



# SROTHAS

*A Monthly Magazine for UPSC Civil Service Examination*

**CURRENT  
AFFAIRS 2023**

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# I. POLITY & GOVERNANCE

## 1. Article 371 F

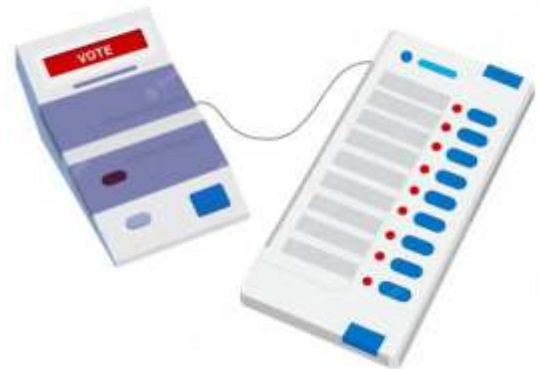
- Sikkim finally opted to become a full-fledged 22nd State of the Indian Union with effect from 26 April 1975 vide the Constitution 36th Amendment Act 1975 with special provision laid for the State under article 371(F) of the Constitution of India
- According to Article 371F, The members of the Legislative Assembly of Sikkim shall elect the representative of Sikkim in the House of the People

## 2. National Party Status

- Aam Aadmi Party (AAP) has qualified to become India's ninth national party, with its performance in the Gujarat elections
- The National Party is entitled to a reserved symbol for its candidates contesting from across the country
- Candidates from a national party require only one proposer to file their nominations and are entitled to two sets of electoral rolls free of cost

## 3. Electronic Voting Machine (EVM)

- An EVM consists of a "control unit" and a "balloting unit".
- It runs on a single alkaline battery fitted in the control unit, and can even be used in areas that have no electricity



- EVMs were 1st used in 1982 Kerala Assembly elections (by-election)
- An EVM used by the Election Commission of India can record a maximum of 2,000 votes

## 4. Point of Order

- A Member can raise a point of order when the proceedings of the House do not follow the normal rules of procedure

- It is usually raised by an opposition member in order to control the government

## 5. Quality Control Orders

- BIS implements Quality Control Orders (QCOs) issued by the Government which ensure that the notified products conform to the requirements of the relevant Indian Standard(s)
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## 6. Ranganath Mishra Commission

- It was constituted to look into various issues related to the linguistic and religious minorities in the country
- The report recommended that SC status be completely delinked from religion and be made religion-neutral like STs

## 7. Administered Price Mechanism (APM) Price

- Under the APM, the Indian government sets the price of natural gas produced by oil and gas companies
- The price of APM gas, which accounts for about two-thirds of India's natural gas production, has been determined as

per the 'modified' Rangarajan formula since November 1, 2014

## 8. National Technical Research Organisation(NTRO)

- The NTRO was created after the 1999 Kargil conflict as a dedicated technical intelligence agency
- It reports directly to the PMO and National Security Advisor(NSA)
- It has the right to lawfully intercept and monitor communications externally

## 9. Prohibition of Child Marriage Act, 2006

- a child has been defined as "a person who, if a male, has not completed twenty-one years of age, and if a female, has not completed eighteen years of age."
- According to NFHS 2019-21 data, West Bengal, Bihar and Tripura top the list, with more than 40% of women aged 20-24 married below 18.
- Child marriages in India are highest in the Eastern parts of the country while they are lower in the Northern and Southern parts of the Country

## II. ENVIRONMENT

### 1. Sloth Bear

- Sloth bears are one of the eight bear species found across the world
- Their range includes India, Sri Lanka and southern Nepal. 90% of the global Sloth Bear population is found in India
- IUCN: Vulnerable; Wildlife Protection Act, 1972: Schedule I



### 2. Parambikulam Tiger Reserve

- It is a protected area in Palakkad district of Kerala.
- The reserve is credited with the first scientifically managed teak plantation in the world which was later merged with the forest land
- It has the world's largest and oldest teak tree named "Kannimara"

### 3. Mission Arikomban

- 'Mission Arikomban' is a mission by the Kerala forest department to capture a wild elephant called 'Arikomban' posing threats to human habitations in Idukki district
- The forest department has initiated 'Mission Arikomban', an operation to capture the rogue tusker.

### 4. Earth Hour

- It is organized by World Wildlife Fund (WWF)
- It takes place on the last Saturday of March every year
- "Earth Hour" encourages people to switch off all lights for an hour, from 8:30 pm to 9:30 pm local time to promote awareness of climate change challenges and energy conservation

### 5. W12+ Blueprint

- Blueprint is one of the W12 programs for urban water challenges
- The W12+ Blueprint is an online information tool for urban water solutions



- It was launched by two NGOs (SOS and ECOCIV) in partnership with UNESCO IHP

## 6. Hydro- SOS

- Hydrological Status and Outlook System (HydroSOS) is an initiative envisioned
- by the Commission for Hydrology and overseen by the WMO Hydrological Assembly

## 7. Safety Across Asia for the Global Environment (SAFE)

- The Safety across Asia for the global Environment (SAFE) project, funded by the European Union and implemented in cooperation with the Food and Agriculture Organization of the United Nations (FAO) and the United Nations Environment Programme (UNEP)
- Funded by the European Union Four Asian countries – China, Thailand, Vietnam and Laos – were initially selected for the survey under the project.

## 8. Carbon Border Adjustment Mechanism (CBAM)

- European Union (EU) pushing for the world's first carbon border tax on imported goods- Carbon Border Adjustment Mechanism (CBAM) from 2026



- A carbon border tax is a tax on carbon emissions imposed on imported goods from countries with less strict climate policies
- Recently, India opposed CBAM or carbon border tax proposed by European Union (EU) in 27th edition of Conference of Parties (COP) in Sharm El Sheikh.

## 9. Bioluminescence

- It is the property of a living organism to produce and emit light through chemical reactions in proteins



- Bioluminescence occurs when the oxidation of a small-molecule luciferin is catalysed by an enzyme luciferase to form an excited-state species that emits light

## 10. Great Pacific Garbage Patch

- The Great Pacific Garbage Patch is a collection of marine debris in the North Pacific Ocean
- Great Pacific Garbage Patch is the largest accumulation of ocean plastic in the world and is located between Hawaii and California
- Recently researchers from Canada, the Netherlands, and the U.S. have reported that coastal lifeforms have colonized plastic items in the Great Pacific Garbage Patch.

## III. SCHEMES

### 1. Stand Up India Scheme

- Ministry of Finance; Launched in 2016, the government has extended the Stand Up India (SUI) Scheme, up to the year 2025
- SC / ST and / or women entrepreneurs, above 18 years of age are eligible
- Loans under the scheme is available only for green field projects

### 2. Mission 50K-EV4ECO

- Under this mission, SIDBI will directly provide loans to eligible small and medium enterprises (SMEs) for the purchase of EVs and developing charging infrastructure, including battery swapping
- The Indian automobile industry ranked fifth largest globally and is expected to become the third largest by 2030.

### 3. One Indian Audit & Accounts Department One System (OIOS)

- It is a web-enabled IT application with support for multiple languages, offline functionality and a mobile app, for complete digitalisation of the audit process

- All new audit work in offices under the CAG will take place only through OIOS.

### 4. Export Promotion Capital Goods (EPCG) Scheme

- It is a trade promotion scheme implemented by the Indian government
- It allows the duty-free import of capital goods for the purpose of export production in India
- The EPCG scheme is administered by the Directorate General of Foreign Trade (DGFT) and is governed by the Foreign Trade Policy of India

### 5. SATHI Portal

- The Seed Traceability, Authentication and Holistic Inventory (SATHI) portal is a Centralized Online System designed to deal with the challenges of seed production, quality seed identification and seed certification
- It has been developed by the National Informatics Centre (NIC) in collaboration with the Union Ministry of Agriculture and Farmers Welfare on the theme of 'Uttam Beej Samridh Kisan

## 6. Bharat Gaurav Scheme

- To tap the huge potential of tourism, the Railways announced the 'Bharat Gaurav' scheme, under which theme based tourist circuit trains, on the lines of the Ramayana Express
- These trains will be run by both private players and IRCTC Service providers, who can be an individual, company, society, trust, joint venture or consortium, will be free to decide themes and circuits such as Guru Kripa trains for covering important places of Sikh culture or the Ramayana Express for places connected with Lord Ram.

## 7. National Mission on Cultural Mapping (NMCM)

- The NMCM aims to develop a comprehensive database of art forms, artists and other resources across the country
- NMCM has now been handed over to Indira Gandhi National Centre for the Arts (IGNCA) in 2021
- Three important objectives of NMCM are: National Cultural Awareness Abhiyan, Nationwide Artist Talent Hunt/Scouting Programme, National Cultural Workplace.

## 8. Language Friendship Bridge Project

- The Indian Council for Cultural Relations (ICCR) has envisaged a project called 'The Language Friendship Bridge', which aims to expand cultural footprint in neighborhoods with whom India has historical ties
- The Project will create a pool of experts in languages spoken in countries like Myanmar, Sri Lanka, Uzbekistan and Indonesia to facilitate better people-to-people exchanges

## 9. National Quantum Mission

- Recently, the union cabinet chaired by the Prime Minister has approved the National Quantum Mission (NQM) to aid scientific and industrial research and development in quantum technology
- It'll be implemented by the Department of Science & Technology (DST) under the Ministry of Science & Technology
- With the launch of this mission, India will be the seventh country to have a dedicated quantum mission after the US, Austria, Finland, France, Canada and China

## 10. Garbh-Ini Programme

- It is an initiative under the Department of Biotechnology of the Union Ministry of Science and Technology as a collaborative interdisciplinary programme
- It is part of the Atal JaiAnusandhan Biotech Mission - Undertaking Nationally Relevant Technology Innovation (UNaTI)
- It promotes Maternal and Child Health and develops prediction tools for preterm birth

## 11. Genome India Project

- The Genome India Project, a Centre-backed initiative to sequence 10,000 Indian human genomes and create a database
- This is a mission-mode, multi-institution consortium project, first of its kind in India supported by the Department of Biotechnology, Government of India

## 12. Target Olympic Podium Scheme (TOPS)

- In order to improve India's performance at Olympics and Paralympics, the Ministry of Youth Affairs and Sports (MYAS) started the Target Olympic Podium Scheme (TOPS) in 2014
- Launched by Ministry of Sports within the ambit of National Sports Development Fund (NSDF)
- It aims at identifying and supporting potential medal prospects for upcoming Olympic Games

## IV. INTERNATIONAL RELATIONS

### 1. UN Statistical Commission

- Highest body of the global statistical system bringing together the Chief Statisticians from member states from around the world
- Statistical Commission oversees the work of the United Nations Statistics Division (UNSD), and it is a Functional Commission of the UN Economic and Social Council
- Recently, India has been elected to the highest statistical body of the United Nations for a four year term beginning January 1, 2024.

### 2. UN Democracy Fund (UNDEF)

- UNDEF was created by UN Secretary-General Kofi A. Annan in 2005 as a United Nations General Trust Fund to support democratization efforts around the world
- India is a founding member of UNDEF
- UNDEF funds projects that empower civil society, promote human rights, and encourage the participation of all groups in democratic processes.

### 3. United Nations Capital Development Fund (UNCDF)

- It is the United Nations' flagship catalytic financing entity for the world's 46 Least Developed Countries (LDCs)
- It is an autonomous, voluntarily funded UN organization, affiliated with the UN Development Programme (UNDP)

### 4. OPEC+

- OPEC Plus was created in 2016 when OPEC countries decided to ally with other oil-producing countries outside the group to cut down the global output of oil
- The non-OPEC countries which export crude oil along with the 14 OPECs are termed as OPEC plus countries. OPEC plus countries include Azerbaijan, Bahrain, Brunei, Kazakhstan, Malaysia, Mexico, Oman, Russia, South Sudan and Sudan.



## 5. CARICOM

- It is a grouping of twenty countries: fifteen member States and five associate members
- It came into being on 4 July 1973 with the signing of the Treaty of Chaguaramas by Barbados, Guyana, Jamaica and Trinidad & Tobago.



## 6. North Sea Summit 2023

- It is the second summit which was held in the city of Ostend, Belgium
- To make the North Sea the largest green energy centre in Europe by accelerating the deployment of offshore wind turbines
- The first summit in 2022 had Esbjerg Declaration which was held in Denmark.

## 7. North Atlantic Treaty (NATO)

- It is a military alliance established by the North Atlantic Treaty (also called the Washington Treaty) of April, 1949, by the United States, Canada, and several Western European nations to provide collective security against the Soviet Union
- A key provision of the treaty, the so-called Article 5, states that if one member of the alliance is attacked in Europe or North America, it is to be considered an attack on all members.

## 8. Financial Action Task Force (FATF)

- FATF is Paris based Intergovernmental body established in 1989 as initiative of G7
- 39-member body with 37 countries and two regional organisations: the European Commission, the European Union's executive body, and the Gulf Cooperation Council
- Informal and Non-permanent body

## 9. European Free Trade Association (EFTA)

- EFTS is an intergovernmental organisation of Iceland, Liechtenstein, Norway and Switzerland
- It was set up in 1960 (Stockholm Convention) for the promotion of free trade and economic integration between its members

## 10. International Finance Corporation (IFC)

- It is an international financial institution that offers investment, advisory, and asset management services to encourage private sector development in developing countries
- It is a member of the World Bank Group and is headquartered in Washington, D.C., United States
- The IFC is owned and governed by its member countries, but has its own executive leadership and staff that conduct its normal business operations

## 11. Indian Ocean Commission (IOC)

- Intergovernmental organization created by the PortLouis Declaration in 1982
- IOC is the only regional organization in Africa composed exclusively of islands, which brings together five member states- The Union of the Comoros, Réunion (French overseas territory), Madagascar, Mauritius, Seychelles

## 12. W20 (Women 20)

- W20 (Women 20) is an official engagement group under the G20 which was established during the Turkish presidency in 2015



- W20 India took over the presidency from W20 Indonesia on 12 December 2022

## 13. G20: Energy Transition Working Group (ETWG)

- The first ETWG meeting recently took place in Bengaluru
- The meeting will have over 150 participants including G20 member countries, nine special invitee guest countries
- It will emphasize addressing technology gaps and financing to ensure that it is delivered across countries in a time-bound and affordable manner.

## 14. Asia Energy Transition Initiative (AETI)

- Japan announced AETI in 2021 which includes a variety of support for the realisation of various and pragmatic energy transitions in Asia



- It initially supported the Association of Southeast Asian Nations (ASEAN) countries towards achieving net zero emissions, including financial assistance of \$10 billion for renewable energy.

## 15. AUKUS Partnership

- Australia, United States, and United Kingdom (AUKUS) Alliance is a trilateral security partnership for the Indo-Pacific, between Australia, the UK, and the US (AUKUS)
- It is based on a shared commitment of its three members to deepen diplomatic, security, and defense cooperation in the Indo-Pacific



## 16. Five Eyes Countries

- An intelligence alliance comprising Australia, Canada, New Zealand, the United Kingdom and the United States
- These countries are parties to the multilateral UKUSA Agreement, a treaty for joint cooperation in signals intelligence

## 17. Global International Biofuel Alliance (GIBA)

- GIBA will help create a favourable ecosystem for promoting development and deployment of biofuels with key stakeholders including US, Brazil, EU, IEA etc. as a clean mobility alternative under India's G20 Presidency

## V. SCIENCE AND TECHNOLOGY

### 1. 3200 Phaethon

- It is classified as an asteroid - the first to be discovered via satellite in 1983
- A new study conducted using NASA's heliophysics observatories recently revealed that the tail of the 3200 Phaethon asteroid is not made of dust at all, but is instead composed of sodium gas.

### 2. YZ Ceti b

- YZ Ceti b is a rocky, earth-sized exoplanet (a planet that orbits a star other than our sun) rotating around a small red dwarf star, YZ Ceti, barely 12 light-years from Earth, a handshake distance in astronomical terms



### 3. Fast Radio Bursts (FRBS)

- FRBs are bright bursts of radio waves whose durations lie in the millisecond scale, because of which it is difficult to detect them and determine their position in the sky
- First FRB was discovered in 2007

### 4. SNAP-10A

- Launched in 1965, SNAP-10A was the world's first operational nuclear reactor in space.
- While it still remains in orbit, it was operational for just 43 days

### 5. NISAR Mission

- It is jointly developed by the Indian Space Research Organisation (ISRO) and the National Aeronautics and Space Administration (NASA)
- It will use two frequency bands: the L-band and S-band to image the seismically active Himalayan region every 12 days and create a "deformation map"

## 6.LIGO India Project

- LIGO is an international network of laboratories that detect the ripples in spacetime produced by the movement of large celestial objects like stars and planets
- LIGO-India will be located in Hingoli district of Maharashtra, about 450 km east of Mumbai, and is scheduled to begin scientific runs from 2030

## 7. LIGO (Laser Interferometer Gravitational-Wave Observatory)

- It is an international network of laboratories meant to detect gravitational waves
- Under this, two large observatories (~ 3000 Km apart) were built in the US with the aim of detecting gravitational waves by laser interferometry

## 8.Gravitational Waves

- These are the ripples in space-time produced by the movement of large celestial bodies like stars and planets

## 9. Copernicus Programme

- Copernicus is the Earth observation component of the European Union's Space programme, looking at our planet and its environment to benefit all European citizens
- This initiative is headed by the European Commission (EC) in partnership with the European Space Agency (ESA).

## 10.Square Kilometer Array

- The Square Kilometer Array (SKA) will be the largest radio telescope in the world when completed in 2028
- The Square Kilometer Array (SKA) project is an international effort to build the world's largest radio telescope, with eventually over a square kilometer (one million square meters) of collecting area
- It is being built in Australia (low-frequency) and South Africa (mid-frequency)

## 11.MeerKAT Telescope

- MeerKAT, originally the Karoo Array Telescope, is a radio telescope consisting of 64 antennas in the Meerkat National Park, in the Northern Cape of South Africa

## 12. Lockbit Ransomware

- It is malicious software designed to block user access to computer systems in exchange for a ransom payment
- It is a subclass of ransomware known as a 'crypto virus' due to forming its ransom requests around financial payment in exchange for decryption

## 13. Magnetoresistance

- Researchers in the UK, led by Nobel laureate Andre Geim, have discovered that graphene displays an anomalous giant magnetoresistance (GMR) at room temperature
- GMR is the result of the electrical resistance of a conductor being affected by magnetic fields in adjacent materials.

## 14. Antineutrino

- Antineutrinos are the antimatter of neutrinos
- They have an almost non-existent mass and charge and they rarely if ever interact with other particles
- They are produced as a byproduct when neutrons separate into protons and electrons in nuclear reactors

## 15. Lithium

- Lithium is a soft, silvery-white metal.

- Under standard conditions, it is the lightest metal and the lightest solid element.
- Countries with Largest Reserves: Chile; Australia; Argentina
- Three nations of South America: Bolivia, Chile, and Argentina have rich resources of lithium. They are collectively referred to as the 'Lithium Triangle'

## 16. Calcium Carbide

- It is a compound with the chemical formula  $\text{CaC}_2$
- It is also known as 'masala' which is used as a fruit ripening agent
- It is manufactured by heating a lime and carbon mixture to 2000 to 2100°C (3632 to 3812°F) in an electric arc furnace
- It has been prohibited as per the provision in the sub-regulation of Food Safety and Standards (Prohibition and Restriction on Sales) Regulation, 2011

## 17. N-nitrosodimethylamine (NDMA)

- It is a yellow, odourless liquid chemical once used to make rocket fuel
- NDMA breaks down when sunlight hits it
- Chemicals found in food and water, such as nitrosamines or alkylamines, can turn into NDMA in the stomach

## 18. Gum Arabic

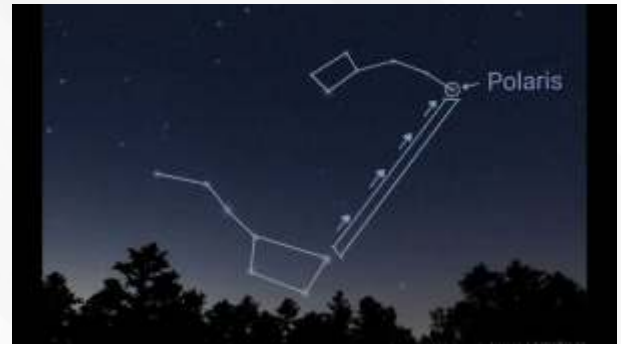
- It is the natural gum exuded by various species of Acacia trees
- The main source of commercial gum Arabic is *Acacia Senegal* L. Willd. and *Acacia seyal* trees



- Key ingredient in everything from fizzy drinks to candy and cosmetics

## 18. North Star

- Polaris, known as the North Star or Pole Star, is a very bright star — around 2,500 times more luminous than the Sun
- It is part of the constellation Ursa Minor, and is around 323 light years away from the Earth
- The North star is less than  $1^\circ$  away from the north celestial pole, almost in direct line with the Earth's rotational axis



## 19. Oumuamua

- It is the first confirmed object from another star (interstellar object) to visit the solar system
- The object was discovered on 19, 2017, by the NASA-funded Pan-STARRS1 telescope

## 20. Quaoar

- Discovered in 2002, Quaoar is currently defined as a minor planet and is proposed as a dwarf planet, though it has not yet been formally given that status by the International Astronomical Union, the scientific body that does such things

## 21. Vibrio Pathogens

- *Vibrio* species (non-cholera) bacteria live in saltwater and are commonly found in marine environments and estuaries.
- No evidence of person-to-person transmission with these strains.

## 22. EMISAT

- It is an electronic intelligence satellite developed by ISRO and DRDO.
- 435 kg EMISAT was launched in the low earth orbit
- It was developed under project KAUTILYA of DRDO

## 23. Surface Water and Ocean Topography

- By NASA and French space agency with contributions from Canadian and UK Space Agencies.
- SWOT is first satellite mission that will measure height of water in freshwater bodies and ocean on more than 90% of Earth's surface.
- SWOT will cover the entire Earth's surface between 78 degrees south and 78 degrees north latitude at least once every 21 days.

## 24. PSLV ORBITAL EXPERIMENTAL MODULE-2 (POEM-2)

- ISRO carried out scientific experiment using POEM-2 in PSLV-C55 mission.
- PSLV-C55 is a dedicated mission of NewSpace India Limited (NSIL), for the international satellite customer from Singapore.

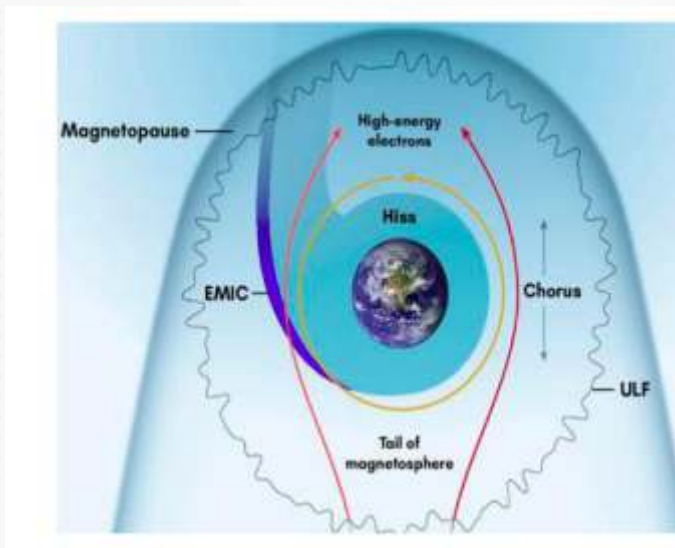
- PSLV includes PSLV Orbital Experimental Module-2 (POEM-2) platform to perform in-orbit experiments using the final stage of PSLV.

## 25. TROPOSPHERIC EMISSIONS MONITORING OF POLLUTION (TEMPO) INSTRUMENT

- NASA launched device called TEMPO to monitor air pollution from space.
- TEMPO will allow scientists to monitor air pollutants and their emission sources and air quality across greater North America on an hourly basis during daytime.

## 26. ELECTROMAGNETIC ION CYCLOTRON (EMIC) WAVES

- They are the discrete electromagnetic emissions (transverse plasma waves) observed in the Earth's inner magnetosphere.
- These waves are generated in the equatorial latitudes and propagate along magnetic field lines to its footprint in the high latitude ionosphere (atmosphere).



## 27. DEEP LEARNING GEOMAGNETIC PERTURBATION (DAGGER) MODEL

- NASA researchers have developed a new computer model called DAGGER, to forecast geomagnetic disturbances and provide a warning for solar storms.
- The model integrates Artificial intelligence with Satellite data, to predict the incoming solar winds

## VI. MISCELLANEOUS

### 1. Sukhoi 30 MKI Aircraft

- Sukhoi 30 MKI is a Twin-seater, Multi-role, Long range Fighter / Bomber / Air Superiority Aircraft
- It was developed by Russia's Sukhoi Aviation Center and built under license by India's Hindustan Aeronautics Limited (HAL) for the Indian Air Force (IAF)
- Maximum Speed – Mach 2

### 2. Dhawan II Engine

- Recently, a private space vehicle company Skyroot Aerospace test-fired its 3D-printed Dhawan II engine
- It is a 3D-printed cryogenic engine developed by the Skyroot Aerospace for its heavier vehicle, the Vikram II rocket

### 3. Exercise Kavach

- Joint Military exercise involving assets of Indian Army, Indian Navy, Indian Air Force and Indian Coast Guard
- being conducted under aegis of Andaman and Nicobar Command (ANC), only Joint Forces Command of the country

### 4. Operation Kaveri

- India recently launched 'Operation Kaveri' to evacuate its nationals from conflict-torn Sudan

### 5. SLINEX-23

- The 10th edition of IN-SLN bilateral maritime exercise SLINEX-23 took place at Colombo

### 6. Ramosi Uprising

- Tribal rebellion that took place in Central India between 1877 and 1883.
- Led by Vasudev Balwant Phadke; Named after the Ramosi tribe
- Main cause of the rebellion was the British colonial administration's land revenue policies, which included a reduction in the size of land allotted to peasants and an increase in revenue demands on the remaining land.
- Phadke established the Ramosi Peasant Force

### 7. FIR

- Not been defined in IPC or CrPC.



- A 'Zero FIR' can be filed in any police station
- An FIR is filed at the 'first' instance' that the police is informed of a cognizable offense or offence for which one can be arrested without a warrant; such as rape, murder, kidnapping.

## 8.Data embassies

- Data Embassies are established to ensure digital continuity and for creating an additional security guarantee for digital data.
- It is set up for ensuring data backup and operating critical services.
- World's first Data Embassy was established by Estonia in Luxembourg in 2017.
- India has proposed to set up data embassies in GIFT City, Gandhinagar in the recent budget.

## 9.Urban infrastructure development fund

- The fund will be managed by National Housing Bank
- UIDF is a fund created for investing the priority sector lending shortfall.
- The fund will be used by public agencies to develop infrastructure in Tier-2 and Tier 3 cities.

## 10. The Terai Arc Landscape (TAL)

- Between the river Yamuna in the west and the river Bhagmati in the east, comprising the Shivalik hills, the adjoining bhabhar areas and the Terai flood plains.
- Spread across the Indian states of Uttarakhand, Uttar Pradesh and Bihar, and the low lying hills of Nepal.
- Corbett Tiger Reserve, Rajaji National Park, Dudhwa Tiger Reserve, Valmiki Tiger Reserve
- Home to three flagship species, the Bengal tiger , the greater one horned rhino and the Asian elephant



## 11. Ocean fertilisation

- Involves adding nutrients such as iron, nitrogen, and phosphorus to parts of the ocean to stimulate the growth of phytoplankton and algae.
- These organisms absorb carbon dioxide through photosynthesis, which can help to reduce the amount of greenhouse gases in the atmosphere.

## 12. Myristica swamp

- Found predominantly in Shendurney Wildlife Sanctuary which is a part of Agasthyamala Biosphere Reserve.
- Type of freshwater swamp forest

## 13. Blue straggler stars

- Hotter, bluer, and more massive than the other stars in their surrounding population.
- These stars appear to be lagging behind in the aging process of a star cluster
- Have been observed in the Milky Way galaxy as well.

## 14. RARE EARTH ELEMENTS

- REEs (aka rare earth oxides) are a group of 17 silverywhite soft heavy metals that occur together in periodic table.

- REEs are all metals having many similar properties, and that often causes them to be found together in geologic deposits.



## 15. BLOCKCHAIN PROJECT

- Government launched Blockchain Project to explore potential of Web3
- It is a part of government's effort towards realizing Web3, as blockchain plays a crucial role in it.
- It will facilitate the creation of Open Application Programming Interfaces (APIs) for smooth integration and provision of blockchain-as-a-service (BaaS) over distributed infrastructure

## 16. SUPPORT FOR UP-GRADATION PREVENTIVE REPAIR & MAINTENANCE OF EQUIPMENT (SUPREME)

- SUPREME was launched by Department of Science and Technology
- It is a first-of-its-kind program to provide financial support for repair/upgradation/ maintenance/ retrofitting or acquiring additional attachments to increase functional capabilities of existing Analytical Instrumentation Facilities (AIFs).

## 17. STATE OF THE WORLD'S CHILDREN (SOWC) 2023 REPORT

- The State of the World's Children (SOWC) 2023: For Every Child, Vaccination Report released by UNICEF.
- Building on global strategies outlined in Immunization Agenda 2030 and Gavi Strategy 5.0 to promote equity and sustainably scale up immunization coverage, report presents an agenda to put childhood vaccination first

## 18. Inclusive Forum On Carbon Mitigation Approaches (IFCMA)

- IFCMA is a new forum by Organisation for Economic Co-operation and Development (OECD)
- IFCMA aims to help improve global impact of emissions reduction efforts through better data and information sharing, evidence based mutual learning etc

## VII. SPECIES IN NEWS

### 1. Bonnet Macaques

- Endemic to southern India.
- Found only in peninsular India
- vulnerable

### 2. Irrawaddy dolphin

- Critically endangered species.
- Found near sea coasts and in estuaries and rivers in parts of the Bay of Bengal and Southeast Asia.
- In India, it is found in Lake Chilika.



### 3. Hump-backed mahseer

- Large freshwater fish
- Tiger of the river;CE
- Found only in the Cauvery river basin (including Kerala's Pambar, Kabini and Bhavani rivers)
- Found only in the Cauvery river basin



### 4. Blind mahseer

- World's largest subterranean (underground) fish.
- Meghalaya is home to the rare species of Blind Mahseer.
- 'endangered'— golden mahseer.
- Hump-backed mahseer is now red-listed as 'critically endangered'
- Presence of Mahseer is an indicator of a healthy riverine ecosystem and hence important as a flagship species.

### 5. Great Indian Bustard

- heaviest flying birds in the world.

- Critically Endangered; Arid and semi-arid grasslands
- Schedule I; Endemic to Indian Sub-continent, Rajasthan has the highest population.
- Despite weighing heavy, can easily fly.; Important Sites: Desert National Park Sanctuary (Rajasthan), Naliya (Gujarat), Warora (Maharashtra) and Bellary (Karnataka)

## 6. Snow Leopard

- Jammu and Kashmir, Himachal Pradesh, Uttarakhand, Sikkim, and Arunachal Pradesh.
- 'Vulnerable
- lives above tree line and alpine meadows

## 7. INDIAN GAUR

- Vulnerable
- Extinct in Sri Lanka and probably also in Bangladesh.
- India has five species of turtles. They are Olive Ridley, Loggerhead, Leatherback, Green Turtle, Hawksbill.

## 8. Giant Leatherback Turtle

- Vulnerable
- largest of the seven species of sea turtles

- Within the Indian Ocean, they nest only in Indonesia, Sri Lanka and the A&N Islands.

## 9. RED PANDA

- Endangered, schedule 1
- thrives in mixed deciduous and conifer forests with dense understories of bamboo.
- India, Nepal, Bhutan and the northern mountains of Myanmar and southern China.
- found in Sikkim, western Arunachal Pradesh, Darjeeling district of West Bengal and parts of Meghalaya.
- It is also the state animal of Sikkim.
- most active at night

## 10. Indus river dolphin

- Mainly in Indus river in Pakistan and some parts of Beas river in India also.
- Endangered

## 11. Hoolock Gibbons

- Endangered, schedule 1
- North-Eastern India.
- Only ape found in India.
- Native to eastern Bangladesh, Northeast India and Southwest China.



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## 12. URIAL

- VULNERABLE
- Found in Central Asia, Ladakh, Spiti Valley

## 13. Sloth bear

- native to the Indian subcontinent
- Vulnerable



## 14. Green Turtle

- Endangered
- Only non veg in threatened turtles

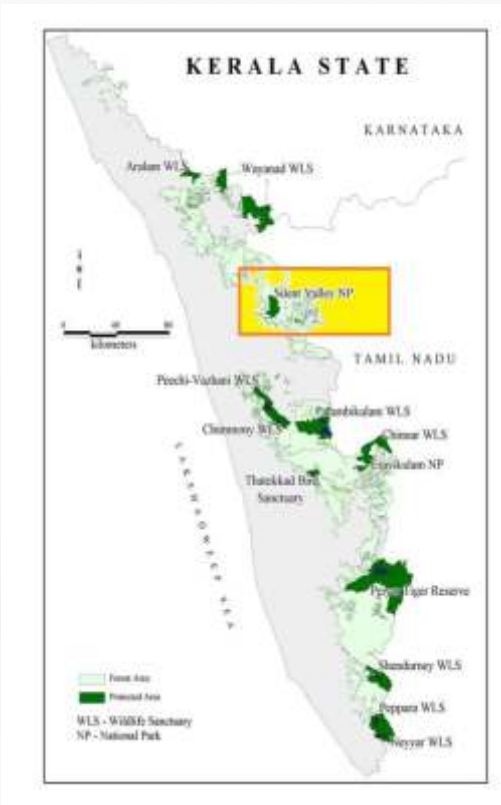
## 15. Sambar

- Vulnerable
- largest deer in India
- found all over India

# VIII. Places in News

## 1. Silent Valley National Park

- It is located in the border of Mannarkkad Taluk of Palakkad district, Nilambur Taluk of Malappuram district, Kerala, and Nilgiris district of Tamil Nadu.



## 2. The Great Lakes



- There are five lakes, which are Superior, Michigan, Huron, Erie, and Ontario and are in general on or near the Canada–US border.

## 3. Arittapatti village

- The Tamil Nadu Government has issued a notification declaring Arittapatti in Melur block, Madurai district, a biodiversity heritage site.



#### 4. Sahel Region



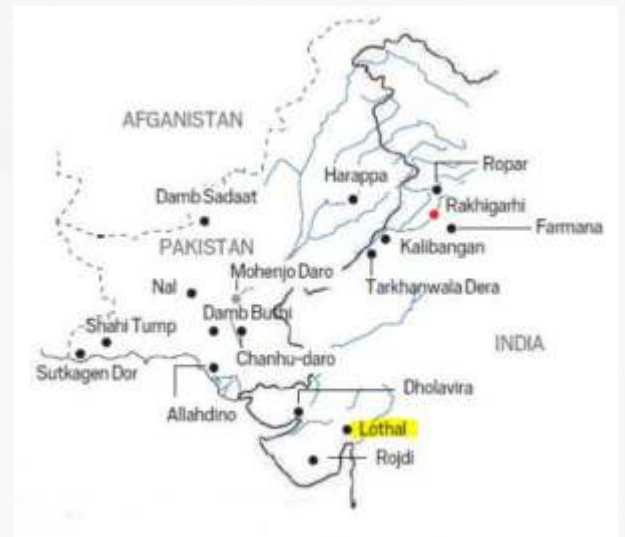
- The Sahel is the ecoclimatic and biogeographic realm of transition in Africa between the Sahara to the north and the Sudanian savanna to the south.

#### 5. Khangkhui Cave

- The Khangkhui, locally called Khangkhui Mangsor, is a **natural limestone cave** about 15 km from Ukhrul, the headquarters of Ukhrul district.



#### 6. Lothal



- Lothal was one of the southernmost sites of the Indus Valley civilization, located in the Bhal region of what is now the state of Gujarat.



## 7. Ram Setu



- The Ram Setu, also known as Adam's Bridge, is a 48m chain of limestone shoals between Rameswaram on India's southeast coast and Mannar Island near Sri Lanka's northwest coast.

and roughly southwest of the port city of Odessa.

## 9. Strait of Hormuz



## 8. Snake Island



- It is located 35 km from the coast in the Black Sea, to the east of the mouth of the Danube