI) of the FAO and FAO's Strategic Framework 2022–2031.

Blue Transformation is a targeted effort by which agencies, countries and dependent communities, use existing and emerging knowledge, tools and practices to secure and sustainably maximize the contribution of Aquatic (both marine and inland) Food Systems (AFS) to food security, nutrition and affordable healthy diets for all.

Steps taken in India towards Blue transformation:
- *Pradhan Mantri Matsya Sampada Yojana (PMMSY)* aims to bring about ecologically healthy, economically viable, and socially inclusive development of the Fisheries sector of India.
- *River Ranching Programme* was introduced as special activity under PMMSY scheme for sustainably augmenting and enhancing the fish production and productivity.
- *Centrally Sponsored Scheme on Blue Revolution: Integrated Development and Management of Fisheries* focuses mainly on increasing fisheries production and productivity from aquaculture and fisheries resources, both inland and marine.
- *Fisheries and Aquaculture Infrastructure Development Fund (FIDF)* is a dedicated fund created for providing interest subvention for development of identified fisheries' infrastructure facilities.
- Inclusion of fishers and fish farmers under Kisan Credit Card (KCC) Scheme.
- *Matsya Setu Apps:* A self-learning app with species-wise/subject-wise online course modules explained by renowned aquaculture experts.
- *National Policy on Marine Fisheries, 2017* that provides the guidance to explore and sustainably use oceanic fishery resources in the exclusive economic zone of India.

IEA releases Breakthrough Agenda Report 2022 for greenhouse gas emissions
The Breakthrough Agenda Report 2022 was released by the International Energy Agency (IEA), the International Renewable Energy Agency (IRENA) and the UN Climate Change High-Level Champions, focusing on international collaboration to drive faster reductions in greenhouse gas emissions.

The Report assesses progress on reducing emissions in 5 key sectors – power, hydrogen, road transport, steel and agriculture. It is a first-of-its-kind annual progress report, requested by world leaders at the UN Climate Change Conference COP26 in November 2021 as part of the launch of the Breakthrough Agenda.

UNESCO releases World Water Development Report 2022
UNESCO has released the report titled – "The World Water Development Report of 2022 'Groundwater: Making the invisible visible'. It was officially launched by the UNESCO Director General at the 9th World Water Forum in Dakar, Senegal. It has encapsulated global concern over the sharp rise in freshwater withdrawal from streams, lakes, aquifers, and human-made reservoirs leading to water scarcity being experienced in different parts of the world.

WMO releases Global Ocean Observing System (GOOS) Report Card
World Metrological Organisation has released Global Ocean Observing System (GOOS) Report Card, 2022. The Report has been released annually since 2017 in partnership with Intergovernmental Oceanographic Commission of UNESCO (IOC-UNESCO) and other GOOS partners.

GOOS is a permanent global system for observations, modelling, and analysis of marine and ocean data. It highlighted biological observations for the first time and identifies gap in system. It pointed at inequality in operational services across oceans like Indian, Atlantic and Southern Ocean.

Digital Monitoring, Reporting and Verification Systems
With growing interest of countries to participate in carbon markets to meet their climate change goals, innovative Digital Monitoring, Reporting and Verification (D-MRV) are evolving to track reductions in greenhouse gas (GHG) emissions. Carbon markets are trading systems in which carbon credits are sold and bought.

D-MRV systems represent the first step in end-to-end digitalization of post-2020 carbon markets. The Systems are based on AI, machine learning, blockchain, smart sensors, drones etc.

India announces Innovation Roadmap of the Mission Integrated Biorefineries
India, at Global Clean Energy Action Forum at Pittsburgh, Pennsylvania, USA, has announced the launch of the "Innovation Roadmap of the Mission Integrated Biorefineries" developed by co-leads and active inputs from Brazil, Canada, European Commission and the United Kingdom. The Mission aims at greater international collaboration and the need for increased financing for Energy Research, Development, and Demonstration (RD&D) during the next 5 years to kickstart this objective and unleash a virtuous cycle of public and private investment. Mission Integrated Biorefineries (MIB) is the 7th mission under Mission Innovation (MI) which was launched in April 2022.

Mission Innovation is a global initiative catalyzing a decade of action and investment in Research, Development and Demonstration (RD&D) to make clean energy affordable, attractive and accessible for all. MI consists of 22 countries and the European Union. MIB aims at greater international collaboration and financing for Energy RD&D during the next five years. India is a founding member. Its target is to replace 10% of fossil-based fuels, chemicals and materials with bio-alternatives by 2030.

Adani Group commissioned World largest Hybrid Power Plant (Wind + Solar) in Jaisalmer
Adani Green has commissioned the world's largest 600 MW Solar and 150 MW Wind Power Project in Jaisalmer, Rajasthan. The plant has a power purchase agreement with Solar Energy Corporation of India (SECI). Also note that, in May 2022, AGEL operationalized India's first hybrid power plant with a capacity of 390 MW in Jaisalmer.

Hybrid Power Plants are those power plants which generate electricity from two or more sources, usually renewable, with one connection point. E.g., Solar + Wind, Solar + Hydraulic, Solar + Biomass etc.

18th Meeting of POPRC-18 held in Rome – Stockholm Convention
18th Meeting of the Persistent Organic Pollutants Review Committee to the Stockholm Convention (POPRC-18) was held in Rome, Italy. POPRC-18 aims to list each of these chemicals in Annex A (elimination), B (restriction) and/or C (unintended release) of the Stockholm Convention.

Stockholm Convention is an international environmental treaty that aims to eliminate or restrict the production and use of POPs or the substances that persist in the environment and pose risk to our health. The listed chemicals include a pesticide, a flame retardant and some plastic stabilizing substances.

MoEF&CC – USAID launches Trees Outside Forests in India Initiative
The Ministry of Environment, Forest, and Climate Change (MoEF&CC) and the U.S. Agency for International Development (USAID), has announced the launch of a new program, "Trees Outside Forests in India." The

program will expand tree coverage outside of forest lands to enhance carbon sequestration, support local communities, and strengthen the climate resilience of agriculture, thereby supporting global climate change mitigation and adaptation goals. The program will be implemented in seven states including Andhra Pradesh, Assam, Haryana, Odisha, Rajasthan, Tamil Nadu, and Uttar Pradesh.

Rule Curve
As per Tamil Nadu Water Resources Organisation, Mullaperiyar is first reservoir to have Rule Curve implemented in country. *Rule Curve* is a tabulation which specifies quantum of storage of water or empty space to be maintained in a reservoir during different times of year, based on the rainfall data for 35 years. Under Rule Curve method, water is not allowed to be stored to permissible maximum level at the time when reservoir receives huge inflows. It is part of core safety mechanism in a dam.

UNEP with Reef World Foundation launches Green Fin Hubs
The United Nations Environmental Programme (UNEP), along with UK-based charity Reef-World Foundation, has launched the Green Fins Hub. It is a global digital platform that aims to provide sustainable marine tourism a 'major boost'. The platform will help diving and snorkeling operators worldwide to make simple, cost-efficient changes to their daily practices by utilizing tried and tested solutions. It would also help them keep track of their annual improvements and communicate with their communities and customers.

Cloudbursts
Cloudbursts are defined by the amount of rainfall. According to the India Meteorological Department (IMD), 100 mm of rain in an hour is called a cloudburst. Usually, cloudbursts occur over a small geographical region of 20 to 30 sq. km. They occurred mostly over the rugged terrains of the Himalayas, the Western Ghats, and the North-Eastern hill States of India, because of terrain and elevation. A cloudburst occurs when moisture-carrying air moves up a hilly terrain, forming a vertical column of clouds known as '*cumulonimbus*' clouds.

TamiraSES project to restore ancient river – Thamirabarani in Tamil Nadu
District administration of Tirunelveli in Tamil Nadu along with Bengaluru-based non-profit organization – 'Ashoka Trust for Research in Ecology and the Environment (ATREE)' are using what they term as a 'hyper local' approach to restore one of south Asia's oldest rivers, the Thamirabarani. The first phase of a Detailed Project Report (DPR) prepared by ATREE was also launched on World Rivers Day (*25th September 2022*). The restoration project is called TamiraSES.

Ecological Niche
It has been observed that the ecological niche modelling helps to find new inhabitants for existing habitats. This has an important bearing on agriculture, as practices and crop choices that have worked well for centuries may no longer be ideal.

An '*ecological niche*' is the right set of environmental conditions under which an animal or plant species will thrive. A range of ecological niches can occur within an ecosystem. Biodiversity is the result of these niches being occupied by species that are uniquely suited to them. Desert plants, for example, are suited for dry, arid ecological niches because they have the ability to store water in their leaves.

Climate Tipping Points
A study published in the '*Science*' journal has stated that a rise of 1.5°C from pre-industrial levels can trigger multiple climate tipping points.

"Climate tipping points" are levels of ecological changes, if crossed, could spark a significant change in the way the Earth's systems operate, affecting oceans, weather and chemical processes, which could be irreversible and self-continuing even if there is no further warming. Some CTPs triggers include substantial sea level rise from melting ice sheets, shrinking of Amazon rainforest or corals and warming from carbon release due to melting of permafrost.

India submits updated NDC target to UNFCCC
India has formally submitted an updated Intended Nationally Determined Contribution (NDC) target to UNFCCC. The updated NDC is a step towards India's goal to reach net-zero emissions by 2070.

Earlier, India submitted its Intended Nationally Determined Contribution (NDC) to UNFCCC in October 2015. India's INDC (to be achieved primarily by 2030):
Original Target: A total of 40% of the installed capacity for electricity will be from non-fossil fuel sources.
New Target: 50% by 2030 (with help from international finance '*Global climate Fund*' and transfer of technology

Original Target: To reduce the emissions intensity of the GDP by 33-35% (from the 2005 level)
New Target: 45% of GDP by 2030

New target added:
- Propagating a sustainable way of living – mass movement for 'LIFE- Lifestyle for environment' using traditions and values of conservation.
- India promised an additional carbon sink of 2.5 to 3 billion tonnes of CO_2 equivalent, through additional forest and tree cover by the year 2030.

The *Nationally Determined Contribution (INDCs)* are the primary means for governments to communicate internationally the steps they will take to address climate change in their own countries. They are not legally binding. India is 3rd largest emitter however, its per capita emission is very low.

In an effort to battle climate change, the Government of India has made the following announcements at the COP26 summit in Glasgow:
1. India will achieve net zero emissions latest by 2070.
2. By 2030, India will ensure 50% of its energy will be sourced from renewable sources.
3. India will also reduce its carbon emissions until 2030 by a billion tonnes.
4. India will also reduce its emissions intensity per unit of GDP by less than 45%.
5. India would also install systems to generate 500 GW of renewable energy by 2030, a 50 GW increase from its existing target.

Net-zero, which is also referred to as carbon-neutrality, does not mean that a country would bring down its emissions to zero. That would be gross-zero, which means reaching a state where there are no emissions at all. Basically, net-zero is a state in which a country's emissions are compensated by absorption and removal of greenhouse gases from the atmosphere.

IRENA launches Global Alliance for Industry Decarbonization with major companies
International Renewable Energy Agency (IRENA) along with major companies (including Tata Steel) have launched Global Alliance for Industry Decarbonization (GAID) with the aim to accelerate net-zero ambitions and decarbonization of the industrial value chains. The first meeting of the Alliance is expected to be held at COP27 in Sharm El Sheikh in Egypt.

The International Renewable Energy Agency is an intergovernmental organization mandated to facilitate cooperation, advance knowledge, and promote the adoption and sustainable use of renewable energy. IRENA also coordinates Small Island Developing States (SIDS) Lighthouse Initiative for supporting the energy transition efforts of Small Island countries. India is the Founding Member of IRENA.

Climate Reparation
Pakistan has witnessed the worst flooding disaster in its history; therefore, it has begun demanding reparations, or compensation, from the rich countries that are mainly responsible for causing climate change. Note that, the UN Framework Convention on Climate Change (UNFCCC), the 1994 international agreement that lays down the broad principles of the global effort to fight climate change, explicitly acknowledges this differentiated responsibility of nations.

Climate Reparations refer to a call for money to be paid by the developed countries to the developing countries as a means of addressing the historical contributions that the Developed countries have made (and continue to make) toward climate change.

A first of its kind Global Registry launched to track Fossil Fuels
Climate campaigners have launched the world's first registry of fossil fuel reserves, production and emissions. A first-of-its-kind, it is a large-scale public database for tracking the world's fossil fuel production, reserves and emissions.

India participates in first-ever joint convening for clean energy – Global Clean Energy Action Forum
India has participated in the Global Clean Energy Action Forum-2022 held at Pittsburgh, Pennsylvania, USA. Global Clean Energy Action Forum (GCEA) is a first-ever joint convening of the 13th Clean Energy Ministerial (CEM 13) and the 7th Mission Innovation Ministerial (MI-7). India, being one of the founding members of the Clean Energy Ministerial (CEM) will be hosting CEM-14 in 2023 in Bengaluru along with its Presidency of G-20 in the same year.
Theme: *"Rapid Innovation and Deployment"*

Clean Energy Ministerial was established in December 2009 at the UN's Framework Convention on Climate Change conference of parties in Copenhagen. CEM is a high-level global forum to promote policies and programs that advance clean energy technology, to share lessons learned and best practices, and to encourage the transition to a global clean energy economy. The CEM is focused on 3 global climate and energy policy goals: Improve energy efficiency worldwide; Enhance clean energy supply; Expand clean energy access.

29 countries are part of CEM. India is also a member country. *Mission Innovation (MI)* is a global initiative catalysing a decade of action and investment in research, development and demonstration to make clean energy affordable, attractive and accessible for all. This will accelerate progress towards the Paris Agreement goals and pathways to net zero.

NTCA to relocate 5 Tigers to Madhav National Park to ensure genetic diversity
The National Tiger Conservation Authority (NTCA) has given the green signal to relocate 5 tigers from 3 National Parks of the state to Madhav National Park. The tigers will be brought from Panna, Bandhavgarh and Satpura National Parks to the Madhav National Park of Shivpuri. This is to ensure genetic diversity. Note that, earlier in January 2022, Government decided to develop Madhav National Park in Shivpuri district as a tiger reserve. M*adhav National Park* is located in Shivpuri District, Madhya Pradesh.

National Tiger Conservation Authority (NTCA) was established through Wildlife (Protection) Amendment Act, 2006 to provide statutory authority to Project Tiger.

Review Committee of Rotterdam Convention recommends Prior Informed Consent for 2 chemicals
The Chemical Review Committee has concluded its 18th meeting of the Rotterdam Convention's Chemical Review Committee (CRC 18) held at Rome, Italy. The Committee recommended for "Prior Informed Consent" (PIC) procedure under the Rotterdam Convention for international trade of 2 new hazardous pesticides — Iprodione and Terbufos.

In India, the use of these chemicals was permitted by the 2015 Anupam Verma committee report. The country is among the largest exporters of Terbufos. CRC 18 has also recommended two other pesticides, paraquat and methyl bromide, to be listed in Annex III.

World's first CNG Terminal to be built at Bhavnagar, Gujarat
Government has laid the foundation stone for the world's first CNG (Compressed Natural Gas) terminal at Bhavnagar in Gujarat. This is a three-year-old project that is expected to infuse Rs 4,000 crore in developing the existing port infrastructure at Bhavnagar. It is expected to be made operational by 2026.

The Bhavnagar port is in close vicinity to the Dholera Special Investment Region (SIR) and is expected to serve the industries that set up base in the region. It is already connected to the northern hinterland through a railway line that extends to the existing berths at the port.

India's first LNG Fuelled Green Truck unveiled at Pune
Blue Energy Motors has unveiled India's first LNG-fuelled green truck by launching a manufacturing plant at Chakan, Pune. Blue Energy Motors' trucks will be Liquified Natural Gas-fuelled, long-haul, heavy-duty trucks.

Liquefied Natural Gas Trucks Working: Heavy-duty Liquefied Natural Gas (LNG) vehicles work much like gasoline-powered vehicles with a spark-ignited internal combustion engine. The natural gas is super-cooled and cryogenically (at – 260 degrees F) stored in liquid form, usually in a tank on the side of the truck. LNG is typically a more expensive option than compressed natural gas (CNG) and is most often used in heavy-duty vehicles to meet longer range requirements. Because it is a liquid, the energy density of LNG is greater than CNG, so more fuel can be stored on board the vehicle.

Zombie Ice
It was reported that the Zombie ice from Greenland may raise the sea level by 10 inches. *Zombie Ice* is the 'doomed ice' that, while still attached to thicker areas of the ice, is no longer getting replenished by parent glaciers receiving less snow. Without replenishment, the doomed ice is melting from climate change and will inevitably melt and raise seas.

4. Schemes and Programmes

Govt. inform about the delay of SEED Scheme
Government has informed that the Scheme for Economic Empowerment of DNTs (SEED) for the welfare of De-notified, Nomadic and Semi Nomadic Communities, has been delayed due to tribe categorization work.

The Scheme for Economic Empowerment of Denotified/Nomadic/Semi-Nomadic (SEED) communities was launched in February 2022 by the Ministry of Social Justice & Empowerment. It aims to provide free competitive exam coaching to these community students, to provide health insurance to families, to uplift clusters of these communities through livelihood initiatives, and to provide financial assistance for housing. The Scheme have been formulated for families having income from all sources of Rs.2.50 lakh or less per annum and not availing any such benefits from similar Scheme of Centre Government or the State Government. The DWBDNCs (Development and Welfare Board for De-notified, Nomadic and Semi-Nomadic Communities) has been tasked with the implementation of this scheme.

Components:
- Free coaching to students from these communities for Civil Services, entry to professional courses like medicine, engineering, MBA, etc.
- Health Insurance through PMJAY of National Health Authority.
- Livelihoods to support income generation
- Housing (through PMAY/IAY)

De-notified Tribes stands for those communities which were notified as 'born criminals' under colonial-era Criminal Tribes Act (CTA) 1871. Post-independence, CTA, 1871 was repealed, and these communities were "De-Notified". It was replaced with Habitual Offenders Act, 1952.

MoH&UA launches Urban Waterbody Information System portal
The Urban Waterbody Information System portal has been launched by the Ministry of Housing & Urban Affairs with help from National Remote Sensing Centre, Hyderabad. The portal will provide satellite images of water bodies to various cities to plan their rejuvenation. The Ministry has also shortlisted 76 start-ups under the 'India Water Pitch-Pilot-Scale Start-Up Challenge'.

Ministry has also shortlisted Startups that have been onboarded under the 'India Water Pitch-Pilot-Scale Start-Up Challenge' (*launched in March 2022 under AMRUT 2.0 Mission*). They will be provided financial support of up to Rs 20 lakhs each to work in the fields of water supply, water management, water body rejuvenation, etc.

Union Cabinet approves PM-Shri Yojana to strengthens schools
Government has announced a new initiative – the development and upgradation of 14,500 schools across the country – under the "*Pradhan Mantri Schools for Rising India (PM-SHRI) Yojana*". These PM-SHRI schools will become model schools which will encapsulate the full spirit of National Education Policy.

These centrally sponsored schools will have a modern, transformational, holistic, inquiry-driven and learner-centric method of imparting education. PM-SHRI schools will showcase all components of National Education Policy 2020 and act as exemplar schools and also offer mentorship to other institutions in their vicinity. They will be equipped with modern infrastructure, including labs, smart classrooms, libraries, sports equipment etc. The PM SHRI schools will also be developed as '*Green schools*'.

CCRAS launches SPARK Scheme

The Central Council for Research in Ayurvedic Sciences (CCRAS) has taken a unique initiative to support the research efforts of bright young minds of the country by developing the Studentship Program for Ayurveda Research Ken (SPARK). The value of the studentship will be Rs. 25,000/- per month for 2 months duration and is meant to be a stipend for the student. This program is only for interested Bachelor of Ayurvedic Medicine and Surgery (BAMS) students.

The *Central Council for Research in Ayurvedic Sciences (CCRAS),* an autonomous body under Ministry of AYUSH, is an apex body in India for undertaking, coordinating, formulating, developing and promoting research on scientific lines in Ayurvedic Sciences.

Govt. plans to introduce PM PRANAM Scheme to reduce subsidy for chemical fertilisers

The government is planning to introduce a new scheme – 'PM PRANAM', which stands for 'PM Promotion of Alternate Nutrients for Agriculture Management Yojana'. The proposed scheme intends to reduce the subsidy burden on chemical fertilisers.

The Department of Agriculture and Farmers Welfare assesses the requirement of fertilisers each year before the start of the cropping season and informs the Ministry of Chemical and fertilisers to ensure the supply. The amount of fertiliser required varies each month according to demand, which is based on the time of crop sowing and which also varies from region to region. For example, the demand for urea peaks during June-August period, but is relatively low in March and April, and the government uses these two months to prepare for an adequate amount of fertiliser for the kharif season.

The 4 major fertilisers requirements are — Urea, DAP (Di-ammonium Phosphate), MOP (Muriate of Potash), NPKS (Nitrogen, Phosphorus and Potassium).

MoFPI and MoA&FW jointly launches convergence portal to support Food Processing Enterprises

Ministry of Food Processing Industries (MoFPI) and Ministry of Agriculture and Farmers Welfare (MoA&FW) has jointly launched a convergence portal between Agriculture Infrastructure Fund (AIF), Pradhan Mantri Formalisation of Micro Food Processing Enterprises (PMFME) scheme and Pradhan Mantri Kisan Sampada Yojana (PMKSY). The aim is to support Food Processing Enterprises.

Govt. launches Scheme for Special Assistance to States for Capital Investment for 2022-23

The Government of India has launched a 'Scheme Special Assistance to States for Capital Investment for 2022-23'. Under this Scheme, financial assistance is provided to the States Governments in the form of 50-year interest free loan for capital investment projects.

The Scheme has 7 Parts:
- *Part I:* Under it, Rs. 80,000 crore is allocated to the States for taking up approved capital works.
- *Part II:* It is aimed at facilitating PM Gati Shakti related investments in the States. PM Gati Shakti will receive priority.
- *Part III:* Under it, Rs. 4,000 crore is earmarked for supplementing funding under PM Gram Sadak Yojana (PMGSY).
- *Part IV:* Under it, Rs. 2,000 crore is earmarked for promoting digitization such as - DigiLocker, Digital payment and DBT etc.
- *Part V:* Under it, Rs. 3,000 crore is earmarked for capital projects on Optical Fibre Cable (OFC) Network.

- *Part VI:* Under it, Rs. 6,000 crore is earmarked for the States to undertake urban reform related activities such as Town Planning Scheme, Transit Oriented Development etc.
- *Part VII:* Under it, State is incentivized for privatization/disinvestment of SPSEs. financial assistance is provided to the States Governments in the form of 50-year interest free loan for capital investment projects (*Rs. 5,000 crore is earmarked*).
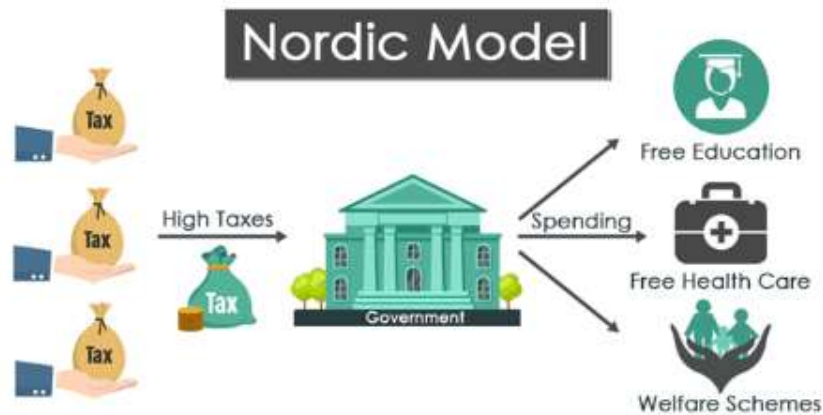
5. Polity

Internal democracy

Election Commission is pushing for internal democracy within political parties in India. Internal democracy in political parties (also known as *Intra-party democracy*) refers to the level and methods of including party members in the decision making and deliberation within the party structure. It helps to nurture citizens' political competencies and producing more capable representatives which in turn ensures that the party produces better policies and political programmes.

Nordic Model of Social Democracy

The Nordic (Scandinavian) Model of Social Democracy is in discussion due to the recent elections held in Sweden.

The *Nordic Model* refers to the standards followed in Sweden, Norway, Finland, Denmark, and Iceland. These nations are known for high living standards and low-income disparity. The model is a unique combination of Free-Market Capitalism and Social Welfare. It is a mixed economic system that reduces the gap between the rich and the poor through redistributive taxation and a robust public sector while preserving the benefits of capitalism. Under it, social benefits are funded by taxpayers and administered by the government for the benefit of all citizens.

Official Language of the Union; Sir William Jones

The Supreme Court (SC) has dismissed a PIL seeking directions to notify 'Sanskrit' as the national language. The petitioner's lawyer invoked Sanskrit as a "mother language" from which other tongues took inspiration. He repeatedly invoked oriental scholar '*Sir William Jones*' and his study of the ancient language. However, SC pointed out that the Constitution of India has not given any language a national status.

Under *Article 343* of the Constitution, the official language of the Union shall be Hindi in Devanagari script. English would continue to be used for 15 years (*now extended*). Also, Article 351 provides for the Union Government to promote the use of Hindi.

William Jones was a Supreme Court Judge as well as a Linguist and proposed that there is an existence of a relationship between European and Indo-Aryan languages, which he coined as '*Indo-European*'. He established the Asiatic Society of Bengal in the year 1784. He was the first to suggest that Sanskrit, Greek and Latin languages had a common root. He also suggested that Sanskrit 'was introduced to India by conquerors from other kingdoms in some very remote age' displacing 'the pure Hindi' of North India.

Constitutional Provisions related to Reservation
Government has reiterated that the affirmation action for marginalized communities is the responsibility of the country rather than a burden. 'Reservation' in the country was introduced to ensure that the historically underprivileged communities were given equal access to resources.

Constitutional Provisions:
- *Article 15(4) and 16(4):* It enabled the State and Central Governments to reserve seats in government services for the members of the SC and ST.
- *Article 16 (4B):* It enables carry forward of the unfilled seats.
- *Article 330 and 332:* reservation of seats for SCs and STs in the Parliament and in the State Legislative Assemblies respectively.
- *Article 243D:* It provides reservation of seats for SCs and STs in every Panchayat.
- *Article 243T:* It provides reservation of seats for SCs and STs in every Municipality.
- *Article 335:* It says that the claims of STs and STs shall be taken into consideration consistently with the maintenance of efficacy of the administration.
- *Indra Sawhney v. Union of India (1992):* Introduced 'Creamy Layer' and reservation to not exceed 50%.

Constitutional bench to decide whether EWS quota violates the Basic Structure
A Constitution Bench led by Chief Justice of India has finalized 3 cardinal issues for examining whether the 103rd Constitutional Amendment 2019 (deals with Economic Weaker Section reservation) violates the Basic Structure of the Constitution.

The Court will examine:
- whether the amendment breaches the Basic Structure by permitting the State to make special provisions, including reservation, based on economic criteria,
- whether it violates the Basic Structure by allowing the state to make special provisions in relation to admissions to private unaided institutions, and
- whether the Basic Structure is trampled upon by the constitutional amendment by excluding SEBC/OBC/SC/ST communities from the scope of the EWS quota.

The *103rd Constitutional Amendment of 2019* inserted Articles 15(6) and 16(6) in the Constitution to provide 10 per cent reservation to EWS other than backward classes, SCs, and STs in higher educational institutions and initial recruitment in government jobs. The rationale was that the amendment could empower state governments to provide reservations on the basis of economic backwardness – determined by criteria such as land size owned, annual income, etc.

The EWS reservation was granted based on the recommendations of a Commission headed by Major General (Retd) S R Sinho. The Commission, which was constituted by the UPA government in March 2005, submitted its report in July 2010.

4 cases are important to understand Basic Structure of Constitution:
1. *Shankari Prasad (1951):* In this case, the Supreme Court contended that the Parliament's power of amending the Constitution under Article 368 included the power to amend the Fundamental Rights guaranteed in Part III as well.

2. *Golak Nath (1967):* In this case, the court reversed its earlier stance that the Fundamental Rights can be amended. It said that Fundamental Rights are not amenable to the Parliamentary restriction as stated in Article 13 and that to amend the Fundamental rights a new Constituent Assembly would be required.

3. *Kesavananda Bharati (1973):* The SC held that although no part of the Constitution, including Fundamental Rights, was beyond the Parliament's amending power, the "basic structure of the Constitution could not be abrogated even by a constitutional amendment." The judgement implied that the Parliament can only amend the constitution and not rewrite it. The power to amend is not a power to destroy.

4. *Minerva Mills (1980):* This case again strengthens the Basic Structure doctrine. The judgement struck down 2 changes made to the Constitution by the 42nd Constitutional Amendment Act 1976, declaring them to be violative of the basic structure. The judgement makes it clear that the Constitution, and not the Parliament is supreme. In this case, the Court added two features to the list of basic structure features. They were judicial review and balance between Fundamental Rights and DPSP.

Salient Features of Electoral Bond Scheme 2018
Government plans to amend Electoral Bond Scheme. The Scheme was notified by Government of India in January 2018 as an alternative to cash donations made to political parties.

As per provisions of the Scheme
- Electoral Bonds may be purchased by a 'person' who is a citizen of India or incorporated or established in India. A person being an individual can buy Electoral Bonds, either singly or jointly with other individuals.
- Only the Political Parties registered under Section 29A of the Representation of the People Act, 1951 and which secured not less than 1 % of the votes polled in the last General Election to the House of the People or the Legislative Assembly of the State, shall be eligible to receive the Electoral Bonds.
- The Electoral Bonds shall be encashed by an eligible Political Party only through a Bank account with the Authorized Bank (*currently State Bank of India*).
- The Electoral Bonds shall be valid for 15 calendar days from the date of issue and no payment shall be made to any payee Political Party if the Electoral Bond is deposited after expiry of the validity period.
- The Electoral Bond deposited by an eligible Political Party in its account shall be credited on the same day.

SC ruled that larger bench judgement to prevail over smaller Bench
A Constitution Bench of the Supreme Court has ruled that a judgment delivered by a larger bench will prevail irrespective of the number of judges constituting the majority. For example, the judgment of a 7-judge bench delivered with 4:3 majority will prevail over a unanimous 5-judge bench. This principal stems from the assumption that a Bench with more strength is more likely to arrive at a correct decision.

Doctrine of Precedence: Under this, Courts refer to their older ruling as precedence on related matters. The precedential legitimacy of a larger bench ruling must be considered a thumb rule for stability in the law.

Article 145(5) states that no judgment shall be delivered by the Supreme Court without the concurrence of a majority of the judges present at the hearing of the case, but nothing in this clause shall prevent a judge from delivering a dissenting judgment.

Government approves addition of 4 Tribes in ST List
The Union Cabinet has approved a Constitutional Amendment bill for the addition of four tribes to the list of Scheduled Tribes. These Tribes are: 1. Hatti tribe (Trans-Giri area of Sirmour district in Himachal Pradesh), 2. Narikoravar (hill tribe of Tamil Nadu), 3. Kuruvikaran (hill tribe of Tamil Nadu), 4. Binjhia (Chhattisgarh).

Article 342 provides for specification of tribal communities or parts of groups within tribes or tribal communities which are deemed to be Scheduled Tribes in relation to that State or UT. In pursuance of these provisions, the list of Scheduled Tribes is notified for each State or Union Territory.

6. Governance

MoCA notifies CSR Amendment Rules 2022

Ministry of Corporate Affairs has notified the Companies (Corporate Social Responsibility Policy) Amendment Rules, 2022, which amends rules governing Corporate Social Responsibility (CSR).

Relevant changes

- *Establishment of a CSR committee for unspent CSR amount:* Companies can set aside unused funds for CSR in designated account as long as they use them within 3 Financial Years. Its utilisation is to be monitored by the CSR Committee.
- *Change in Expenditure for Impact Assessment:* The Amendment Rules provide that the cost of social impact assessments, which can be considered as CSR spending, cannot be greater than 2% of all CSR expenditures for the applicable financial year or Rs. 50 lakhs, whichever is higher.
- *Revised format for annual report on CSR activities:* The Amendment Rules provide for a new format for the annual report on CSR activities which is to be included in the board's report for the Financial Year commencing on or after April 2020.

A company having:

- a net worth of Rs. 500 crore or more,
- a turnover of Rs. 1000 crore or more,
- a net profit of Rs. 5 crore or more.

needs to mandatorily spend at least 2% of their average net profit of the immediately preceding 3 Financial Years (FY) on CSR activities under Section 135 of the Companies Act, 2013.

NELM released by Ministry of Health and Family Welfare (MoH&FW)

The Ministry of Health & Family Welfare has launched the new 'National List of Essential Medicines (NLEM)', where 384 drugs have been included in this list with addition of 34 drugs, while 26 from the previous list have been dropped.

As per the World Health Organisation (WHO), *Essential Medicines* are those that satisfy the priority health care needs of the population.

Medicines under NLEM automatically come under price control under Drug Price Control Order (DPCO). DPCO was issued by the government under Essential Commodities Act, 1955 to regulate prices for essential and lifesaving medicines.

Safe Harbour

USA and India are looking to remove special protection available to social media platforms, called 'safe harbour'. In the USA, social media companies enjoy special protection under countries' Communications Decency Act (CDA) 1996. It is similar to Section 79 of India's Information Technology Act, 2000, (IT Act) which classifies social media platforms as intermediaries and broadly shields them from legal action based on content users post on their platforms. Both these regulations offer social media platforms something called a 'safe harbour'. Section 79 of IT Act 2000: *Network service providers not to be liable in certain cases*

UIDAI tops in Grievance Redressal Index released by DARPG

Department of Administrative Reforms and Public Grievances (DARPG) has published Grievance Redressal Index during August 2022. As per it, UIDAI has been a top performer in resolution of cases received through Centralized Public Grievance Redress and Monitoring System (CPGRAMS).

Centralised Public Grievance Redress and Monitoring System (CPGRAMS) is an online platform available to the citizens 24×7 to lodge their grievances to the public authorities on any subject related to service delivery. It is a single portal connected to all the Ministries/Departments of Government of India and States.

SC appoints former Judge L. Nageswara Rao to amend IOA constitution and holding elections
The Supreme Court has appointed L Nageswara Rao (former SC Judge) for amending Indian Olympic Association constitution and preparing electoral college. Earlier, IOA was derecognized by International Olympic Association citing Supreme Court meddling in its affairs.

IOA is an autonomous body (*recognized under Olympic Charter*) and a non-profit organisation under Societies Registration Act, 1860. Note that, India first participated in the Olympics in 1900 in Paris. The country was represented by Norman Pritchard, an Anglo Indian who was holidaying in Paris during that time.

NDMA celebrates 18th Formation Day
The National Disaster Management Authority (NDMA) has celebrated its 18th Formation Day on 28th September 2022 in New Delhi. Theme for this year's Foundation Day was "*Volunteerism in Disaster Management*".

The *National Disaster Management Authority (NDMA)* is India's apex statutory body for Disaster Management. The Prime Minister is its chairperson, and it has 9 other members. The primary responsibility for the management of disaster rests with the State Government concerned. However, the National Policy on Disaster Management puts in place an enabling environment for all i.e., the Centre, State and District. India is also a signatory to the Sendai Framework for Disaster Risk Reduction (SFDRR) which sets targets for Disaster Management.

MHA notifies Criminal Procedure (Identification) Rules 2022
Ministry of Home Affairs (MHA) has notified the Criminal Procedure (Identification) Rules, 2022 governing the Criminal Procedure (Identification) Act (CPA), 2022 which was passed in March 2022. The Rules specify the details for CPA in order to lay down the procedure for taking measurements of convicts and other persons for the purposes of identification and investigation in criminal matters and to preserve records.

The *Criminal Procedure (Identification) Act* (CPA), 2022 repealed the Identification of Prisoners Act, 1920 which was enacted to authorize the taking of measurements and photographs of convicts and other persons. The 2022 Act expands the scope and ambit of the ''measurements'' which can be taken under the provisions of law. It will help in unique identification of a person involved in any crime and will assist the investigating agencies in solving the criminal case.

7. *International Relations*

India-Saudi Arabia Relations
India's current Minister of External Affairs has made its his first-ever visit to Saudi Arabia.

Key Highlights
- India initiated talks with Saudi Arabia for Rupee-Riyal trade.
- Both countries agreed to cooperate in joint projects such as a west coast refinery, LNG infrastructure, and strategic petroleum storage facilities.
- MoU on Mechanism of Consultations between India and Gulf Cooperation Council (GCC) was signed for institutionalization of annual dialogue between India and the GCC.

Notable Points
- First-ever bilateral naval exercise between the 2 nations "*AL-MOHED-AL-HINDI*" was held in 2021.
- Both countries aim to establish a 'Comprehensive Security Dialogue' at the level of National Security Advisors and set up a Joint Working Group on Counter-Terrorism.
- On International Yoga Day 2021, an MoU on Yoga Cooperation was signed for the establishment of formal Yoga standards and courses. (*First time by any country in the Gulf region*).

22nd Meeting of SCO's Heads of the Council held in Samarkand, Uzbekistan
The Council of Heads of State of the Shanghai Cooperation Organization (SCO), which is the highest decision-making body of the Organisation, has held its 22nd meeting at Samarkand, Uzbekistan. The Samarkand Summit was the first summit meeting to be held in-person following the Bishkek Summit in 2019. Theme: *"Dialogue and Cooperation in an Interconnected World"*

From being an Observer since 2005, India became a member of the SCO in 2017. Following the Summit meeting in Samarkand, India, for the first time, has assumed the annually rotating Chairmanship of this Eurasia-centred organisation. It is also for the first time in SCO's over two-decade history that it will be headed by a South Asian country. Varanasi was declared as the SCO Tourism and Cultural Capital for 2022-2023 to promote the rich heritage and the tourism potential of SCO member states. Iran was accepted as a permanent member of the SCO.

Indian PM attends 7th Eastern Economic Forum held in Russia
Prime Minister has virtually attended the 7th Eastern Economic Forum (EEF) hosted by Russia in Vladivostok. This year also marks the 30th anniversary of the establishment of the Consulate of India in Vladivostok.

Eastern Economic Forum (EEF): The EEF was established in 2015 to encourage foreign investments in the Russia's Far East (RFE) region. EEF displays the economic potential, suitable business conditions and investment opportunities in the region. The agreements focus on infrastructure, transportation projects, mineral excavations, construction, industry and agriculture. The forum aimed at connecting the Far East with the Asia Pacific region.

Russia's Far East (RFE) Region: Far Eastern Federal District (FEFD) is the easternmost part of Russia and borders the Pacific and the Arctic Ocean, and 5 countries (China, Japan, Mongolia, the United States and the North Korea).

QUAD signs HADR Agreement
QUAD countries have signed Humanitarian Assistance and Disaster Relief (HADR) Agreement. This was done in view of the Ukraine conflict and climate-related events. Earlier, this partnership was announced by QUAD

Leaders in Tokyo in May 2022, as part of a shared vision for a free, open, inclusive and resilient Indo-Pacific region. QUAD group of countries – *India, U.S.A., Australia, and Japan*

Other supporting initiatives by QUAD countries: NASA-SERVIR by US to provide satellite and geospatial information to developing countries; Asia-Pacific Climate Change Adaptation Information Platform (AP-Plat) by Japan; Climate and Oceans Support Program in the Pacific (COSPPac) by Australia.

NHPC Ltd. signs MoU with Nepal for Hydroelectric Project in Nepal
NHPC Limited signed an MoU with Investment Board Nepal (IBN) to develop 750 MW West Seti and 450 MW SR-6 Hydroelectric Projects in Nepal. NHPC Limited, established in 1975 is a Schedule 'A' Enterprise of the Government of India with 'Mini Ratna' status.

The Investment Board Nepal (IBN), established in 2011 is a high-level institution of Government of Nepal under the chairmanship of the Prime Minister of Nepal, tasked with attracting and facilitating private investments, including Foreign Direct Investment (FDI) and managing Public Private Partnership (PPP) in Nepal. Other Projects involving India: *Mahakali Treaty (6,480 MW), Upper Karnali Project (900 MW), Arun Three projects (900 MW).*

NHPC Limited (*formerly known as National Hydroelectric Power Corporation Ltd.*) was incorporated in 1975. The company is mandated to plan, promote and organize an integrated and efficient development of power in all its aspects through Conventional and Non-Conventional Sources in India and abroad. It is under the ownership of Ministry of Power, Government of India.

UNGA 77th session held in New York, USA
The 77th Session of the UN General Assembly was held in New York, USA. The UN General Assembly (UNGA) is the main policy-making organ of the Organization. Comprising all Member States, it provides a unique forum for multilateral discussion of the full spectrum of international issues covered by the Charter of the United Nations. Each of the 193 Member States of the United Nations has an equal vote.
Theme: *"A watershed moment: Transformative Solutions to Interlocking Challenges"*

Govt. releases Roadmap for Better Growth-India @100
Economic Advisory Council to Prime Minister and Institute for Competitiveness has released "Roadmap for Better Growth- India @100", to enable India to become a high-income country by 2047 using sector and region-specific policies based on the 4S principle.

The 4S Principle is given below.
- *Shared Prosperity:* opportunities should be shared across every section of society.
- *Social Prosperity:* i.e., economic Growth should match social development.
- *Sustainable Prosperity:* i.e., economic progress should be environmentally sustainable.
- *Solid Prosperity:* economic system should be resilient to shocks.

Russia's annexation of Ukraine territories through Referendum
Russia has annexed 4 territories of Ukraine by conducting referendum. The 4 regions are: Donetsk, Luhansk, Zaporizhzhia, and Kherson. A *referendum* is a direct vote by the electorate on a proposal, law, or political issue. In other words, if a country holds a referendum on a particular policy, they ask the people to vote on the policy and show whether or not they agree with it.

India participates in Indo-Pacific Economic Framework Ministerial Meeting held in USA
India has participated in the Indo-Pacific Economic Framework (IPEF) Ministerial meeting held in USA. India agreed to 3 out of 4 pillars, which are Supply Chains, Tax & Anti-Corruption and Clean Energy, however, it decided to stay away from the Fair & resilient trade Pillar.

Indo-Pacific Economic Framework (IPEF) is a US-led initiative that aims to strengthen economic partnership among participating countries to enhance resilience, sustainability, inclusiveness, economic growth, fairness, and competitiveness in the Indo-Pacific region. The IPEF was launched in 2021. The IPEF is not a Free Trade Agreement (FTA) but allows members to negotiate the parts they want to. The negotiations will be along four main "*pillars*". Currently, India and 13 countries located in the Pacific Ocean are its members.

Kazakhstan invited Indian PM to CICA Summit
Kazakhstan has invited Prime Minister of India to the Conference on Confidence Building Measures and Interaction in Asia (CICA) Summit, which it to be held in Astana (Kazakhstan's capital) in the month of October (2023).

CICA is a forum aimed at enhancing cooperation through elaborating multilateral approaches toward promoting peace, security and stability in Asia. It was founded in 1999 and is a multi-national forum of countries having a part of its territory in Asia. India is among its 27 members.

India's Presidency of AIBD extends to one more year
The 47th Asia-Pacific Institute for Broadcasting Development (AIBD) Annual Gathering / 20th AIBD General Conference and Associated Meetings was held in New Delhi. It has a special focus on the topic of "*Building a Stronger Future of Broadcasting in post pandemic era*". India's Presidency of the Asia-pacific Institute of Broadcasting Development (AIBD) has been extended for one more year. This was unanimously decided by the AIBD member countries at the General Conference of the Institute held in New Delhi.

5 Major Palm oil importing nation's apex edible oil industry associations formed association – APOA
The apex edible oil industry associations from 5 major palm oil importing countries of Asia – India, Pakistan, Sri Lanka, Bangladesh and Nepal – have come together to form the Asian Palm Oil Alliance (APOA), at the instance of Solidaridad Network, a specialist in sustainable agriculture. APOA was launched during the Summit held at Agra, Uttar Pradesh. Note that, India is the largest importer of palm oil in Asia.

Also, the Government has announced the National Edible Oil Mission-Oil Palm (NMEO-OP) to boost domestic oilseed production and make the country self-sufficient in cooking oils.

CERT-In hosts Cyber Security Exercise "Synergy" for 13 Countries
Indian Computer Emergency Response Team (CERT-In), in collaboration with Cyber Security Agency of Singapore (CSA), has successfully designed & conducted the Cyber Security Exercise "Synergy" for 13 countries as part of the International Counter Ransomware Initiative – Resilience Working Group which is being led by India under the leadership of National Security Council Secretariat (NSCS).
Theme of the Exercise: *"Building Network Resiliency to counter Ransomware Attacks"*

CERT-In functions under Ministry of Electronics & Information Technology. It is the nodal agency to deal with cyber security threats like hacking and phishing.

MoU signs between ICAO and ISA to check CO$_2$ Emission

A Memorandum of Understanding (MoU) was signed between International Solar Alliance (ISA) and International Civil Aviation Organisation (ICAO) in a ceremony held on the sidelines of the 42nd Session of ICAO Assembly in Montreal, Canada. MoU was signed to check growth of CO$_2$ emissions in the aviation sector. In 2015, India's Cochin International Airport became world's first fully solar powered airport. India has a target of installing 175 GW of renewable energy by 2022, and net zero carbon goal in 2070.

The International Civil Aviation Organization (ICAO) is a specialized agency of the United Nations that coordinates the principles and techniques of international air navigation, and fosters the planning and development of international air transport to ensure safe and orderly growth.

Defence Exercises in News

Exercise Pitch Black 22: It was hosted by the Royal Australian Air Force. The exercise saw the participation of 17 Air Forces including India.

Exercise Kakadu 2022: (*started in 1993*) is a multilateral regional maritime engagement exercise hosted by the Royal Australian Navy (RAN). The Indian Navy's Long Range Maritime Reconnaissance Aircraft P8I participated in the exercise.

Jimex 2022: It is a series of exercises commenced in January 2012 with a special focus on maritime security cooperation. It is conducted biennially between the Indian Navy and the Japanese Maritime Self-Defence Force (JMSDF).

Vostok 2022: Indian Army Contingent has participated in Exercise Vostok-2022 at Sergeyevsky, East Military District Russia. The exercise is aimed at interaction and coordination amongst other participating military contingents and observers.

INS Tarkash Mission (India-Nigeria): Reinforcing the Indian Navy's commitment to maritime security, INS Tarkash is currently mission deployed in the Gulf of Guinea (GoG) for anti-piracy operations. As part of the deployment, the ship undertook Joint Maritime Exercise with Nigerian Navy Patrol Ships.

Exercise Parvat Prahar: Exercise showcased prowess of Indian Army to carry out operations in high-altitude mountains of Ladakh sector.

8. Awards and Recognition

MoH&UA presents Smart Solutions and Inclusive Cities Awards
The Ministry for Housing & Urban Affairs has presented Smart Solutions Challenge & Inclusive Cities Awards 2022. These awards are an initiative of National Institute of Urban Affairs (NIUA) and United Nations in India to address city-level accessibility and inclusion challenges faced by Persons with Disabilities (PwD), women and girls, and elderly. Awards also aim to promote people-centric design and to foster novel home-grown technological innovations and solutions.

Ministry of Science and Technology presents INSPIRE Awards – Manak
Ministry of Science & Technology has presented INSPIRE awards to 60 start-ups and financial support to over 50,000 students in order to attract more and more talents toward science. MANAK (Millions Minds Augmenting National Aspiration and Knowledge) was launched in 2017 with the aim to target 1 million original ideas/innovations rooted in Science & Technology and create a culture of creativity among school students.

Mikhail Gorbachev, the last Soviet Union Leader, passed away
Mikhail Gorbachev, the last Soviet Union President, who brought the Cold War to a peaceful end, has died. He was credited with ending the Cold War without bloodshed, but he failed to prevent the collapse of the Soviet Union. He took power in 1985 and introduced reforms, as well as opening up the Soviet Union to the world. But he was unable to prevent the slow collapse of the union. He forged arms reduction deals with the United States and partnerships with Western powers to remove the Iron Curtain that had divided Europe since World War Two and bring about the reunification of Germany.

American Meteorologist Vernon Dvorak credited to develop ADT, passed away
American Meteorologist Vernon Dvorak, credited with having developed Advanced Dvorak Technique (ADT) in the 1970s, passed away at the age of 100.

The *Advanced Dvorak Technique (ADT)* utilizes longwave-infrared, temperature measurements from geostationary satellites to estimate Tropical Cyclone (TC) intensity. During daytime, images in the visible spectrum were used while at night, the ocean would be observed using infrared images.

India's Distinguished Economist Abhijit Sen passed away
India's distinguished Development Economist, teacher and policymaker Abhijit Sen, has passed away. He was a renowned agriculture economist and former member of the Planning Commission He was also chairman of the Commission for Agricultural Costs & Prices (CACP) and authored the report of the High-Level Committee on Long-Term Grain Policy (2000).

The landmark report recommended that the Commission for Agricultural Costs and Prices (CACP) be made an empowered statutory body and its fixation of minimum support prices—which the government was bound to accept—be based on the 'C2' cost of production. This recommendation—to include all paid-out cultivation expenses in cash and in kind, plus the imputed value of unpaid family labour and rent/interest forgone on owned land and fixed capital assets—paved the way for the "Swaminathan formula".

The Swaminathan Commission Report states that the government should raise the MSP to at least 50% more than the weighted average cost of production. It is also known as the C2+ 50% formula. It includes the imputed cost of capital and the rent on the land (called 'C2') to give farmers 50% returns.

The Abhijit Sen Committee had, however, proposed that the comprehensive 'C2' costs of only the efficient producing regions be considered. It also favoured a universal Public Distribution System with uniform central

issue prices for rice and wheat, while doing away with 'below poverty line' and 'above poverty line' categories. This went on to be incorporated in the then government's National Food Security Act of 2013, which now provides wheat and rice to more than a third of the country's population at a uniform Rs 2 and Rs 3 per kg price.

Government appoints new Chief of Defence Staff – Lt. General Anil Chauhan
The Government of India has appointed former Eastern Army Commander Lt. General Anil Chauhan as the next Chief of Defense Staff (CDS). The next Chief of Defense Staff (CDS) shall also function as Secretary to the Government of India, Department of Military Affairs.

Chief of Defense Staff (CDS): CDS acts as the permanent Chairman of the Chiefs of Staff Committee which will also have 3 service chiefs as members. He also heads the newly created Department of Military Affairs (DMA) in the Ministry of Defense.

64ᵗʰ Ramon Magsaysay Awards recipients announced
64ᵗʰ Ramon Magsaysay Award 2022 was announced. The 4 recipients of Asia's premier prize and highest honour are given below.
*   Gary Bencheghib (*Indonesia*): For fight against marine plastic pollution.
*   Sotheara Chhim (*Cambodia*): For mental health.
*   Tadashi Hattori (*Japan*): For training local doctors who have treated Vietnamese people.
*   Bernadette J. Madrid (*Philippines*): For effort in child protection.

The *Ramon Magsaysay Award* is an annual award established to perpetuate former Philippine President Ramon Magsaysay's example of integrity in governance, courageous service to the people, and pragmatic idealism within a democratic society. Vinoba Bhave was the first Magsaysay Award winner when the award was instituted in 1958.

UNESCO International Literacy Prize 2022
Kalinga Institute of Social Sciences (KISS), Bhubaneswar has won the prestigious UNESCO King Sejong Literacy Prize 2022 for its outstanding literacy programme based on the recommendations of an international jury.

The *UNESCO King Sejong Literacy Prize* is sponsored by the Government of the Republic of Korea and recognizes contributions to mother language-based literacy development. KISS has received the award in the category of 'Mother Tongue Based Multilingual Education Programme'. KISS is the 5ᵗʰ recipient from India and the first and only institute from Odisha to receive this International honour.

Swati Piramal receives French highest honour – Knight of the Legion of Honour
Swati Piramal, an Indian scientist and industrialist, has received the Chevalier de la Légion d'honneur (*Knight of the Legion of Honour*), France's highest civilian honour. She is the Vice-Chairperson of the Piramal Group. She was given the Knight of the Legion of Honour for her contributions in the fields of business and industry, science, medicine, and towards strengthening Indo-French ties.

The Chevalier de la Légion d'Honneur (Knight of the National Order of the French Legion of Honour) is the highest civilian award given by the French Republic for outstanding contribution to the recipient's field of expertise, regardless of their nationality. It was instituted in 1802 by Napoleon Bonaparte (1769-1821), a French military commander and political leader. *Piramal Group* is a global business conglomerate with diverse interests in pharma, financial services and real estate.

Cochin Airport receives Airport Service Quality Award 2022
The Cochin International Airport Limited (CIAL) has been awarded the Airport Service Quality (ASQ) award 2022 by the Airport Council International (ACI). The award is given for its implementation of the 'Mission Safeguarding' programme, which ensured seamless traffic and reinforced passenger satisfaction in the aftermath of the pandemic. The award is considered to be the highest honour in the global aviation sector.

Airports Council International is an organization of airport authorities aimed at unifying industry practices for airport standards. Established in 1991, its headquarters is situated in Montreal, Quebec, Canada.

National Lata Mangeshkar Award announced by Madhya Pradesh Government
Noted playback singers Kumar Sanu and Shailendra Singh and music-composer duo Anand-Milind were conferred with the National Lata Mangeshkar Award on the birth anniversary of the late singing legend at her birthplace in Indore. Instituted in 1984, the National Lata Mangeshkar Award is given to promote excellence in the area of light music annually by the Madhya Pradesh government's culture department. It carries a cash prize of Rs 2 lakhs and a citation.

Dada Saheb Phalke award for 2020 accorded to Ms. Asha Parekh
Dadasaheb Phalke Award for the year 2020 was accorded to Ms Asha Parekh for her exemplary lifetime contribution to Indian Cinema. She was conferred with this highest award in India in the field of cinema by the President of India, Smt. Droupadi Murmu at the 68th National Film Awards.
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Dadasaheb Phalke is the country's highest film honour conferred for "Outstanding contribution for the growth and development of Indian cinema". Dadasaheb Phalke Award was introduced in 1969 and it was awarded for the first time to Devika Rani, "the first lady of Indian cinema". Dadasaheb Phalke directed India's first feature film Raja Harischandra (1913). He is known as "*Father of Indian Cinema*".

Uttarakhand receives Best Tourism Destination Award
Uttarakhand has been given the Best Tourism Destination Award at the National Tourism Awards event held in New Delhi under the aegis of the Union Ministry of Tourism on the occasion of World Tourism Day (*27th September*).

Along with the Best Tourism Destination Award, Uttarakhand was also given the first prize for the all-round development of tourism.

Govt. appoints new Attorney General of India – R. Venkataramani
Senior advocate, R Venkataramani has been appointed as the new Attorney General of India. The President has appointed Mr Venkataramani as the new Attorney General for a period of 3 years. He will replace current Attorney General KK Venugopal.

The *Attorney General for India (AGI)* is the Indian government's chief legal advisor and is its chief advocate in the courts. They are appointed by the President of India at the instance of the Union Cabinet under Article 76 of the Constitution and hold office during the pleasure of the President. *Article 76* of the Constitution mentions that AGI is the highest law officer in India. As a chief legal advisor to the Government of India, he advises the Union Government on all legal matters. She is also is the primary lawyer representing the Union Government in the Supreme Court of India.

2023 Breakthrough Prizes winners announced
The 2023 winners of the Breakthrough Prizes, also known as *'Oscars of Science',* were announced. The Breakthrough Prizes were founded by Sergey Brin, Priscilla Chan and Mark Zuckerberg, Julia and Yuri Milner, and Anne Wojcicki and have been sponsored by foundations established by them.

2023 Breakthrough Prize laureates, recognized for their game-changing discoveries in Fundamental Physics, Life Sciences and Mathematics, along with early-career scientists who have made significant contributions to their fields.

Winners:
- *Breakthrough Prize in Life Sciences* Awarded to Clifford P. Brangwynne and Anthony A. Hyman; Demis Hassabis and John Jumper; Emmanuel Mignot and Masashi Yanagisawa.
- *Breakthrough Prize in Mathematics* Awarded to Daniel A. Spielman.
- *Breakthrough Prize in Fundamental Physics* Awarded to Charles H. Bennett, Gilles Brassard, David Deutsch and Peter Shor.

Gautam Adani becomes 3rd richest person in the world
According to Forbes real-time billionaires list, Asia's richest man Gautam Adani has overtaken Amazon founder Jeff Bezos to become the 3rd richest person in the world.

Winners of 2022 Goalkeepers Global Goals Awards announced
Bill and Melinda Gates Foundation has honoured 4 changemakers, with the 2022 Goalkeepers Global Goals Awards as a part of its annual Goalkeepers campaign. The award recognises their efforts to advance progress towards the United Nations (UN) Sustainable Development Goals (SDGs) in their communities and around the world.

Also, the Gates Foundation's sixth annual Goalkeepers Report, "The Future of Progress," was released. It was co-authored by foundation co-chairs Bill Gates and Melinda French Gates.

One of the recipients is Dr Radhika Batra (2022 Progress Award). She is the co-founder of the non-profit organization '*Every Infant Matters*', which provides last-mile health solutions to disadvantaged children in India. She is progressing SDG 3: Good Health & Well-Being and SDG 10: Reduced Inequalities.

IIFL Wealth Hurun India Rich List 2022 released
IIFL Wealth Hurun India Rich List 2022 was released. The list was topped by Gautam Adani and family. Also, Nykaa Founder & Chief Executive Officer (CEO), Falguni Nayar became India's richest self-made woman by surpassing Biocon chief Kiran Mazumdar-Shaw in net worth. She is also the richest female in India.

Meena Kandasamy receives Hermann Kesten Prize
Indian author and poet Meena Kandasamy has been announced as this year's recipient of the Hermann Kesten Prize by the PEN Centre in Germany's Darmstadt. The Hermann Kesten Prize honours personalities who, in the spirit of the charter of the PEN association, stand up for the rights of persecuted authors and journalists.

9. Social Development

WHO establishes Financial Intermediary Fund for pandemic PPR
World Health Organization has established a new Financial Intermediary Fund for pandemic Prevention, Preparedness, and Response (PPR) internationally, with financial commitments from multiple countries including India. FIF will provide long-term financing to strengthen PPR capabilities in low- and middle-income countries and address critical gaps at national, regional, and global levels.

UNDP releases latest edition of Human Development Report
UNDP has released latest edition of Human Development Report 2021-22. According to it, India's rank on the Human Development Index (HDI) has slipped from 130 in 2020 to 132 in 2022, in line with a global fall in HDI scores in the wake of the COVID-19 pandemic. India's HDI value stood at 0.633 in 2021, which was lower than the world average of 0.732. Among India's neighboring countries, Sri Lanka (73), China (79), Bangladesh (129) and Bhutan (127) have fared better then India.
Theme: *"Uncertain Times, Unsettled Lives: Shaping our Future in a World in Transformation"*

Human Development Reports (HDRs) have been released since 1990 and have explored different themes through the human development approach. It's published by the Human Development Report Office for the United Nations Development Programme (UNDP).

Human Development Index (HDI) is a composite index that measures average achievement in human development taking into account 4 indicators:
- Life expectancy at birth (Sustainable Development Goal 3),
- Expected years of schooling (Sustainable Development Goal 4.3),
- Mean years of schooling (Sustainable Development Goal 4.4),
- Gross national income (GNI) (Sustainable Development Goal 8.5)

ILO releases report titled 'World Social Protection Report 2020–22'
An International Labour Organization report titled 'World Social Protection Report 2020–22: Regional companion report for Asia and the Pacific' was released. The report highlighted that the pandemic response was uneven and insufficient. Thereby, COVID-19 has further underscored the critical importance of achieving universal social protection.

Social protection is defined as a set of policies and programs designed to reduce poverty and vulnerability by promoting efficient labour markets, diminishing people's exposure to risks, and enhancing their capacity to protect themselves against hazards and income loss. It includes access to health care and income security measures related especially to old age, unemployment, sickness, disability, maternity etc.

International Labour Organization (ILO) is a specialized agency of the United Nations. It is the only tripartite UN agency. It brings together governments, employers and workers of 187 member States, to set labour standards, develop policies and devise programmes promoting decent work for all women and men.

Andaman and Nicobar Islands becomes India's first to be certified as Swachh Sujal Pradesh
Andaman and Nicobar Islands has declared India's first Swachh Sujal Pradesh. Now, all villages of Andaman and Nicobar Island have been certified as Har Ghar Jal and verified as Open Defecation Free – ODF Plus.

Government launches Jaldoot app to measure water levels in the wells

Government has launched the "JALDOOT App and JALDOOT App e-brochure. *Jaldoot* App has been jointly developed by Ministry of Rural Development and Panchayati Raj. This app will be used across the country to capture the water level of selected 2-3 wells in a village. Manual monitoring of water levels in open wells will be measured twice in a year, from 1st May to 31st May as pre-monsoon water level and from 1st October to 31st October for post-monsoon level for the same well.

Jaldoots, that is, officers assigned to measure the water levels, should also upload the geo-tagged photographs through the app on every occasion of measurement. This Mobile app will work in both online and offline mode. So, water level can be captured even without internet connectivity and captured date will be stored in mobile and when mobile comes in the connectivity area, data will synchronize with the central server.

National Water Informatics Centre (NWIC) was set up by the Government of India in March, 2018 to act as a central repository of updated water data and allied themes. It is created as a subordinate office under Ministry of Jal Shakti, Department of Water Resources, RD & GR and the office is located in New Delhi.

Office of PSA launches new initiative – WEST to promote women in I-STEM

The Office of the Principal Scientific Adviser (PSA) has launched a new initiative Women in Engineering, Science, and Technology (WEST) to promote women in I-STEM. *WEST* is a new I-STEM (*Indian Science Technology and Engineering facilities Map: Linking Researchers and Resources*) initiative. STEM is a common abbreviation for 4 closely connected areas of study: Science, Technology, Engineering and Mathematics. I-STEM is a national web portal for sharing research equipment/facilities and for promoting collaborations in R&D and technological innovation in academia and industry.

I-STEM is an initiative of PSA under the Prime Minister's Science, Technology, and Innovation Advisory Council (PM-STIAC) mission. Through the WEST initiative, I-STEM shall provide a separate platform to scientifically inclined women researchers, scientists, and technologists for pursuing research in science and engineering. It will provide skill development programs, access to R&D facilities and R&D software platforms.

MoE & NCERT jointly conducted Foundational Learning Study 2022

Study titled "*Foundational Learning Study 2022*" was jointly conducted by the Ministry of Education and National Council of Educational Research and Training (NCERT). It is a one-of-a-kind study to arrive at the benchmarks in Foundational Literacy and Numeracy (FLN) under the FLS 2022.

Foundational Learning Study (FLN) is the ability to read with meaning and perform basic math calculations by the end of Class 3. The National Education Policy (NEP) 2020 accords the highest priority to achieving FLN among all children by 2025.

NIPUN Bharat or National Initiative for Proficiency in Reading with Understanding and Numeracy: NIPUN Bharat has been launched under the Centrally Sponsored Scheme 'Samagra Shiksha'. Vision of the Mission is to create an enabling environment to ensure the universal acquisition of Foundational Literacy and Numeracy (FLN), so that by 2026-27 every child achieves the desired learning competencies in reading, writing and numeracy at the end of Grade III and not later than Grade V.

Implementing Agency: Department of School Education and Literacy, Ministry of Education.
Implementation Strategy: A five-tier Implementation mechanism will be set up at National-State-District-Block-School level.

UNESCO launches State of the Education Report for India 2022: AI in Education
UNESCO has launched 'State of the Education Report for India 2022: *Artificial Intelligence in Education'*. 2022 report aims to guide stakeholders for leveraging AI in Education (AIED) systems and outlines major opportunities and challenges for AI in the education system in India. This report is the 4th edition of the annual State of Education Report (SOER) of UNESCO.

United Nations Educational, Scientific and Cultural Organization (UNESCO): It was established in 1945 as a specialised agency of the UN. It seeks to build peace through international cooperation in education, sciences and culture. UNESCO is entrusted to lead and coordinate the Education 2030 Agenda – part of a global movement to eradicate poverty through 17 SDGs by 2030. It is governed by the General Conference and the Executive Board. Headquarters: Paris.

NCRB releases Prison Statistics in India Report 2021
National Crime Record Bureau (NCRB) has released Prison Statistics in India (PSI) Report, 2021. *PSI Report* is one of the 3 annual flagship reports by the NCRB. It provides data such as numbers and available capacity of different types of jails, strength and training of jail officials and prison budget and expenditure.

'*Prisons/persons detained therein*' is a State subject under Seventh Schedule of Indian Constitution. Administration and management of prisons is the responsibility of respective State Governments. It is governed by the Prisons Act 1894 and the prison manuals of the respective State Governments. Ministry of Home Affairs also provides regular guidance and advice to States and UTs on various issues concerning prisons and prison inmates.

National Crime Record Bureau (NCRB) was set-up in 1986 under the Ministry of Home Affairs. It functions as a repository of information on crime and criminals so as to assist the investigators. It was entrusted with the responsibility for monitoring, coordinating and implementing the Crime and Criminal Tracking Network & Systems (CCTNS) project since 2009. Other reports released by NCRB: *Accidental Deaths & Suicides in India; Crime in India, Fingerprint in India*

UN Women and UN DESA launches Progress on SDG: The Gender Snapshot 2022 Report
The Report entitled "Progress on the Sustainable Development Goals (SDG): The Gender Snapshot 2022" was launched by United Nations (UN) Women and the UN Department of Economic and Social Affairs (UN DESA). The report highlighted that Sustainable Development Goal-5 (SDG-5), or achieving gender equality, will not be met by 2030 at the current pace of progress.

ILO releases Global Estimates of Modern Slavery 2021 Report
International Labour Organization (ILO) has released a Report titled "Global Estimates of Modern Slavery 2021". This report was produced through a collaboration between the ILO, Walk Free and the International Organization for Migration. *Modern slavery*, as defined in the report, is comprised of two principal components – forced labour and forced marriage. Both refer to situations of exploitation that a person cannot refuse or cannot leave because of threats, violence, deception, abuse of power etc.

India's first indigenously developed vaccine for prevention of cervical cancer – CERVAVAC
CERVAVAC, India's first indigenously developed quadrivalent Human Papilloma Virus (qHPV) vaccine for the prevention of cervical cancer, has achieved scientific completion. The vaccine is developed by Serum Institute of India with support from Biotechnology Industry Research Assistance Council (BIRAC), and Bill and Melinda Gates Foundation.

Key initiatives that are currently being implemented to promote basic and translational vaccine research include:

- Indo-US Vaccine Action Programme,
- National Biopharma Mission (To enable and nurture an ecosystem for preparing India's Technological and product development capabilities om biopharmaceuticals)
- Ind-CEPI Mission (India Centric Epidemic Preparedness) for Rapid Vaccine Development and Supporting Indian Vaccine Development.
- Mission COVID Suraksha, which was launched as part of Atmanirbhar Bharat 3.0, with the goal of bringing safe, efficacious, affordable and accessible indigenous COVID 19 vaccines to the citizens of the country at the earliest.

Cervical cancer is a type of cancer that affects the cervix, which is the lower part of the uterus that connects to the vagina. It is usually caused by the human papillomavirus (HPV) and can often be prevented by getting the HPV vaccine.

Ayurveda

Ayurveda is a traditional system of medicine that originated in India over 3,000 years ago. It is based on the concept of balancing the three fundamental energies or "*doshas*" (*vata, pitta, and kapha*) in the body to maintain health and prevent disease. Ayurveda uses a holistic approach to health, incorporating diet, lifestyle, and herbal remedies to restore balance and maintain well-being.

Steps taken by the Government of India to promote Ayurveda:

- *Setting up of National Ayush Mission (NAM):* NAM aims to provide access to affordable and quality Ayurveda services, improve the availability of medicinal plants, and enhance the integration of Ayurveda into the public health system.
- *Development of Ayurvedic Villages:* The government has launched a scheme to develop model Ayurvedic villages to provide comprehensive health care facilities to rural populations and promote Ayurveda.
- *Ayurveda Education and Training:* The government has taken steps to improve the quality of Ayurveda education and increase the number of institutions offering Ayurveda courses.
- *Expansion of Ayurvedic Health Care Services:* The government has expanded the scope of Ayurvedic health care services by setting up Ayurvedic hospitals and clinics and promoting the use of Ayurvedic medicines.
- *Research and Development:* The government has established research institutions to develop and validate Ayurvedic medicines and promote research in Ayurveda.
- *Setting up of Ministry of AYUSH* (Ayurveda, Yoga and naturopathy, Unani, Siddha, and Homeopathy) in 2014.
- *Proposed WHO's Global Centre for Traditional Medicine (Jamnagar, Gujarat):* It will be the first and only global outpost centre for traditional medicine across the world.

Mankading

Indian Women's Cricketer Deepti Sharma ran out England's Charlie Dean standing outside the crease at the non-striker's leading to trigger "Mankading" in the Sport.

Mankading is a method of dismissing a batsman in the sport of cricket. The term is named after Indian cricketer Vinoo Mankad, who first used it in a match in 1947. Mankading involves a bowler running out the non-striker (the batsman who is waiting to face the next delivery) before releasing the ball. This is considered a legitimate dismissal under the Laws of Cricket, but it is also considered to be against the spirit of the game.

Odisha becomes first State to start Encyclopedia on Tribal Communities

Odisha has become the first State in the country to start an encyclopedia on tribal communities to document their age-old and unique traditions. It is published by Scheduled Castes and Scheduled Tribes Research and Training Institute and Odisha State Tribal Museum.

UNICEF, WHO release a report to see progress of WASH in healthcare facilities

UNICEF and WHO have released a report to see progress on WASH (Water, Sanitation and Hygiene) and linkages between WASH and Infection Prevention and Control (IPC). The WHO and UNICEF release progress updates on WASH in households, WASH in schools and WASH in health care facilities every 2 years.

In March 2018, United Nations launched a global call to action for WASH in all health care facilities, noting that health care facilities are essential tools in reducing disease, and that without basic WASH services, health care facilities can instead contribute to more infections, prolonged hospital stays and preventable deaths, including of mothers and babies. Note that, WASH Strategy has been developed in response to the 2030 Agenda for Sustainable Development (*SDG 3: Good Health and Well Being; SDG 6: Clean Water and Sanitation*).

ICAR organizes Kritagya 3.0 for promoting Crop Improvement

Indian Council of Agricultural Research (ICAR) has organized Hackathon 3.0 ''KRITAGYA" on promoting 'speed breeding for crop improvement'. The definition of KRITAGYA is '*KRI*' for Krishi meaning Agriculture, '*TA*' for Taknik meaning Technology and '*GYA*' for Gyan meaning Knowledge. This initiative aims to help the crop sector achieve the desired immediate results by fostering employability, entrepreneurship, innovation, and problem-solving skills. Additionally, it will encourage the nation to adopt more technologically advanced solutions.

9th Session of SEED Treaty held in New Delhi; PPV&FR Act 2001

The Ninth Session of the Governing Body (GB9) of the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) was held in New Delhi. The treaty is also known as SEED Treaty.

Seed treaty or also known as the International Treaty of Plant Genetic Resources for Food and Agriculture (ITPGRFA) is a major legally binding international agreement to conserve, use and manage plant genetic resources. It was adopted by Food and Agricultural Organization in 2001 and came into force in 2004. India is a party to it. The Treaty aims at recognizes the contribution of farmers to the diversity of crops. It provides access to plant genetic materials; and ensures sharing of the benefits.

The *Protection of Plant Varieties and Farmers' Rights (PPV&FR) Act* was enacted in 2001 under Article 27 of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). The Act is in conformity with International Union for the Protection of New Varieties of Plants (UPOV), 1978 (an inter-governmental organization, to provide and promote an effective system of plant variety protection).

The Act introduced intellectual property protection in Indian agriculture and is the world's only IPR legislation which grants intellectual property rights not only to the plant breeders but also to the farmers.

MoU signs between PCIM&H and IPC to promote One Herb One Standard (OHOS)

A Memorandum of Understanding (MoU) was signed between Pharmacopoeia Commission for Indian Medicine and Homoeopathy (Ministry of Ayush) and Indian Pharmacopoeia Commission (Ministry of Health & Family Welfare) in New Delhi for Inter-Ministerial Cooperation for promotion and facilitation of "One Herb, One Standard".

Pharmacopoeia Commission for Indian Medicine and Homoeopathy (PCIM&H) is engaged in the development of Pharmacopoeial Standards for Ayurvedic, Unani, Siddha & Homeopathic drugs. '*Pharmacopoeia*' is an official publication containing a list of medicinal drugs with their effects and directions for their use.

PM inaugurate Atal Bridge for Pedestrians and Cyclists over Sabarmati River, Ahmedabad

Prime Minister of India has inaugurated the 300-metre long 'Atal Bridge' for pedestrians and cyclists across the Sabarmati River in Ahmedabad. The bridge connects the flower garden on the western end of the Sabarmati Riverfront and the upcoming arts and culture centre on the eastern end. It has a design inspired by kites.

FAO releases Blue Transformation Roadmap (2022-30) to highlight aquatic food system importance

Food and Agriculture Organization (FAO) has released Blue Transformation Roadmap (2022-30) to give importance to the aquatic food system as the driver of employment, inclusive growth, SDGs and environmental recovery. It aims to coordinate efforts by countries, communities and agencies to maximize the contribution of the aquatic (both freshwater and saltwater) food systems to food security. The aims re-emphasize the 2021 "Declaration for Sustainable Fisheries and Aquaculture" of the Committee on Fisheries (COFI).

Committee on Fisheries (COFI) is a subsidiary body of FAO, where members review the issues and challenges related to fisheries and aquaculture.

PSA launches WEST to enable women's contribution in Science

Office of the Principal Scientific Adviser (PSA) has launched the Women in Engineering, Science and Technology Initiative (WEST) to enable women's contribution to science.

WEST is a new I-STEM (Indian Science Technology and Engineering facilities Map) initiative which shall provide a separate platform to scientifically inclined women researchers, scientists, and technologists for pursuing research in basic or applied sciences in frontier areas of science and engineering. I-STEM comes under PM-STIAC Mission.

Other related schemes: *KIRAN (to encourage women scientists); CURIE (to develop infrastructure in women universities); Vigyan Jyoti (for girls in high school to pursue STEM)*

CBI carried out Operation Megh Chakra to curb child abuse

CBI has carried out an operation code-named "Megh Chakra". It is a pan-India drive against the circulation and sharing of Child Sexual Abuse Material (CSAM). This is following the inputs received from Interpol's Singapore special unit based on the information received from the authorities in New Zealand. Similar operation carried out by CBI was Operation Carbon in which multiple States and UTs were raided.

Protection of Children from Sexual Offences Act, 2012 was enacted to protect the children from offences of sexual assault, sexual harassment and pornography with due regard for safeguarding the interest and well-being of children. It defines a child as any person under 18 years of age. The Act stipulates that a case of child sexual abuse must be disposed of within one year from the date the offence is reported. It was amended in August 2019 to provide more stringent punishment, including the death penalty, for sexual crimes against children.

CBI launches Operation Garuda against illicit drug trafficking networks

The Central Bureau of Investigation has launched a multi-phase *'Operation Garuda'* against illicit drug trafficking networks to disrupt, degrade and dismantle drug networks with international linkages through the rapid exchange of criminal intelligence on drug trafficking. This global operation was initiated in close

coordination with Interpol and Narcotics Control Bureau, for combating the smuggling of illicit drugs and psychotropic substances, with a special focus on the Indian Ocean region.

UN Global Congress of Victims of Terrorism held in New York, USA
The UN Global Congress of Victims of Terrorism was held at the UN Headquarters in New York, USA. It is organized to provide a forum for victims of terrorism to directly share their experiences, challenges, stories of resilience, and contributions to the larger society in a socially connected setting. It was organized by UN Office of Counter-Terrorism (UNOCT) – Victims of Terrorism Unit.

Telangana to have University of Forest - only 3ʳᵈ in the World
Telangana State Legislative Assembly has approved the University of Forestry (UOF) Act 2022. The 'University of Forestry (UOF) will be the first of its kind in the country. With only Russia and China having forest universities in the world, globally, this will be the third university of forestry. The Government of Telangana has decided to expand Forest College and Research Institute (FCRI) in Hyderabad into a full-fledged university.

MoA&FW organizes events for International Year of Millets 2023
A series of pre-launch events and initiatives have been organized by the Ministry of Agriculture and Farmers Welfare as a run-up to the International Year of Millets 2023 to create awareness and a sense of participation in the country around the ancient and forgotten golden grains. Many events were launched such as 'India's Wealth, Millets for Health', Millet Startup Innovation Challenge, Mighty Millets Quiz, Logo and slogan contest etc.

Note that, India's proposal to observe an International Year of Millets in 2023 was approved by the Food and Agriculture Organisation (FAO) in 2018 and the United Nations General Assembly, in 2021, has declared the year 2023 as the International Year of Millets. This was adopted by a United Nations Resolution.

Millet is a collective term referring to a number of small-seeded annual grasses that are cultivated as grain crops, primarily on marginal lands in dry areas in temperate, subtropical and tropical regions.

Some of the common millets available in India are Ragi (*Finger millet*), Jowar (*Sorghum*), Sama (*Little millet*), Bajra (*Pearl millet*), and Variga (*Proso millet*). The earliest evidence for these grains has been found in Indus civilization and were one of the first plants domesticated for food. India is the largest producer of millet in the world.

10. Economy

Water Trading

NITI Aayog has drafted a policy for "*Water Trading on commodity exchange in India*", similar to Gold, Silver and Oil. It aims to ensure better price delivery of water, efficient use and more investment in water resources.

Water trading is the process of buying and selling water access entitlements, also often called "*Water Rights*". Water trade allows water holders to decide whether they need to buy or sell water at a particular time. First tradable water price futures index was launched on the Chicago Stock Exchange in 2020. It is in practice in Australia, Chile, USA etc.

Multilateral Financial Institutions

India's Union Finance Minister has highlighted that multilateral financial institutions need to recalibrate their functioning to remain relevant in the post-pandemic world.

Multilateral Financial Institutions also known as International Financial Institutions (IFIs) are financial institutions established by two or more countries to encourage international cooperation in managing the worldwide financial system. Some of the examples of such institutions – International Monetary Fund, Asian Development Bank, Global Environment Facility, among others.

Govt unveils National Logistics Policy

Government has unveiled the National Logistics Policy (NLP) to promote robust flow of goods across the country and improve Indian goods competitiveness in domestic as well as global markets. Logistics means the overall process of managing how the resources are acquired, stored and transported to a final destination.

Pillars of NLP: It is based on 4 major pillars:
- Unified Logistics Interface Platform
- Integration of Digital System (IDS)
- Ease of Logistics (E-Logs)
- System Improvement Group (SIG)

Government initiatives for systematic infrastructure development for improved efficiency:
- *PM Gati Shakti* – National Master Plan to build world class infrastructure and to fill the missing gaps for a holistic and integrated development. It encompasses ongoing initiatives like Bharatmala Pariyojana, Sagarmala etc.
- *National Rail Plan* – to create a 'future ready' Railway system by 2030.
- The *Logistics Ease Across Different States (LEADS)* Index – to assess logistics performance of States and UTs and further improve their logistics performance.
- Several other reforms were introduced in the last decade such as – paperless EXIM trade process through e-Sanchit, faceless assessment for customs, e-way bills, FASTag, GST etc.; for increasing efficiency and other benefits.

Banking System Liquidity

It was reported that after remaining in surplus mode since May 2019, the Indian banking system liquidity turned into a deficit mode in September 2022.

Banking System Liquidity refers to 'readily available cash that banks need to meet short-term business and financial needs. It is understood through Liquidity Adjustment Facility (LAF), the primary instrument of the RBI's operations to inject or absorb liquidity into the banking system.

RBI's card-on-file (CoF) Tokenization Norms to be effective from 1st October 2023
Reserve Bank of India's Card-on-File (CoF) tokenisation norms are effective from 1st October 2023.
Tokenisation is a process by which card details in a CoF transaction are replaced by a unique code or token allowing purchases to go through without exposing sensitive details. Under the process of tokenisation, online players or merchants are not allowed to store card number, CVV and expiry date for processing online transactions. Any existing details that were saved by merchants will be deleted. Tokenisation and de-tokenisation (conversion of the token back to actual card details) can be performed only by the card issuing Bank or Visa / Mastercard / Rupay who are referred to as authorised card networks.

WIPO releases Global Innovation Index 2022
According to the latest Global Innovation Index, published by WIPO, India has become 40th (*ranked 46th in the 2021 index*) most innovative country in the 132-nation Global Innovation Index (GII). In terms of region and income group, India ranks at the top in Central and Southern Asia, and in the Lower middle-income group. Also, India continues to hold 1st rank in the ICT services exports indicator.

The *Global Innovation Index (GII)* is an annual ranking of countries by their capacity, and success in, innovation. It is published by Cornell University, INSEAD, and the World Intellectual Property Organization, in partnership with other organisations and institutions. The index was started in 2007 by INSEAD and World Business, a British magazine. The GII is commonly used by corporate and government officials to compare countries by their level of innovation.
GII 2022 Theme: *"What is the future of innovation-driven growth?"*

Top 5 countries in GII 2022: *Switzerland, USA, Sweden, UK, and the Netherlands.*

National Conference of State Tourism adopts Dharamshala Declaration
National Conference of State Tourism was concluded with the adoption of Dharamshala Declaration. It affirms commitment toward developing "sustainable and responsible tourism" and situates India as a "global leader in the tourism sector by 2047".

The document titled "Dharamshala Declaration-2020: Sustainable and Responsible Tourism" asserts that India will play a pivotal role in contributing toward global tourism recovery driven mainly through domestic tourism. It also says that the National Tourism Policy has been drafted with a holistic vision and strategy to revive India's tourism and targets to achieve USD 1 Trillion by executing proper errands in the sector by 2047. Note that, the World Travel and Tourism Council's 2019 report ranks India's tourism at 10th in terms of its contribution to World GDP (Gross Domestic Product).

Some of the initiatives related to Tourism in India:
- Swadesh Darshan Scheme
- Draft National Tourism Policy 2022
- Dekho Apna Desh Initiative
- National Green Tourism Mission

Nutri-Gardens

Poshan Vatikas or Nutri- gardens are being set up across the country to provide easy and affordable access to fruits, vegetables, medicinal plants and herbs.

Nutri-garden is an advanced form of kitchen garden in which fruits and vegetables are grown as a source of food and income. In order to provide the right kind of nourishment, '*Poshan Vatikas*' or '*Nutri-gardens*' are being set under POSHAN Abhiyaan. It will provide easy and affordable access to locally produced fruits, vegetables, medicinal plants and herbs to women and children.

Windfall Tax

Government has defended the windfall tax as a way to rein in the "phenomenal profits" made by some oil refiners who chose to export fuel to reap the benefits of skyrocketing global prices while affecting domestic supplies.

A *windfall tax* is a higher tax rate levied by governments against certain industries when economic conditions allow those industries to experience above-average profits. So, when any industry (*for instance oil and gas*) benefits from an event or a one-off external situation (*the Russia-Ukraine war*) that they were not responsible for and make sudden profits, these profits are taxed separately, over and above the normal taxes that these companies pay to the governments.

Ministry of Finance constitutes Expert Committee for assessing VC and PE Investments

The Ministry of Finance has constituted an expert committee headed by former SEBI chief M. Damodaran to examine and suggest appropriate measures to address regulatory issues to scale up investments by Venture Capital (VC) and Private Equity (PE).

Private Equity is an alternative investment class that invests in or acquires private companies that are not listed on a public stock exchange.

Venture Capital (VC) is a form of private equity and a type of financing that investors provide to startup companies and small businesses that are believed to have long-term growth potential. Venture capital generally comes from well-off investors, investment banks, and any other financial institution.

IFSCA launches Fintech Incentive Scheme

The International Financial Services Centres Authority, with an overall objective to promote the establishment of a FinTech Hub, at GIFT International Financial Services Centre (IFSC) in India, has launched the IFSCA (FinTech Incentive) Scheme for providing financial support to FinTech activities in the form of specific grant(s). The types of incentives for eligible applicants are: FinTech Start-up grant, Proof of Concept (PoC) grant, Sandbox grant, Green FinTech Grant, Accelerator Grant etc.

The *International Financial Services Centres Authority (IFSCA)*, headquartered at GIFT City, Gandhinagar Gujarat, has been established under the International Financial Services Centres Authority Act, 2019. It works as a unified authority for the development and regulation of financial products, financial services and financial institutions in the International Financial Services Centre (IFSC) in India.

MoP&NG sets up a Kirit Parakh Committee to review current gas pricing

The Ministry of Petroleum and Natural Gas has set up a committee under the energy Expert 'Kirit Parikh' to review the current gas pricing formula.

Gas priced under APM (*Administered Price Mechanism*) is set by the Government of India. Under this system, the oil and gas sector are controlled at 4 stages viz., production, refining, distribution and marketing.

Non-APM or Free Market Gas is further divided into 2 categories, namely, domestically produced gas from Joint Venture fields and imported LNG. The pricing of JV gas is governed in terms of the PSC (Production Sharing Contract) provisions. While the price of LNG under term contracts is governed by the SPA (Sale and Purchase Agreement) between the LNG seller and the buyer, the spot cargoes are purchased on mutually agreeable commercial terms.

MoDNER organizes virtual conference SymphoNE to promote NE region Tourism
The Virtual Conference 'SymphoNE' is being organized by the Ministry of Development of the North-Eastern Region on the occasion of World Tourism Day (27th September). It aims to create a roadmap to showcase the unexplored beauty of North-East India & boost the tourism Sector in North-Eastern Region. India's North-East region is marketed as a '*Traveller's Unexplored Paradise*', with a rare combination of Scenic Beauty, Unique Cultures and abundant Natural resources.

Govt. launches SCALE app to provide one-stop solution for skill development in leather industry
Government has launched the SCALE (Skill Certification Assessment for Leather Employees) app which provides a one-stop solution for the skilling, learning, assessment, and employment needs of the leather industry.

REC Ltd. accorded the Maharatna Company Status
Power sector-focussed Non-Banking Finance Company (NBFC) – REC Ltd. (formerly Rural Electrification Corporation Limited) has been given the status of a 'Maharatna' Central Public Sector Enterprise.

Incorporated in 1969, REC Ltd. focuses on power sector financing and development across India. It provides financial assistance in the power sector. REC has played a key role in the success of the flagship schemes such as DDUGJY, SAUBHAGYA and is currently the nodal agency for Revamped Distribution Sector Scheme (RDSS). It is an organization under Ministry of Power.

The criteria laid down by the Government for grant of Maharatna, Navratna and Miniratna status to Central Public Sector Enterprises (CPSEs) is given below:

1. Criteria for grant of Maharatna status to CPSEs
The CPSEs meeting the following criteria are eligible to be considered for grant of Maharatna status:
- Having Navratna status
- Listed on Indian stock exchange with minimum prescribed public shareholding under SEBI regulations
- An average annual turnover of more than Rs. 25,000 crores during the last 3 years
- An average annual net worth of more than Rs. 15,000 crores during the last 3 years
- An average annual net profit after tax of more than Rs. 5,000 crores during the last 3 years
- Should have significant global presence/international operations.

2. Criteria for grant of Navratna status to CPSEs
The CPSEs which are Miniratna I, Schedule 'A' and have obtained 'excellent' or 'very good' MOU rating in 3 of the last 5 years and having composite score of 60 or above in 6 selected performance indicators *(Net Profit to Net worth, PBDIT to Capital employed, Earning Per Share etc.)* are eligible to be considered for grant of Navratna status.

3. Criteria for grant of Miniratna status to CPSEs

Miniratna Category-I status: The CPSEs which have made profit in the last 3 years continuously, pre-tax profit is Rs.30 crores or more in at least one of the three years and have a positive net worth are eligible to be considered for grant of Miniratna-I status.

Miniratna Category-II status: The CPSEs which have made profit for the last 3 years continuously and have a positive net worth are eligible to be considered for grant of Miniratna-II status.
- Miniratna CPSEs should have not defaulted in the repayment of loans/interest payment on any loans due to the Government.
- Miniratna CPSEs shall not depend upon budgetary support or Government guarantees.

Govt. launches Mentorship program for Startups – SETU
Government has launched the US Startup SETU - Supporting Entrepreneurs in Transformation and Upskilling programme. The initiative would connect start-ups in India to US-based investors and start-up ecosystem leaders with mentorship and assistance in various areas including funding, market access and commercialization.

The interaction will be supported through the mentorship portal under the Startup India initiative MAARG, or the Mentorship, Advisory, Assistance, Resilience, and Growth program, which is a single-stop solution finder for startups in India.

Office of Registrar General of India releases Sample Registration System Statistical Report 2020
Office of Registrar General & Census Commissioner has released 'Sample Registration System (SRS) Statistical Report 2020'. SRS is the only official source of various demographic indicators in India except the census. It provides annual estimates of various fertility and mortality indicators.

According to the Report, the country has been witnessing a progressive reduction in IMR, U5MR and NMR since 2014 towards achieving the Sustainable Development Goals (SDG) targets by 2030.
Basic Terms
- *Crude Birth Rate:* It is expressed as births per 1,000 population.
- *The Total Fertility Rate:* It is the average number of children a woman would bear at her reproductive age. The current fertility rate for India in 2022 is 2.159 births per woman, a 0.92% decline from 2021.
- *Neo-natal deaths:* deaths within the first 28 days of life of an infant).
- *U5MR:* The mortality rate of children aged under 5 years.
- The infant mortality Rate is the number of deaths of children under one year of age per 1000 live births.

Registrar General of India was founded in 1961 by the Government of India under the Ministry of Home Affairs. It conducts and analyses the results of demographic surveys (including the Census of India and the Linguistic Survey of India).

SDG Target 3| Health: By 2030, end preventable deaths of newborns and children under 5 years of age. It aims to reduce neonatal mortality and under-5 mortality.

RBI to remove Central Bank of India from PCAF
RBI has decided to remove Central Bank of India from its Prompt Corrective Action Framework (PCAF). The RBI had imposed the PCA norms on the bank in June 2017 due to its high net NPA and negative return of assets (RoA).

Prompt Corrective Action (PCA) is a framework under which banks with weak financial metrics are put under watch by the Reserve Bank of India (RBI). The RBI introduced the PCA framework in 2002 as a structured

early-intervention mechanism for banks that become under-capitalized due to poor asset quality, or vulnerable due to loss of profitability. It aims to check the problem of Non-Performing Assets (NPAs) in the Indian banking sector.

A *Non-Performing Asset (NPA)* is a loan or advance for which the principal or interest payment remains overdue for a period of 90 days. Banks are required to classify NPAs further into Sub-standard, Doubtful and Loss assets.

Capital Adequacy Ratio (CAR): The CAR is a measure of a bank's available capital expressed as a percentage of a bank's risk-weighted credit exposures. The Capital Adequacy Ratio, also known as Capital-to-Risk Weighted Assets Ratio (CRAR), is used to protect depositors and promote the stability and efficiency of financial systems around the world.

A *leverage ratio* is any one of several financial measurements that assesses the ability of a company to meet its financial obligations. Some of the examples are:
- *Equity Ratio:* This ratio indicates total owner contribution in the company.
- *Debt Ratio:* This ratio indicates total leverage used in the company.
- *Debt To Equity Ratio:* This ratio indicates total debt used in the business in comparison to equity.

11. Important Days

International Day for the Preservation of the Ozone Layer – 16th September

International Day for the Preservation of the Ozone Layer is celebrated every year on 16th September.

Theme for the 2022 was Montreal Protocol@35: global cooperation protecting life on earth, recognizing impact of Montreal Protocol on climate change and need to forge global cooperation to address climate challenges.

Montreal Protocol: In 1985, world's governments adopted Vienna Convention for the Protection of the Ozone Layer. Under the Convention's Montreal Protocol (1987), governments, scientists and industry worked together to cut out 99 per cent of all ozone-depleting substances (ODS). It is the only UN treaty ever that has been ratified by all 198 UN Member States. India became a Party to Montreal Protocol in 1992 and has successfully met phase out targets of all ODS as per Montreal Protocol Schedule.

World Coconut Day – 2nd September

World Coconut Day is observed annually on 2nd September to highlight the significance of coconut in our daily lives and how beneficial are they for health.
Theme for the year 2022: *"Growing coconut for a better future and life"*

Hindi Diwas – 14th September

Every year, 14th September is celebrated as Hindi Diwas in India. It aims to raise awareness about the language and also commemorate the event when it was adopted as one of the official languages of India. Hindi, written in the Devanagari script, was adopted as the official language of the Republic of India on 14th September 1949, , the day when the Constituent Assembly of India took the decision to make Hindi the official language of the Union government, while English was to hold the status of associate language for 15 years through the Munshi-Ayyangar formula, named after the drafting committee members K M Munshi and N Gopalaswamy Ayyangar.

Article 351: promotion and development of the Hindi language in a way that it could serve as a means of expression in all matters.

World Hindi Day: January 10 (to commemorate the 1st Hindi Conference in Nagpur, 1975)

International Day for the Preservation of the Ozone Layer

The United Nations observes 16th September every year as International Day for the Preservation of the Ozone Layer. Theme of the day for 2022 is *'Global Cooperation Protecting Life on Earth'*.

The day aims to create awareness about the importance and need of the Ozone layer which is the single protection on Earth against UV rays coming out from the sun.

Ozone (O_3) is a highly reactive gas composed of 3 oxygen atoms. It is both a natural and a man-made product that occurs in the Earth's upper atmosphere, (*the stratosphere*) and lower atmosphere (*the troposphere*). While the entire UV-C and some of UV-B are absorbed by the ozone layer and the atmosphere, UV-A makes its way to our planet. Humans require UV-B to generate Vitamin D, but an excess of these radiations can cause serious illness and also result in a reduced crop yield.

World Tourism Day – 27th September
The World Tourism Day (WTD) is being observed annually on 27th September. The host country for the Day was Bali, Indonesia. The day was first observed in 1980. This date was chosen by United Nations World Tourism Organization (UNWTO) to commemorate the adoption of Statutes of UNWTO in 1970.
Theme for the year 2022: *"rethink tourism"*

United Nation International Days: International days are occasions to educate the public on issues of concern, to mobilize political will and resources to address global problems, and to celebrate and reinforce achievements of humanity. The existence of international days predate the establishment of the United Nations, but the UN has embraced them as a powerful advocacy tool.

International Day of Democracy – 15th September
United Nations observes 15th September every year as International Day of Democracy. Theme for the year: *"importance of media freedom to democracy, peace, and delivering on the Sustainable Development Goals"*

The day was established through a resolution passed by the UN General Assembly in 2007, encouraging governments to strengthen and consolidate democracy. The idea stems from the Universal Declaration on Democracy. It was adopted by the Inter-Parliamentary Council in its 161st Session on 16th September 1997.

International Literacy Day (ILD) – 8th September
The International Literacy Day (ILD) is being observed every year on 8th September to highlight the importance of literacy and to throw light on issues that exist and affect local communities around us. The Day was proclaimed as International Literacy Day (ILD) by the United Nations Educational, Scientific and Cultural Organization (UNESCO) in 1966.
Theme for the year 2022: "*Transforming Literacy Learning Spaces*"

International Day of Peace – 21st September
The International Day of Peace is observed around the world every year on 21st September. It is dedicated to world peace and specifically the absence of war & violence, such as might be occasioned by a temporary ceasefire in a combat zone for humanitarian aid access.
Theme for the year 2022: *"End racism. Build peace"*.

Rashtriya Poshan Maah 2022 celebrated in the month of September
Ministry of Women and Child Development is celebrating the 5th Rashtriya Poshan Maah 2022 across the nation in the month of September. Under the POSHAN Abhiyaan, 'Rashtriya Poshan Maah' is celebrated each year in September with the aim to create awareness about nutrition and healthy food. Its objective is to trigger Poshan Maah through Gram Panchayats as Poshan Panchayats with a key focus on "*Mahila aur Swasthya*" and "*Bacha aur Shiksha*".

POSHAN (Prime Minister's Overarching Scheme for Holistic Nutrition) Abhiyaan is a Multi-Ministerial Convergence Mission with the vision to ensure the attainment of Malnutrition Free India by 2022. Earlier known as National Nutrition Mission, in 2018, it was launched to address the problem of malnutrition in the country in a phased manner through life-cycle approach.

International Day for Universal Access to Information – 28th September
International Day for Universal Access to Information is observed every year on 28th September. The day was declared by UNESCO in 2015 and adopted by UNGA in 2019.
Theme for the year 2022: *"Artificial Intelligence, e Governance and Access to Information"*

International Day for the Total Elimination of Nuclear Weapons – 26th September

The United Nations observes 26th September every year as the International Day for the Total Elimination of nuclear weapons. The aim of the day is to enhance public awareness about the threat posed to humanity by nuclear weapons and the necessity for their total elimination.

Teachers' Day – 5th September

Every year, Teachers' Day in India is celebrated on the 5th of September. This day is celebrated to honour Dr. Sarvepalli Radhakrishnan's birth anniversary, a Bharat Ratna awardee. The first Teachers' Day in India was celebrated in 1962.
Theme: *'Leading in crisis, reimaging the future'*

National Engineer's Day – 15th September

India observes National Engineer's Day on September 15 every year to recognise the contribution of engineers in the development of the nation.

This day commemorates the birth anniversary of Sir Moksha Gundam Visvesvaraya, who is considered one of the greatest engineers of India. MV was the Chief Engineer of Krishna Raja Sagar dam in the north-west suburb of Mysuru city. Note that, along with India, Sri Lanka and Tanzania also celebrate Engineers Day on September 15.

Antyodaya Diwas – 25th September

Antyodaya Diwas is celebrated annually on 25th September in India. It marks the birth anniversary of Indian leader Pandit Deendayal Upadhyaya and is celebrated in his honour to remember his life and legacy.

12. Culture

PM visits Sri Adi Shankaracharya Janma Bhoomi in Kerala
The Prime Minister of India has visited Sri Adi Shankaracharya '*Janma Bhoomi Kshetram*' at Kalady village in Kerala.

Adi Shankara, also known as Jagadguru Sri Adi Shankaracharya, was an Indian philosopher and theologian known for '*Advaita Vedanta*' and '*Dashanami Sampradaya*'. He took '*sanyas*' at an early age and worked to revive Sanatana Dharma and re-establish right values in society. He is also considered as an incarnation of Lord Shiva.

Advaita Vedanta (Non-Dualism): According to it, Brahman (*Atman*) is the Paramartha or absolute reality which doesn't change. It is metaphysically true and ontologically accurate. Individual soul is identical to it and the world has no separate existence apart from Brahman. The surroundings or physical environment is the ever-changing '*vyavahara*' or empirical (*pragmatic*) reality created by illusion or '*māyā*'. Pratibhasika or deceptive reality is another level of reality constructed through imagination.

UNESCO Lists 50 Iconic Textile Crafts
UNESCO has released list of 50 exclusive and iconic heritage textile crafts of the country under the Report titled '*Handmade for the 21st century: Safeguarding Traditional Indian Textiles*'.

The origin of Indian textiles can be traced to the Indus valley civilization as early as 5th millennium BC. People of that civilization used *homespun cotton* for weaving their garments and used indigo to color their fabric. Homespun cotton is ….

Traditional Indian textiles can be divided into:
- Embroidered textiles (*Phulakri, chikankari*),
- Resist dyed textiles (*Bandhani, Ikat*),
- Printed textiles (*Kalamkari, Bagru prints*) and
- Hand-woven textiles (*Banaras Brocades, Kashmir Shawls*) etc.

Initiatives related to the Textile Sector:
- *Amended Technology Upgradation Fund Scheme (ATUFS):* In 2015, the Government approved the scheme for technology upgradation of the textiles industry.
- *Scheme for Integrated Textile Parks (SITP):* To assist small and medium entrepreneurs in the textile industry to clusterize investments in textile parks by providing financial support for world class infrastructure in the parks.
- *Power-Tex India:* It comprises new research and development in power loom textiles, new markets, branding, subsidies and welfare schemes for the workers.
- *Silk Samagra Scheme:* It focuses on improving the quality and productivity of domestic silk thereby reducing the country's dependence on imported silk.
- *Jute ICARE:* This pilot project launched in 2015 is aimed at addressing the difficulties faced by the jute cultivators by providing them certified seeds at subsidized rates, and by popularizing several newly developed retting technologies under water limiting conditions.
- *National Technical Textile Mission:* It aims to position the country as a global leader in technical textiles and increase the use of technical textiles in the domestic market. It aims to take the domestic market size to USD 40 billion to USD 50 billion by 2024.

SC asks for the protection of Taj Mahal Architecture
The Supreme Court has repeatedly called attention to the failures in protecting the Taj Mahal known for its architectural marvels – intricate lattice structures and designs from various forms of pollution.

Taj Mahal is a mausoleum of white marble built by the Mughal Emperor, Shahjahan, in memory of his wife Mumtaz Mahal. It stands on the banks of the river Yamuna. It is also a brilliant representation of the pinnacle of Mughal architecture and grandeur. The construction of the Taj Mahal was completed within a period of 17 years from 1631 AD to 1648 AD.

Cut from marble or red sandstone in ornamental patterns, '*jaali*' was a distinct architectural feature in India between the 16th and 18th Century (*including the Taj Mahal*). Now, in their search for sustainable cooling solutions, architects are reviving this ancient design to construct comfortable, low-carbon buildings. Jaali's cooling feature relies on the 'Venturi effect' in a similar way to an air conditioning unit.

PM inaugurates Subhas Chandra Bose Statue at India Gate
A statue of Subhas Chandra Bose was unveiled by Prime Minister of India at India Gate, inaugurated along with the Kartavya Path which was earlier known as 'Rajpath'.

Tamil Novel – Ponniyin Selvan
There is a film which is in the news named - Ponniyin Selvan-I, a two-part film franchise inspired by an immensely popular work of historical fiction – Ponniyin Selvan – by author Kalki Krishnamurthi (1899-1954) and serialized from 1950-54 on a weekly basis in Tamil magazine '*Kalki*'. The novel's popularity stems from its connection with Tamil Nadu's culture and heritage through a narrative woven around the Chola rule. It tells the story of the early days of Rajaraja I, born Arunmozhi Varman and considered the greatest of all Chola rulers.

Arabic Version of "Majma Ul-Bahrain" of Dara Shikoh
Vice President of India has released the Arabic Version of "*Majma Ul-Bahrain*" of Dara Shikoh.

Majma-ul-Bahrain (which means 'Confluence of Two Oceans') throws invaluable light on the similarities between religions and helped bring stronger unity among the people of India. In this book, Dara Shikoh listed one by one, all the commonalities between Hinduism (*Vedanta*) and Islam (*Sufism*) and came to the conclusion that the difference between Islam and Hinduism is only verbal.

*Dara Shikoh, the e*ldest son of Shah Jahan, he is described as a "liberal Muslim" who tried to find commonalities between Hindu and Islamic traditions. He is known as a pioneer of the academic movement for interfaith understanding in India. His most important works, Majma-ul-Bahrain (*Mingling of Two Oceans*) and Sirr-i-Akbar (*Great Mystery*) are devoted to the cause of establishing connections between Hinduism and Islam. He translated the Upanishads and other important sources of Hindu religion and spirituality from Sanskrit to Persian.

PM inaugurates Smriti Van Memorial in the memory of Bhuj Earthquake in Gujarat
Prime Minister of India has inaugurated the Smriti Van Memorial, which celebrates the courage shown by people during the devastating 2001 earthquake in the Kutch region of Gujarat. It is built on Bhujiyo Hill near Bhuj town. It is to be noted that the forest around the Memorial has been developed under the Miyawaki method.

Miyawaki is a technique pioneered by Japanese botanist 'Akira Miyawaki', that helps build dense, native forests in a short time. His method includes planting trees (only native species) as close as possible in the same area which not only saves space, but the planted saplings also support each other in growth and block sunlight reaching the ground, thereby preventing the growth of weed. The native trees of the region are identified and divided into four layers — shrub, sub-tree, tree, and canopy.

Indian cities, Nilambur and Thrissur enters into UNESCO Global Network of Learning Cities

The Indian cities, Nilambur and Thrissur (*known as cultural capital*) in Kerala, have gained recognition from UNESCO after they became the nation's first entrants in the UNESCO Global Network of Learning Cities. The group of global cities also includes some of the most developed cities like Beijing, Shanghai, Hamburg, Athens, Incheon, Bristol, and Dublin.

The *UNESCO Global Network of Learning Cities* is an international policy-oriented network that paves way for the development and progress of other cities by sharing ideas and innovations at a global platform. The cities included in the list can benefit greatly from the exchange of ideas and solutions for development with other cities.

Arattupuzha Velayudhya Panicker

A movie released in the Malayalam film industry – 'Pathonpatham Noottandu' (*Nineteenth Century*) – is based on the life of Arattupuzha Velayudha Panicker, a social reformer from the Ezhava community in Kerala who lived in the 19th century.

Arattupuzha Velayudha Panicker challenged the domination of upper castes or '*Savarnas*' and brought about changes in the lives of both men and women through the *Achippudava Samaram* strike (for the right to wear a lower garment beyond the knees for women of backward class), *Ethappu Samaram* (for the right to wear an upper body cloth for women) and *Mukkuthi Samaram* (for the rights of lower-caste women to wear 'mukkuthi' or nose-ring, and other gold ornaments.

Govt. announces special tourist circuit for Dr. B.R. Ambedkar

The Government has announced a special tourist circuit named Ambedkar circuit, which encompasses 5 key sites associated with Dr B.R. Ambedkar, termed as '*Panchteerth*'.

The 5 cities in the tourist circuit as announced by the government are:
(i) *Janma Bhoomi:* Ambedkar's birthplace in Madhya Pradesh's Mhow.
(ii) *Shiksha Bhoomi:* the place in London where he stayed while studying in the UK.
(iii) *Deeksha Bhoomi:* the place in Nagpur where he embraced Buddhism.
(iv) *Mahaparinirvan Bhoomi:* the place of his demise in Delhi.
(v) *Chaitya Bhoomi:* the place of his cremation is in Mumbai.

He is known as the Father of the Indian Constitution and was India's first Law Minister. He was the Chairman of the Drafting Committee for the new Constitution. He was a social reformer, jurist, economist, author, polyglot (knowing or using several languages) orator, a scholar and thinker of comparative religions. He participated in all three Round Table Conferences. In 1932 he signed the Poona pact with Mahatma Gandhi, which abandoned the idea of separate electorates for the depressed classes (Communal Award). His ideas before the Hilton Young Commission served as the foundation of the Reserve Bank of India (RBI).

Journals: Mooknayak (1920), Bahishkrit Bharat (1927), Samatha (1929), Janata (1930).

Books: Annihilation of Caste; Buddha or Karl Marx; The Untouchable: Who are They and Why They Have Become Untouchables; Buddha and His Dhamma; The Rise and Fall of Hindu Women.

Organisations: Bahishkrit Hitkarini Sabha (1923), Independent Labor Party (1936), Scheduled Castes Federation (1942).