NDI DEFENCE INSTITUTE

PULSE

CURRENT AFFAIRS





ONE-LINERS-AUG

- AFCAT
- CDS
- CAPF
- NDA

CONTACT US

91509 81461 /62

Ndidefence.com

Preparing for AFCAT, CDS, CAPF, NDA or Defence Exams?



NDI
DEFENCE INSTITUTE

- Structured Online & Classroom Coaching
- Daily Current Affairs & Concept Classes
- Weekly Mock Tests
- AFSB / SSB Guidance
- Personal Mentorship

Serious Aspirants Don't Just Read...
They Prepare With Direction.



Contact:

9150981461 | 9150981462

Visit: www.ndidefence.com

© NDI. All Rights Reserved.

CURRENT AFFAIRS MAGAZINE – AUGUST

IMPORTANT DAYS:

Date	Important Day / Observance	Significance
1 –7 August	World Breastfeeding Week	Promotes the importance of breastfeeding for the health and development of infants and mothers.
1 August	World Wide Web Day	Recognises the importance and impact of the World Wide Web in global communication and information sharing.
2 August	Friendship Day	Celebrates friendship, relationships and the importance of social connections.
2 August	World Anglo-Indian Day	Recognises the heritage, history and contributions of the Anglo-Indian community.
6 August	Hiroshima Day	Commemorates the atomic bombing of Hiroshima in 1945 and promotes peace and nuclear disarmament.
6 August	International Day of Awareness of the Special Development Needs and Challenges of Landlocked Developing Countries	Raises awareness about the economic and developmental challenges faced by landlocked developing countries.
7 August	National Handloom Day	Celebrates India's handloom sector and honours the contribution of weavers; commemorates the Swadeshi Movement of 1905.
8 August	Quit India Movement Day	Commemorates the launch of the Quit India Movement in 1942.
9 August	Nagasaki Day	Remembers the atomic bombing of Nagasaki in 1945 and promotes nuclear disarmament and peace.
9 August	International Day of the World's Indigenous Peoples	Promotes the rights, cultures, traditions and welfare of Indigenous peoples.

CURRENT AFFAIRS MAGAZINE – AUGUST

12 August	International Youth Day	Highlights issues concerning young people and celebrates their contribution to society and development.
13 August	World Organ Donation Day	Creates awareness about organ donation and encourages people to become organ donors.
15 August	Independence Day	Commemorates India's independence from British rule on 15 August 1947.
19 August	World Humanitarian Day	Recognises humanitarian workers and honours those who have lost their lives while serving others.
20 August	Sadbhavana Diwas	Promotes national integration, peace, harmony and communal goodwill.
20 August	Akshay Urja Day	Promotes awareness and adoption of renewable and sustainable energy sources.
21 August	World Senior Citizen Day	Highlights the rights, welfare and contributions of senior citizens.
21 August	World Entrepreneurs' Day	Celebrates entrepreneurship, innovation and the contribution of entrepreneurs to society and the economy.
21 August	International Day of Remembrance and Tribute to the Victims of Terrorism	Honours victims and survivors of terrorism and raises awareness about the impact of terrorism.
22 August	Madras Day	Celebrates the history and heritage of Madras, now Chennai.
22 August	International Day Commemorating the Victims of Acts of Violence Based on Religion or Belief	Promotes tolerance, religious freedom and respect for human rights.
23 August	International Day for the Remembrance of the Slave Trade and Its Abolition	Remembers the transatlantic slave trade and its abolition while promoting awareness of its historical legacy.

26 August	Onam	Major harvest and cultural festival of Kerala associated with the legend of King Mahabali.
26 August	Women's Equality Day	Recognises women's equality and highlights equal rights and opportunities for women.
27 August	World Lake Day	Raises awareness about the conservation and sustainable management of lakes.
28 August	Raksha Bandhan	Celebrates the traditional bond of affection and protection between siblings.
28 August	World Sanskrit Day	Celebrates and promotes Sanskrit language, literature and cultural heritage.
29 August	National Sports Day	Commemorates Major Dhyan Chand's birth anniversary and promotes sports and physical fitness.
29 August	Telugu Language Day	Celebrates the Telugu language, literature and cultural heritage.
29 August	International Day against Nuclear Tests	Raises awareness about the harmful effects of nuclear testing and promotes nuclear disarmament.
30 August	International Day of the Victims of Enforced Disappearances	Raises awareness about enforced disappearances and supports the protection of victims and their families.
30 August	National Small Industry Day	Recognises the contribution of small industries to employment, entrepreneurship and economic development.
31 August	International Day for People of African Descent	Celebrates the heritage and contributions of people of African descent and promotes equality and human rights.

CURRENT AFFAIRS MAGAZINE – AUGUST

MISCELLANEOUS:

Bagdara Wildlife Sanctuary

- **Bagdara Wildlife Sanctuary** is located in the **Sidhi and Singrauli districts of Madhya Pradesh**.
- It was established in **1978** and covers approximately **478 sq. km**.
- The **Son River forms the southern boundary** of the sanctuary.
- It was established particularly for the conservation of **blackbuck** and supports tiger, leopard, sambar, chital, chinkara, hyena and wild boar.
- The sanctuary contains **dry deciduous mixed forests**, natural caves and rock shelters.

Important GK

- **Son River** originates near **Amarkantak** and is an important southern tributary of the Ganga.
- **Blackbuck (**Antilope cervicapra**)** is endemic to the Indian subcontinent.
- Blackbuck is listed as **Least Concern** on the IUCN Red List.
- Important blackbuck habitats include **Velavadar National Park in Gujarat** and **Blackbuck National Park** landscapes.

Republic of Naoero

- **Nauru has officially adopted the traditional name "Republic of Naoero"**, reflecting its national identity and cultural heritage.
- It is a small **island republic in the southwestern Pacific Ocean**, situated in southeastern Micronesia about **40 km south of the Equator**.
- It is a **raised coral island** covering approximately **21 sq. km**, making it the world's smallest independent republic by land area according to the source.
- It has **no official capital**; government offices are located in the **Yaren district**.
- The country has **no rivers or lakes**, and historically its economy depended heavily on **phosphate mining**.

Important GK

- Naoero lies approximately **1,300 km northeast of the Solomon Islands**.
- **Banaba Island of Kiribati** is its nearest island neighbour, around 300 km to the east.
- **Nauruan** is the national language, while the **Australian dollar** is used as currency.
- The country became independent in **1968** and follows a **Westminster-style parliamentary system**.

CURRENT AFFAIRS MAGAZINE – AUGUST

Pseudolaguvia khairii

- Pseudolaguvia khairii is a newly discovered species of **freshwater catfish**.
- It was discovered in the **Budhabalanga River in Mayurbhanj district, Odisha**.
- It belongs to Pseudolaguvia, a genus of small **hill-stream catfishes** occurring in India, Bangladesh, Nepal and Myanmar.
- The species has a distinctive **fleshy projection at the base of its dorsal fin**, a feature not previously recorded in the genus.
- It was named after **Khairi**, the famous tigress associated with wildlife conservation in Odisha.

Important GK

- The **Budhabalanga River** originates in the **Similipal Hills of Odisha**.
- The river flows through **Mayurbhanj and Balasore districts** before entering the Bay of Bengal.
- **Similipal** is both a National Park and Tiger Reserve and forms part of the **Similipal Biosphere Reserve**.
- Hill-stream fishes generally possess adaptations that enable them to survive in **clear and fast-flowing waters**.

Magellanic Bridge

- The **Magellanic Bridge** is a stream of **gas and stars connecting the Large Magellanic Cloud and Small Magellanic Cloud**.
- It is predominantly gaseous, with a relatively small population of young stars formed within it.
- It is believed to consist largely of material **tidally stripped from the Small Magellanic Cloud** during an encounter with the Large Magellanic Cloud around **200–300 million years ago**.
- An IUCAA-led team discovered an unusual system in the Magellanic Bridge using the **eROSITA X-ray telescope**.
- Studying the Bridge helps scientists understand how **galactic interactions affect star formation and binary-star evolution**.

Important GK

- The **Large and Small Magellanic Clouds** are neighbouring satellite galaxies of the Milky Way.
- **eROSITA** is a wide-field X-ray telescope aboard the Russian-German **Spectrum-Roentgen-Gamma observatory**.

- It was developed under the leadership of Germany's **Max Planck Institute for Extraterrestrial Physics**.
- The observatory operates around the **Sun-Earth L2 region**, and eROSITA was designed for wide-area X-ray surveys.

Dhimsa Dance

- **Dhimsa** is a traditional tribal dance associated with communities including the **Bagata, Valmiki, Poraja, Khond, Gadaba, Kondadora, Mukadora and Kotia** in Andhra Pradesh.
- Its origins are associated with the **Koraput region**, and the tradition has multiple forms.
- It is performed during **festivals, weddings and the hunting festival held in April**.
- Women generally dance in synchronised formations while men provide accompaniment using traditional instruments.
- Important instruments include the **Mori, Thudum and Dappu**, while dance themes draw from mythology, folklore, economic activities and community life.

Important GK

- **Koraput** is located in southern Odisha and has a large tribal population.
- **Dappu** is a percussion instrument, while **Mori** is a wind instrument.
- Dhimsa places greater emphasis on **rhythmic hand and foot movements** than on facial expression.
- A mass Dhimsa performance involving more than **13,000 tribal women and girl students** was recognised by Guinness World Records.

Samudra Manthan Scheme

- **Samudra Manthan** is the **National Offshore Exploration Scheme** approved with an outlay of **₹84,084 crore**.
- It is a **Central Sector Scheme of the Ministry of Petroleum and Natural Gas**.
- The scheme will operate up to **FY 2030–31** and seeks to unlock India's offshore energy potential.
- It supports large-scale **seismic surveys, deep-water and ultra-deep-water exploratory drilling and scientific drilling in frontier basins**.
- It also envisages common offshore production infrastructure and an integrated **Oil and Gas Manufacturing and Services Zone**.

Important GK

- Offshore exploration involves searching for **oil and natural gas beneath the seabed**.

- **Seismic surveys** use reflected seismic waves to study subsurface geological structures.
- India's important offshore hydrocarbon regions include the **Mumbai Offshore Basin and Krishna-Godavari Basin**.
- The scheme includes technology adoption, capacity building and digital programme management.

Pradhan Mantri Surya Sarovar Yojana

- **Pradhan Mantri Surya Sarovar Yojana** promotes **Floating Solar Photovoltaic projects combined with Energy Storage Systems**.
- It envisages **5,000 MW of floating solar capacity** with at least **10,000 MWh of storage capacity**.
- Projects are to be sanctioned from **FY 2026–27 to FY 2030–31**, while financial support can continue until FY 2032–33.
- Central Financial Assistance of **₹1 crore per MW** is available for eligible commissioned projects.
- Floating solar enables productive use of **reservoirs and industrial ponds**, reduces pressure on land resources and can improve grid reliability through integrated storage.

Important GK

- The nodal ministry is the **Ministry of New and Renewable Energy**.
- Floating solar installations can reduce **land requirements and water evaporation**.
- Energy-storage systems help manage the **intermittent nature of solar power**.
- The scheme targets an estimated reduction of around **10 million tonnes of CO_2 emissions annually**.

Cholera

- **Cholera** is an acute bacterial disease caused by Vibrio cholerae.
- It spreads primarily through consumption of **food or water contaminated with the bacteria**.
- Severe cases cause **acute watery diarrhoea and rapid dehydration**, which can become fatal without prompt treatment.
- Outbreaks are particularly associated with **poor sanitation, unsafe water, overcrowding, conflict and humanitarian emergencies**.
- Treatment primarily involves rapid **oral or intravenous rehydration**, while antibiotics may be used in appropriate cases.

Important GK

- Vibrio cholerae is a **comma-shaped bacterium**.

- Symptoms can appear approximately **12 hours to five days after infection**.
- The bacteria can survive in **brackish and coastal waters**, and contaminated raw shellfish can transmit infection.
- Safe drinking water, sanitation and hygiene are fundamental to **cholera prevention**.

VISHWAS 2026

- **VISHWAS 2026** is a one-time dispute-resolution initiative launched by the **Employees' Provident Fund Organisation** under the Ministry of Labour and Employment.
- It facilitates settlement of disputes relating to the **levy of damages and penalties**.
- The scheme came into effect on **29 June 2026** and remains operational for six months from notification.
- It seeks to promote **voluntary compliance, reduce litigation and resolve long-pending EPF disputes**.
- Eligible employers can apply digitally through the **EPFO Employer Portal** using a Digital Signature Certificate or e-Sign.

Important GK

- **EPFO** administers major social-security provisions relating to provident funds for eligible organised-sector workers.
- EPFO functions under the **Ministry of Labour and Employment**.
- Cases involving **fraud, misappropriation or deliberate falsification of records** are excluded from VISHWAS 2026.
- The scheme can also indirectly benefit employees by encouraging faster settlement and better statutory compliance.

Xtreme Weather Grade Diesel

- **Xtreme Weather Grade Diesel** is an indigenously developed specialised fuel for operations in **extremely low-temperature environments**.
- It was developed jointly by the **Indian Army and Oil Marketing Companies**.
- It remains usable at temperatures as low as approximately **minus 42°C**.
- It complies with **BS-VI emission standards and IS 1460:2025 specifications**.
- Existing Army vehicles can use the fuel without requiring major **engine modification or re-homologation**, improving mobility in high-altitude and severe-winter areas.

Important GK

- The fuel has a **pour point of about minus 42°C** and flash point of approximately 50°C.
- The **pour point** represents the lowest temperature at which a liquid fuel remains capable of flowing under specified conditions.
- **Indian Oil Corporation** is associated with the fuel's development and launch.
- Such fuels have both military and civilian applications in **Himalayan and other extremely cold regions**.

Vikram-I Rocket

- **Vikram-I** is India's first **privately developed orbital-class rocket**, developed by Skyroot Aerospace.
- It is a **four-stage launch vehicle**, with three solid-fuel stages and a hypergolic liquid upper stage.
- Its fourth stage uses four **Raman engines**, employing MMH fuel and NTO oxidiser that ignite on contact.
- The rocket uses an **all-carbon-composite structure**, 3D-printed engines and advanced avionics.
- It is designed to carry approximately **350 kg to Low Earth Orbit and 260 kg to Sun-Synchronous Orbit**.

Important GK

- The maiden orbital test flight of Vikram-I is called **Mission Aagaman**.
- **Low Earth Orbit** generally covers Earth-centred orbits at relatively low altitudes.
- **Sun-Synchronous Orbit** allows a satellite to pass over a location at approximately the same local solar time.
- Vikram-I is designed for rapid deployment and the **small-satellite launch market**.

Pygmy Hog

- The **pygmy hog** is the world's smallest and one of the rarest wild pigs.
- In India, surviving wild populations are currently associated with the **grasslands of Assam**, particularly **Manas and Orang National Parks**.
- It prefers undisturbed **tall riverine grasslands** and is an important indicator of grassland ecosystem health.
- It is unusual among mammals because it constructs a **roofed nest**.
- Its IUCN status is **Critically Endangered**, and it receives protection under **Schedule I of the Wildlife Protection Act, 1972**.

Important GK

- The pygmy hog feeds on **roots, tubers, shoots, vegetation, worms and other invertebrates**.
- Its digging activity helps **aerate grassland soil**.
- It contributes to **seed dispersal** through feeding and movement.
- The **Integrated Development of Wildlife Habitats** scheme includes recovery programmes for critically endangered species and habitats.

Dhauladhar Wildlife Sanctuary

- **Dhauladhar Wildlife Sanctuary** is located in **Kangra district of Himachal Pradesh**.
- It was established in **1994** and extends from approximately **1,600 metres to 4,500 metres elevation**.
- The **Dhauladhar and Bara Bhangal ranges** are major geographical features of the sanctuary.
- Its vegetation is dominated by **western mixed coniferous forests**, including deodar, fir, spruce, blue pine and oak, along with alpine pastures.
- Important fauna include **musk deer, Himalayan black bear, serow, Himalayan weasel, cheer pheasant and western tragopan**; a snow leopard was recently photographed there for the first time.

Important GK

- The **Dhauladhar Range** forms part of the Lesser Himalayan system.
- **Snow leopard (**Panthera uncia**)** is a high-altitude mountain predator.
- The **Western Tragopan** is the state bird of Himachal Pradesh.
- Kangra lies in the western Himalayan region of **Himachal Pradesh**.

Nathu La Pass

- **Nathu La** is a high-altitude Himalayan pass in **Sikkim**, approximately 54 km east of Gangtok.
- It connects **Sikkim with the Tibet Autonomous Region of China**.
- It lies at approximately **4,310 metres above mean sea level**.
- It formed part of an offshoot of the **ancient Silk Road**.
- Border trade through Nathu La, suspended for six years because of the pandemic and India-China tensions, recently resumed.

Important GK

- The term **Nathu** means "listening ears", while **La** means "pass" in Tibetan.
- Nathu La was closed after the **1962 India-China War** and reopened for trade in **2006**.
- India's other open trading posts with China mentioned by the source are **Shipki La in Himachal Pradesh and Lipulekh in Uttarakhand**.
- Nathu La is one of the most important strategic passes of the **Eastern Himalayas**.

Scheme of Venture Capital Fund for Scheduled Castes

- The **Venture Capital Fund for Scheduled Castes** was launched in **2014–15** by the Ministry of Social Justice and Empowerment.
- It provides **concessional finance to Scheduled Caste entrepreneurs**, with priority given to women and persons with disabilities from SC communities.
- The fund began with an initial capital of **₹200 crore**.
- It is registered under the **SEBI Alternative Investment Fund Regulations, 2012**, with the Government of India as anchor investor and IFCI Ltd. as sponsor investor.
- Financial assistance can range from **₹10 lakh to ₹15 crore**, subject to the prescribed financing pattern.

Important GK

- The scheme seeks to promote **entrepreneurship, innovation, financial inclusion and employment generation**.
- Assistance up to ₹5 crore can cover a maximum of **75% of project cost**.
- For assistance above ₹5 crore, the fund can finance a maximum of **50% of project cost**.
- The scheme is implemented nationally and focuses on economically strengthening **SC entrepreneurs**.

Broad Peak

- **Broad Peak** is the **12th-highest mountain in the world**, with an elevation of approximately **8,051 metres**.
- It is situated in the **Karakoram Range**, roughly **8 km southeast of K2**.
- It lies in the Karakoram region spanning **Gilgit-Baltistan and China's Xinjiang region**.
- Its traditional Balti name is **Falchan Kangri**, meaning "Broad Mountain".
- Its snow and ice contribute to the **Godwin-Austen and Baltoro glacier systems**.

Important GK

- **K2**, at 8,611 metres, is the world's second-highest mountain.
- Broad Peak belongs to the **Gasherbrum Massif**.
- Its summit ridge extends for more than **1.5 km**.
- Broad Peak has multiple summits, including three exceeding **8,000 metres**.

Environmental Performance Index 2026

- The **Environmental Performance Index** is a biennial global assessment of countries' environmental performance.
- It is developed by institutions associated with **Yale University and Columbia University**.
- The 2026 framework contains **47 indicators across 12 issue categories** under Environmental Health, Ecosystem Vitality and Climate Change.
- **Estonia ranked first** in the 2026 index, followed by Luxembourg, the United Kingdom, Finland and the Netherlands.
- **India ranked 176th among 177 countries**, with an overall score of 22.46 according to the source.

Important GK

- The EPI helps assess progress towards international environmental objectives including the **Sustainable Development Goals and Paris Agreement**.
- **Laos ranked last** in the 2026 index.
- The index is associated with the **Yale Center for Environmental Law & Policy** and Columbia University's CIESIN.
- EPI should not be confused with India's **Environmental Performance Index for individual States or local administrative assessments**.

Suspension Polyvinyl Chloride

- **Suspension Polyvinyl Chloride (S-PVC)** is a polymer produced from **vinyl chloride monomer**.
- It is manufactured through suspension polymerisation in an **aqueous medium using initiators and additives**.
- S-PVC generally occurs as relatively **dust-free granular particles** with varying porosity.
- It is widely used in **irrigation pipes, conduits, electrical wires and construction products**.
- India's Directorate General of Foreign Trade recently imposed a **six-month restriction on imports of S-PVC resin**.

Important GK

- PVC can be produced through **suspension, emulsion, bulk and solution polymerisation**.
- **Vinyl chloride monomer** is the basic chemical building block used to manufacture PVC.
- Suspension PVC is particularly important in the manufacture of **rigid PVC products such as pipes**.
- PVC is a **thermoplastic polymer**, allowing it to soften when heated and harden again when cooled.

Pamba River

- The **Pamba River**, also called the Pampa, is the **third-longest river in Kerala after the Periyar and Bharathappuzha**.
- It originates at approximately **1,650 metres in Pulachimalai Hill on the Peerumedu Plateau of the Western Ghats**.
- The entire Pamba catchment lies within **Kerala**.
- The river ultimately drains towards the **Arabian Sea through several channels**.
- Important tributaries include **Kakki Ar, Azhuta Ar, Kakkad Ar, Kallar, Manimala and Achenkovil**.

Important GK

- Pamba is known as the **"Dakshina Bhageerathi" or "Ganga of Kerala."**
- The river has strong religious significance because of its association with the **Sabarimala Temple**.
- Its basin is bounded by the **Western Ghats in the east and Arabian Sea in the west**.
- The river is particularly important to the geography and hydrology of **Pathanamthitta district**.

Exercise ROTOR CLAP III

- **Exercise ROTOR CLAP III** is a specialised helicopter exercise conducted by the **Indian Air Force**.
- The third edition was conducted at the **Pokhran Field Firing Range in Jaisalmer district, Rajasthan**.
- Its central theme was **Counter-Unmanned Aerial Systems**, reflecting the increasing battlefield threat from drones.
- Participating platforms included **AH-64 Apache, Mi-25/35, Prachand, Chinook, Mi-17 and Dhruv helicopters**.
- Missions included precision strikes, reconnaissance, battlefield support, troop insertion, casualty evacuation and coordinated counter-threat operations.

Important GK

- **LCH Prachand** is an indigenous Light Combat Helicopter.

- **AH-64 Apache** is primarily an attack helicopter, while **Chinook** is a heavy-lift transport helicopter.
- **Dhruv** is an indigenous Advanced Light Helicopter.
- **Pokhran** in Rajasthan is an important Indian military training and weapons-testing region.

Lohagad Fort

- **Lohagad**, meaning **Iron Fort**, is a hill fort near **Lonavala in Pune district, Maharashtra**.
- It stands approximately **1,033 metres above sea level in the Western Ghats**.
- The mountain divides the **Pavana and Indrayani river basins**, and the fort overlooks the Pavana reservoir.
- **Visapur Fort** lies to its east.
- Chhatrapati Shivaji Maharaj captured Lohagad in **1648**, surrendered it under the **Treaty of Purandar in 1665**, and recaptured it in 1670.

Important GK

- Lohagad forms part of the **Maratha Military Landscapes of India**, inscribed on UNESCO's World Heritage List.
- Its four important gateways are **Ganesh Darwaja, Narayan Darwaja, Hanuman Darwaja and Maha Darwaja**.
- **Vinchukada**, meaning "Scorpion's Tail", is a distinctive fortified spur of the fort.
- During the Peshwa period, **Nana Phadnavis** was associated with construction activity at Lohagad.

National Roll-out Plan for the Vessel Communication and Support System

- The **Vessel Communication and Support System (VCSS)** is a **satellite-based two-way communication system** for marine fishing vessels.
- The Union Department of Fisheries approved its national rollout under the **Pradhan Mantri Matsya Sampada Yojana (PMMSY)**.
- It envisages installation of **indigenously developed transponders on one lakh mechanised and motorised fishing vessels** across all 13 coastal States and Union Territories.
- The transponders will be provided **free of cost to eligible fishermen**.
- The project will follow a **60:40 Centre-State cost-sharing pattern**, while Union Territories will receive **100% central assistance**.
- **ISRO** provides the technical support and has developed the **Nabhmitra application**.

- Nabhmitra provides **two-way messaging, SOS alerts, weather and cyclone advisories, Potential Fishing Zone information, navigational assistance and geo-fencing-based warnings**.
- The system can warn fishermen about **International Maritime Boundary Line (IMBL), No Fishing Zones and adverse weather conditions**.

Rakthamichthys anchi

- Rakthamichthys anchi is a newly discovered **blind, blood-red phreatobitic swamp eel** from **Goalpara district of Assam**.
- It was discovered in **dug-out wells** and lives exclusively within the **phreatic zone of groundwater aquifers**.
- The genus Rakthamichthys is **endemic to India**.
- The species name **anchi** is derived from a Garo word meaning **"blood."**
- Its body lacks pigmentation, while its striking red colour results from **blood vessels visible through its almost transparent skin**.
- It belongs to the family **Synbranchidae**.
- Eels are elongated fish generally characterised by **worm-like bodies, absence of scales and continuous dorsal and anal fins around the tail**.

Asiatic Wild Buffalo

- The **Asiatic wild buffalo**, also called the **wild water buffalo**, is regarded as the **largest wild bovine in the world**.
- Its habitat includes **swamps, flooded grasslands, wetlands, alluvial plains and densely vegetated river valleys**.
- Its distribution includes **southern Nepal, eastern and central India, southern Bhutan and western Thailand**.
- India supports **more than 90% of the global wild water buffalo population**, with the largest population occurring in Assam.
- Smaller populations occur in **Meghalaya, Chhattisgarh and the Kolamarka forests of Maharashtra**.
- Major threats include **habitat loss, hunting, diseases and interbreeding with domestic buffaloes**.
- It is classified as **Endangered on the IUCN Red List** and is listed under **Schedule I of the Wildlife Protection Act, 1972**.

- Chhattisgarh is planning translocation of wild buffaloes from Assam to **Pamed Wildlife Sanctuary, Udanti-Sitanadi Tiger Reserve and Indravati Tiger Reserve**.

Lepidoptera

- **Lepidoptera** is the insect order comprising **butterflies and moths**.
- The name is derived from Greek and means **"scaly-winged"**, referring to the microscopic scales covering their wings.
- Lepidopterans occur on **every continent except Antarctica**.
- Their life cycle consists of four stages: **egg, larva/caterpillar, pupa and adult**.
- Caterpillars are predominantly **herbivorous**, while many adult butterflies and moths feed on nectar.
- Lepidopterans play important ecological roles as **pollinators and primary consumers**.
- **Silkworm (**Bombyx mori**)** is a moth and is the source of commercial silk.
- The ZSI catalogue records **13,703 species of Lepidoptera in India**, comprising **1,417 butterflies and 12,286 moths**.

Amboseli National Park

- **Amboseli National Park** is located in **southern Kenya near the Tanzania border**.
- It covers approximately **392 sq. km** and forms part of a larger **Kenya-Tanzania transboundary ecosystem** associated with Mount Kilimanjaro.
- **Mount Kilimanjaro**, Africa's highest peak, lies beyond the park and dominates its landscape.
- The park is particularly famous for its **large herds of African elephants**.
- Its landscape includes **dry lakebeds, savannas, acacia woodlands and wetlands**.
- The wetlands are supplied partly by underground water associated with the **melting snow of Mount Kilimanjaro**.
- The ecosystem supports lions, cheetahs, hyenas, zebras, wildebeest, buffaloes and giraffes, along with numerous wetland birds.
- The **Amboseli ecosystem was designated a UNESCO Biosphere Reserve in 1991**.

PowerBank-50

- **PowerBank-50** is an indigenous **satellite battery pack** developed by Hyderabad-based spacetech startup **TakeMe2Space**.
- It became India's first indigenously developed satellite battery to receive **"flight heritage" status**.

CURRENT AFFAIRS MAGAZINE – AUGUST

- The battery successfully operated during **Skyroot Aerospace's Vikram-1 Mission Aagaman**.
- A PowerBank-50 unit powered an experimental payload on the rocket's **Orbital Adjustment Module at an altitude of about 450 km**.
- It is a compact **lithium-ion battery** designed specifically for small satellites.
- It weighs approximately **380 grams** and stores more than **50 Wh of energy**.
- It incorporates a **battery-management system, onboard heaters and an aluminium flight enclosure**.
- Multiple units can be combined for **CubeSats and microsatellites**, with an operational life of up to five years in LEO.
- **Flight heritage** means that a component has successfully operated during an actual space mission, providing confidence to satellite manufacturers, launch providers and insurers.

Ujh Multipurpose Project

- The **Ujh Multipurpose Project** is being developed on the **Ujh River in Kathua district, Jammu and Kashmir**.
- The Ujh is a major tributary of the **Ravi River**.
- The project was declared a **National Project in 2008**.
- It involves construction of a **116-metre-high concrete-faced rockfill dam**.
- It is designed for **hydropower generation, irrigation and drinking-water supply**.
- Expected hydropower generation is approximately **186–212 MW**.
- It is designed to provide irrigation to nearly **90,000 hectares** in Jammu and Kashmir and Punjab.
- The project has strategic importance because it aims to increase India's utilisation of waters of the **eastern rivers allocated to India under the Indus Waters Treaty**.
- It is also expected to help regulate water flows and address vulnerable **cross-border infiltration routes** along the riverbed.

Cholanaikkan Tribe

- The **Cholanaikkans** are an indigenous tribal community found mainly in the **Nilambur Valley of Kerala's Western Ghats**.
- They are popularly known as the **"Cavemen of Kerala"** because of their traditional use of natural rock caves.
- They live mainly in rock shelters called **Kallulai**, generally close to streams and water sources.

- They traditionally depend heavily on **collection of forest produce**.
- Their smaller social groups are known as **Jenmam**.
- Their language, **Cholanaikkan**, belongs to the **Dravidian language family**.
- They are classified as a **Particularly Vulnerable Tribal Group (PVTG)**.
- Their habitat lies within the **Nilgiri Biosphere Reserve**.

Egypt

- **Egypt** is located in the **northeastern corner of Africa**, with the **Sinai Peninsula extending into Asia**.
- The Sinai Peninsula forms an important **land bridge between Africa and Asia**.
- Egypt shares land borders with **Libya, Sudan, Israel and the Gaza Strip**.
- It has coastlines along the **Mediterranean Sea, Red Sea and Gulf of Aqaba**.
- The **Nile River** flows through the country from south to north and supports the fertile Nile Valley amid surrounding desert regions.
- **Cairo** is the capital.
- **Mount Catherine**, at approximately 2,642 metres, is the country's highest point.
- Major natural resources include **petroleum, natural gas, phosphates and iron ore**.

Leptospirosis

- **Leptospirosis** is a bacterial and **zoonotic disease** caused by bacteria of the genus Leptospira.
- The bacteria can survive in **contaminated water and soil**, particularly in warm and humid conditions.
- Transmission commonly occurs through contact with water or soil contaminated with **urine or body fluids of infected animals**.
- The risk increases after **flooding, heavy rainfall and other situations involving contaminated water**.
- The bacteria can enter the body through **cuts or abrasions in the skin and through mucous membranes of the eyes, nose and mouth**.
- Common symptoms include **fever, severe headache, chills, muscle pain and vomiting**.
- Severe disease can cause **jaundice, kidney damage, meningitis, liver failure, breathing difficulties and death**.

Treatment involves antibiotics such as **doxycycline or penicillin**, with intravenous antibiotics used in severe cases.

Magnetorheological Fluid

- **Magnetorheological (MR) fluids** are fluids whose mechanical properties change rapidly when exposed to a **magnetic field**.
- They generally contain **microscopic magnetic iron particles suspended in a carrier fluid**, along with additives that reduce sedimentation and particle agglomeration.
- When a magnetic field is applied, the particles align and the fluid's **apparent viscosity increases sharply**, potentially making it behave like a viscoelastic solid.
- **Silicone oil** is particularly useful as a carrier fluid for vibration-control applications because of its favourable viscosity, friction, flash-point and shear-strength characteristics.
- The force transmitted by MR fluid can be controlled using an **electromagnet**.
- Major applications include **adaptive brakes, clutches, shock absorbers, dampers, actuators and vibration-control systems**.
- IIT Patna has developed a **hybrid magneto-rheometer** to advance research and applications of these fluids.

COSPAR Vikram Sarabhai Medal

- The **Vikram Sarabhai Medal** was instituted in **1990** in honour of Vikram Sarabhai.
- It is an international award recognising outstanding contributions to **space research by scientists from developing countries**.
- It is jointly awarded by the **Committee on Space Research (COSPAR) and ISRO**.
- **Annapurni Subramaniam** received the **2026 COSPAR Vikram Sarabhai Medal**.
- She is the **fourth Indian recipient**, after **U. R. Rao, Gurbax Singh Lakhina and Anil Bharadwaj**.
- COSPAR was established in **1958** and is an international body affiliated with the **International Science Council**.
- COSPAR conducts its major **Scientific Assembly biennially**.

Glaw Lake

- **Glaw Lake** is a freshwater lake located in **Lohit district of Arunachal Pradesh**.
- It has been designated **India's 101st Ramsar Site** and is the **first Ramsar Site in Arunachal Pradesh**.

- The lake lies within the **Kamlang Tiger Reserve and Wildlife Sanctuary**.
- It is situated at an elevation of approximately **1,168 metres**.
- The lake is fed by **perennial mountain streams** and is surrounded by rich vegetation.
- More than **150 tree species and 49 orchid species** have been recorded within the site and its catchment.
- The wetland supports important biodiversity, including species such as the **white-bellied heron and clouded leopard**.
- The **Ramsar Convention** was adopted in **1971 at Ramsar, Iran**, and entered into force in **1975**.

Madura Island

- **Madura Island** is an Indonesian island located off the **northeastern coast of Java**.
- It is separated from Java by the **Madura Strait**.
- It covers approximately **5,290 sq. km**.
- The island is relatively **flat**, without major mountain systems.
- It is known as Indonesia's **"Salt Island"** because of its important salt production.
- The **Madurese** constitute the dominant ethnic population and speak the **Madurese language**.
- Important towns include **Bangkalan, Sampang, Pamekasan and Sumenep**.
- Major economic activities include **cattle raising and salt production**, along with products such as kapok, copra, coconut oil and teak.

TRAI MyCall

- **TRAI MyCall** is a mobile application developed by the **Telecom Regulatory Authority of India (TRAI)**.
- The revamped application enables telecom consumers to provide **real-time feedback on their voice-calling experience**.
- Users can report their experience along with relevant **network parameters**.
- Feedback is made available to **TRAI and telecom service providers in anonymised form**.
- The information helps service providers identify **network-quality problems and take corrective measures**.
- TRAI is a statutory regulatory body established under the **TRAI Act, 1997**.

- **TDSAT** handles adjudicatory and dispute-settlement functions that were separated from TRAI through amendments to the TRAI Act.

S8000 Banderol Missile

- **S8000 Banderol** is a Russian **cruise missile**.
- It is primarily an **air-launched munition**, with the **Orion UAV** serving as a major launch platform.
- It has also been integrated with the **Mi-28 Havoc helicopter**.
- Reports indicate development of a compact **ground-launcher** for the missile.
- It is approximately **5 metres long**, with a wingspan of about **2.2 metres** and a body diameter of around **30 cm**.
- It uses a commercially available **Chinese turbojet engine**.
- Its reported range is up to approximately **500 km**.
- Maximum speed is around **620–650 km/h**, with a cruising speed of approximately **520–560 km/h**.
- It carries a relatively small **high-explosive fragmentation warhead** and uses **inertial and satellite guidance**.

Modified Interest Subvention Scheme

- The **Modified Interest Subvention Scheme (MISS)** is a **Central Sector Scheme** launched in **2006–07**.
- It aims to provide farmers with **short-term agricultural credit at affordable interest rates through Kisan Credit Cards (KCCs)**.
- Under the scheme, eligible farmers can obtain short-term loans up to **₹3 lakh** at a subsidised interest rate of **7%**.
- Lending institutions receive **1.5% interest subvention**.
- Farmers making prompt repayments can receive a **3% Prompt Repayment Incentive**, effectively reducing the interest burden to **4%**.
- For loans exclusively for **animal husbandry and fisheries**, the interest benefit applies up to **₹2 lakh**.
- The scheme is implemented through **RBI and NABARD** and operates through public-sector banks, RRBs, cooperative banks and eligible private banks.
- An ISEC assessment reported that every **₹1 invested under KCC-MISS generated ₹2.30 in net value addition** in the agriculture and allied sector.

Ethiopia

- **Ethiopia** is a **landlocked country in the Horn of Africa**.
- It shares borders with **Eritrea, Djibouti, Somalia, Kenya, South Sudan and Sudan**.
- Its capital is **Addis Ababa**.
- Major geographical divisions include the **Ethiopian Highlands, Western and Eastern Lowlands and the Great Rift Valley**.
- The **Denakil Plain** contains the **Kobar Sink**, a depression extending below sea level.
- **Mount Ras Dejen**, approximately 4,533 metres high, is the country's highest point.
- Major rivers include the **Blue Nile, Omo and Awash**.
- **Lake Tana** lies in the northwestern Ethiopian Highlands and is the source region of the **Blue Nile**.
- Ethiopia possesses resources including **gold, potash, natural gas, copper and platinum**.

Baba Baidyanath Dham Temple

- **Baba Baidyanath Dham** is a major Hindu temple dedicated to **Lord Shiva** in **Deoghar, Jharkhand**.
- It is one of the **12 Jyotirlingas** of India.
- The temple complex covers approximately **12 acres** and contains **22 temples**.
- Its architecture is predominantly in the **Nagara style** of North Indian temple architecture.
- The main temple has a pyramidal tower approximately **72 feet high**.
- The temple is associated with the legend of **Ravana and Lord Shiva**.
- The temple hosts the **Shravani Mela**, one of India's major annual religious gatherings.
- Historical accounts cited by the source associate the original construction with **Puran Mal**, with later renovations and expansion over the centuries.

Dikhow River

- The **Dikhow River** is an important **south-bank tributary of the Brahmaputra**.
- It originates in **Zunheboto district of Nagaland**.
- It enters the Assam plains through **Naginimara in Sivasagar district**.
- It flows through Sivasagar before joining the **Brahmaputra at Dikhowmukh**.
- Its total length is approximately **236 km**.
- The river basin is bounded by the **Brahmaputra in the north, Buridihing basin in the east, Jhanji basin in the west and Naga Hills in the south**.

- The river has left numerous abandoned channels in the Assam plains, many of which occur as **ox-bow lakes**.
- Flash floods from the river recently affected settlements in Assam, highlighting the vulnerability of the Brahmaputra valley to **monsoon and riverine flooding**

Special Majority

- A **special majority** is a higher voting threshold required for certain important constitutional and legislative decisions.
- Under **Article 368**, most Constitutional Amendment Bills require a majority of the total membership of each House plus **two-thirds of members present and voting**.
- **Article 249** requires a two-thirds majority of members present and voting in the Rajya Sabha for Parliament to legislate on a **State List subject in the national interest**.
- Amendments affecting the federal structure require the special majority in Parliament plus ratification by **at least half of the State Legislatures**.
- **Article 61**, concerning impeachment of the President, requires a majority of **two-thirds of the total membership of the House**.

Achanakmar Wildlife Sanctuary

- **Achanakmar Wildlife Sanctuary** extends across **Mungeli district of Chhattisgarh and Anuppur and Dindori districts of Madhya Pradesh**.
- It was established in **1975** and became a **Tiger Reserve in 2009** under Project Tiger.
- It forms the core zone of the **Achanakmar-Amarkantak Biosphere Reserve**, which was included in UNESCO's World Network of Biosphere Reserves in **2012**.
- The sanctuary lies in the **Maikal Hills** and contains tropical moist deciduous forests.
- The **Maniyari River** flows through the reserve, while the region is close to the sources of the **Narmada and Son rivers**.
- It forms an important tiger corridor connecting towards **Kanha Tiger Reserve and Bandhavgarh**.
- Important fauna include tiger, leopard, gaur, elephant, sloth bear, dhole, chital and sambar.

Zanskar Range

- The **Zanskar Range** is part of the **Trans-Himalayan mountain system**, located mainly in Ladakh.
- It separates the **Indus Valley to the north from the Zanskar Valley to the south**.
- Geologically, it forms part of the **Tethys Himalaya** and consists largely of folded and thrust sedimentary and metamorphic rocks.

- The range contains important passes such as **Pensi La** and **Shingo La**.
- The **Zanskar River** is formed by the confluence of the **Doda and Lungnak rivers** and joins the **Indus near Nimmu**.
- **Drang-Drung Glacier** near Pensi La is an important source of meltwater for the Zanskar river system.
- The region experiences a **cold desert climate** because of the Himalayan rain-shadow effect.
- The region is associated with **snow leopard, Himalayan blue sheep, ibex and Himalayan marmot**.

Bundela Dynasty

- The **Bundela Dynasty** was a Rajput dynasty that ruled substantial parts of **Bundelkhand in present-day Madhya Pradesh and Uttar Pradesh**.
- **Rudra Pratap Singh** founded the Kingdom of **Orchha in 1531 CE**.
- **Bir Singh Deo** was an important ruler associated with the construction of the **Jahangir Mahal** and expansion of the Orchha Fort complex.
- **Maharaja Chhatrasal** established an independent Bundela kingdom and resisted Mughal authority.
- Bundela architecture shows a combination of **Rajput and Mughal influences**.
- Important monuments include **Orchha Fort Complex, Jahangir Mahal, Raja Mahal and Chaturbhuj Temple**.

Article 13 of the Constitution

- **Article 13** protects Fundamental Rights by declaring laws inconsistent with them **void to the extent of inconsistency**.
- Article 13(1) deals with **pre-Constitution laws** that are inconsistent with Fundamental Rights.
- Article 13(2) prohibits the State from making laws that take away or abridge Fundamental Rights.
- Article 13(3) gives a broad meaning to **"law"**, including ordinances, orders, bye-laws, rules, regulations, notifications, customs and usages having the force of law.
- Article 13(4) states that Article 13 does not apply to **Constitutional Amendments made under Article 368**.
- Important judicial developments connected with Article 13 include **Golaknath, Kesavananda Bharati, Minerva Mills and L. Chandra Kumar**.

Ashfaqulla Khan

- **Ashfaqulla Khan** was an important revolutionary associated with the **Hindustan Republican Association**.
- He played a major role in the **Kakori Conspiracy of 1925**.
- The Kakori action involved the revolutionary seizure of government treasury funds being transported by train.
- He was arrested after a period of hiding and was subsequently tried and sentenced to death.
- Ashfaqulla Khan was executed on **19 December 1927** at Faizabad Jail.
- He is remembered alongside **Ram Prasad Bismil, Rajendra Lahiri and Roshan Singh** as one of the principal revolutionaries executed in connection with the Kakori case.

Revamped Khelo India Scheme

- The **Khelo India Scheme** has been revamped for the period **2026–27 to 2030–31**.
- It seeks to strengthen India's sports ecosystem through **grassroots talent identification, sports infrastructure, athlete development and high-performance support**.
- The programme is particularly important for creating a continuous pathway from **grassroots participation to elite sporting performance**.
- It also seeks to improve access to sports facilities and encourage wider participation among **children and young people**.

Lepidoptera

- **Lepidoptera** is the insect order comprising **butterflies and moths**.
- The name refers to their characteristic **scaly wings**.
- Their life cycle consists of **egg, larva, pupa and adult** stages.
- Caterpillars are predominantly herbivorous, while many adults feed on **nectar**.
- Lepidopterans perform important ecological functions as **pollinators and components of food chains**.
- The **silkworm (**Bombyx mori**)** is a moth of major economic importance.
- India's first comprehensive catalogue documented **13,703 Lepidoptera species**, comprising **1,417 butterflies and 12,286 moths**.

Pingali Venkayya

- **Pingali Venkayya** is associated with the design of the Indian national flag.
- India observed his **150th birth anniversary on 2 August 2026**.

- He was born in **1876** and was involved in the freedom movement.
- His work contributed to the evolution of the design that eventually became the **Tiranga**.
- His contribution is particularly important in the history of India's **national symbols and freedom movement**.

Kunwar Singh

- **Kunwar Singh** was one of the prominent leaders of the **Revolt of 1857**.
- He belonged to **Jagdishpur in Bihar** and led resistance against British rule in the region.
- Despite his advanced age, he played an important military role during the uprising.
- He successfully conducted operations against British forces and became an important symbol of resistance in **Bihar**.
- His activities are particularly associated with the **Arrah and Jagdishpur region**.

Plastic Currency

- **Polymer banknotes** are made from a durable plastic-based substrate rather than conventional cotton-paper material.
- Their advantages include greater **durability, resistance to moisture and improved security features**.
- Polymer notes can incorporate transparent windows and other anti-counterfeiting features.
- India has periodically examined polymer currency as a possible means of increasing the **life of banknotes and reducing replacement costs**.
- Polymer currency does not necessarily imply the immediate replacement of all existing paper currency.

Repo Rate

- The **repo rate** is the rate at which the Reserve Bank of India lends short-term funds to commercial banks against eligible securities.
- It is an important instrument of **monetary policy**.
- The RBI's Monetary Policy Committee kept the repo rate at **5.25%** in the August 2026 policy context reported by Vajiram & Ravi.
- A lower repo rate generally makes borrowing cheaper and can stimulate economic activity, while a higher rate can help contain inflationary pressures.

Repo-rate changes influence **bank lending rates, credit demand, investment, consumption and inflation**.

Great Bear Lake

- **Great Bear Lake** is located in the **Northwest Territories of Canada**.
- It is the **largest lake entirely within Canada**.
- It is the **fourth-largest lake in North America** and one of the largest freshwater lakes in the world by surface area.
- The lake lies within the **Arctic Circle region** and remains covered by ice for a substantial part of the year.
- The **Great Bear River** drains the lake into the **Mackenzie River system**.
- It is known for its exceptionally clear water and important Arctic freshwater ecosystem.

Lake Superior

- **Lake Superior** is the largest of the **Great Lakes of North America** by surface area.
- It is shared by **Canada and the United States**.
- It is the **largest freshwater lake in the world by surface area**.
- It drains through the **St. Marys River into Lake Huron**.
- The lake is connected to the broader Great Lakes system and ultimately drains through the **St. Lawrence River into the Atlantic Ocean**.
- Its large volume and depth give it substantial importance for regional climate, freshwater resources, navigation and biodiversity.

Migratory Birds

- **Migratory birds** move seasonally between breeding and non-breeding areas in response to food availability, climate and reproductive requirements.
- India lies along important migratory routes, particularly the **Central Asian Flyway**.
- Wetlands, grasslands, coastal areas and forests provide crucial **feeding, breeding and resting habitats**.
- Major threats include **habitat loss, pollution, climate change, hunting and disturbance along migration routes**.
- Protected wetlands such as Ramsar Sites are therefore important for maintaining **international migratory bird populations**.

CURRENT AFFAIRS MAGAZINE – AUGUST

Nitrosamines

- **Nitrosamines** are chemical compounds that can form when certain **amines react with nitrites or related nitrogen-containing compounds**.
- Several nitrosamines are classified as **potential or known carcinogenic substances**.
- They have attracted regulatory attention because they can occur as impurities in **pharmaceuticals, processed foods and industrial products**.
- Their presence in medicines is particularly important because prolonged exposure to certain nitrosamines may pose **genotoxic and carcinogenic risks**.
- Monitoring and controlling nitrosamine impurities is therefore an important aspect of **pharmaceutical quality and food safety**.

Pseudecheneis likimroensis

- Pseudecheneis likimroensis is a newly described **catfish species from Nagaland**.
- It belongs to a group of hill-stream fishes adapted to **fast-flowing freshwater environments**.
- The discovery adds to India's rich freshwater fish diversity, particularly in the **Northeastern region**.
- Northeastern India's river systems are important centres of freshwater fish endemism and biodiversity.

Kazakhstan

- **Kazakhstan** is a **landlocked country in Central Asia**.
- It shares borders with **Russia, China, Kyrgyzstan, Uzbekistan and Turkmenistan**.
- It also has a coastline along the **Caspian Sea**.
- The capital is **Astana**.
- The country contains extensive **steppe, desert and semi-desert landscapes**.
- The **Tian Shan and Altai mountain systems** occur in its eastern and southeastern regions.
- Major rivers include the **Irtysh, Ural, Syr Darya and Ili**.
- Kazakhstan is rich in **uranium, oil, natural gas and other mineral resources**.

MSME Sustainable ZED Certification Scheme

- **ZED** stands for **Zero Defect, Zero Effect**.
- The scheme is implemented by the **Ministry of Micro, Small and Medium Enterprises**.
- It encourages MSMEs to improve **product quality while minimising environmental impact**.

- It provides progressive **Bronze, Silver and Gold certifications**.
- Women-owned MSMEs have received **100% subsidy for ZED certification costs since November 2023**.
- Financial assistance is available for testing and certification, consultancy and **cleaner technologies/pollution-control measures**.
- The initiative promotes competitiveness, resource efficiency and environmentally sustainable manufacturing.

National Centre for Cell Science

- The **National Centre for Cell Science (NCCS)** is an autonomous organisation supported by the **Department of Biotechnology, Ministry of Science and Technology**.
- It is located at **Savitribai Phule Pune University, Pune**.
- It originated from the **National Tissue Culture Facility established in 1986** and became NCCS in 1996.
- Its major functions include maintaining a **National Cell Repository, conducting basic cell-biology research and human-resource development**.
- Research areas include **cancer biology, structural biology, bioinformatics, infectious diseases, immunology, neurobiology and stem-cell biology**.
- NCCS also hosts the **National Centre for Microbial Research**, which collects, identifies and preserves microbial cultures.

English Channel

- The **English Channel** separates **southern England from northern France**.
- It connects the **Atlantic Ocean with the North Sea**.
- Its French name is **La Manche**.
- The **Strait of Dover** forms its narrowest eastern section and separates Britain from continental Europe.
- The Channel is one of the world's busiest **maritime routes** and has major significance for European trade and transport.

African Swine Fever

- **African Swine Fever (ASF)** is a highly contagious viral disease affecting **domestic and wild pigs**.
- It is caused by the **African Swine Fever Virus (ASFV)**.

- It does **not infect humans**, but can cause mortality approaching **100% in severe outbreaks**.
- India first detected ASF in **2020**, with particularly severe effects in the **Northeastern States**.
- ICAR-NIHSAD, Bhopal developed India's first indigenous **MA-104 cell-line-based live attenuated ASF vaccine**.
- The vaccine uses a **Genotype II live attenuated virus with gene deletions** and is intended for healthy pigs above eight weeks of age.
- It can strengthen India's livestock biosecurity and reduce economic losses to pig farmers.

Rhine River

- The **Rhine** is one of Europe's major international rivers.
- It rises in the **Swiss Alps** and flows through or along **Switzerland, Liechtenstein, Austria, Germany, France and the Netherlands**.
- It ultimately enters the **North Sea** through the Netherlands.
- Major tributaries include the **Main, Moselle and Neckar**.
- The Rhine is one of Europe's most important **inland waterways**, supporting industrial and commercial transport.
- Its basin is heavily industrialised and densely populated.

Clouded Leopard

- The **clouded leopard (**Neofelis nebulosa**)** is a distinctive wild cat of **South and Southeast Asia**.
- In India, it occurs mainly in the **Northeastern States**.
- It prefers dense evergreen and semi-evergreen forests and can occur in Himalayan foothill habitats.
- It is an exceptional climber, aided by specialised ankle joints and a long tail.
- Its distinctive **cloud-shaped markings** give the species its common name.
- It is evolutionarily distinct from the common leopard and belongs to the genus **Neofelis**.
- India has launched a **Clouded Leopard Conservation Action Plan** to strengthen landscape-level conservation.

Srisailam Project

- The **Srisailam Project** is a major multipurpose river-valley project on the **Krishna River**.
- It is located on the **Telangana-Andhra Pradesh border**.
- The project has major significance for **irrigation and hydroelectric power generation**.

- The reservoir is associated with important forest and wildlife landscapes of the **Nallamala Hills**.
- The project is particularly important for understanding the integrated use of **Krishna River waters** in peninsular India.

Digital Arrest

- **Digital arrest scams** involve fraudsters falsely claiming to be police, CBI, customs, courts or other government authorities.
- Victims are often told that they are involved in a criminal case and must remain on a video call or transfer money to avoid arrest.
- The Supreme Court has directed authorities to strengthen mechanisms against such fraud, including **e-zero FIRs, standard operating procedures and mechanisms for restoration of fraudulently transferred money**.
- Banks, telecom authorities and law-enforcement agencies have important roles in identifying and blocking suspicious transactions.
- Public awareness is essential because legitimate investigating agencies do **not conduct arrests or demand payments through video calls**.

Asan Conservation Reserve

- **Asan Conservation Reserve** is located in **Dehradun district, Uttarakhand**.
- It covers approximately **444.4 hectares** and is situated near the confluence of the **Asan and Yamuna rivers**.
- The wetland was created following the construction of the **Asan Barrage in 1967**.
- It was declared a **Conservation Reserve in 2005** and a **Ramsar Site in 2020**, becoming Uttarakhand's first Ramsar Site.
- It lies along the **Central Asian Flyway** and is important for migratory birds.
- Species recorded include **ruddy shelduck, Baer's pochard, white-rumped vulture, Egyptian vulture, steppe eagle and black-bellied tern**.
- The wetland also supports **golden mahseer**, an important endangered freshwater fish.

Chief Election Commissioner and Other Election Commissioners Act, 2023

- The **Chief Election Commissioner and Other Election Commissioners Act, 2023** establishes a statutory framework for appointment and service conditions of the CEC and Election Commissioners.
- It operates in the context of **Article 324(2)** of the Constitution.
- A **Search Committee** headed by the Law Minister prepares a panel of candidates.

- The **Selection Committee** consists of the Prime Minister, the Leader of Opposition in the Lok Sabha or leader of the largest opposition party, and a Union Cabinet Minister nominated by the Prime Minister.
- The President formally appoints the CEC and ECs on the recommendation of the Selection Committee.
- The Act replaced the interim appointment mechanism prescribed by the Supreme Court in **Anoop Baranwal v. Union of India (2023)**.
- The Supreme Court is examining constitutional challenges concerning the appointment mechanism.

36th Constitutional Amendment Act, 1975

- The **36th Constitutional Amendment Act, 1975** made **Sikkim the 22nd State of India**.
- It inserted **Article 371F**, providing special constitutional arrangements for Sikkim.
- The amendment followed the political integration of Sikkim into the Indian Union.
- Article 371F contains special provisions relating to the **Legislature, administration, preservation of existing laws and representation**.
- The amendment is important for understanding the constitutional process through which **Sikkim became a full-fledged State of India**.

Insecticides Act, 1968

- The **Insecticides Act, 1968** regulates the **import, manufacture, sale, transport, distribution and use of insecticides** in India.
- It aims to ensure that insecticides meet prescribed standards of **quality, safety and effectiveness**.
- The Act came into force on **1 August 1971**, together with the Insecticides Rules, 1971.
- It provides for **registration, licensing, inspection and enforcement mechanisms**.
- Its objective is to protect **human beings, animals, crops and the environment** from harmful effects of insecticides.

Pigeonpea

- **Pigeonpea (**Cajanus cajan**)**, commonly known as **tur or arhar**, belongs to the **Fabaceae family**.
- India is the **largest producer of pigeonpea in the world**.
- ICAR has developed India's first fully annotated **telomere-to-telomere reference genome** of the pigeonpea variety **'Asha'**.
- The crop is important for **protein nutrition, soil fertility and agricultural diversification**.

- Important diseases include **wilt, sterility mosaic disease, Phytophthora blight and powdery mildew**.

HYDERACENE

- **HYDERACENE** is a novel polymer-based material developed at the **University of Hyderabad**.
- It has been patented for potential applications in **solid rocket propellants and high-performance defence systems**.
- Its formal composition involves **ferrocene-polyethylene-glycidyl-grafted hydroxyl-terminated polybutadiene**.
- The material was developed using **ring-opening polymerisation**.
- Its significance lies in combining material science and energetic applications for **rocket and defence technologies**.

Hexavalent Vaccine

- A **hexavalent vaccine** protects against six diseases through a single combination vaccine.
- Its possible introduction into India's **Universal Immunisation Programme** is aimed at improving the efficiency of childhood immunisation.
- Combination vaccines can reduce the number of injections and simplify **immunisation schedules and logistics**.
- The development is relevant to India's efforts to strengthen **child health and vaccination coverage**.

Hippocampus amandavincentae

- Hippocampus amandavincentae is a newly recognised **seahorse species**.
- It was previously misidentified as Hippocampus histrix.
- It has been recorded off the **southwestern coast of Kerala**.
- Its identification increases the number of seahorse species recorded from the Kerala coast to **five**.
- Seahorses are marine fishes belonging to the genus **Hippocampus** and are closely related to **pipefishes**.
- Typical habitats include **coral reefs, mangroves, seagrass beds and estuaries**.

Lesotho

- **Lesotho** is a **landlocked and completely enclaved country within South Africa**.
- Its capital is **Maseru**.

- It is notable for being the **only independent country whose entire territory lies above approximately 1,000 metres in elevation**.
- Important mountain systems include the **Drakensberg and Maloti ranges**.
- **Thabana Ntlenyana** is its highest point.
- Lesotho and India maintain bilateral cooperation, including through the **India-Lesotho Joint Bilateral Commission for Cooperation**.

Clouded Leopard Conservation

- The clouded leopard is found across **South and Southeast Asia**, with India representing an important part of its western distribution.
- In India, the species is strongly associated with the **Northeastern States**.
- Its highly arboreal behaviour and specialised ankle joints make it an exceptional climber.
- Conservation requires protection of **continuous forest landscapes and transboundary habitats**.
- India has developed a **Clouded Leopard Conservation Action Plan** with emphasis on habitat protection, research, community participation and cooperation with neighbouring countries.

G7 Summit

- The **G7** is an informal grouping of major advanced industrial democracies.
- Its members are **Canada, France, Germany, Italy, Japan, the United Kingdom and the United States**, with the European Union participating in G7 proceedings.
- The summit discusses **global economic, political, security, technological and environmental issues**.
- India's engagement with the G7 is through its **outreach-partner status**, rather than formal membership.
- At the 2026 discussions covered in the source, India emphasised **Global South representation, India-Africa cooperation and freedom of navigation and maritime security**.

SpaceX Falcon 9 Lunar Impact

- A **SpaceX Falcon 9 upper stage** impacted the Moon on **5 August 2026** after remaining in an uncontrolled trajectory for an extended period.
- The incident is relevant to the growing issue of **space debris and uncontrolled objects in cislunar space**.
- Falcon 9 is a **two-stage partially reusable orbital launch vehicle** developed by SpaceX.

- Its first stage uses reusable **Merlin engines** and is designed for recovery and repeated flights.
- Space objects that are no longer operational but remain in orbit or on uncontrolled trajectories are broadly described as **space debris or space junk**.

African Swine Fever Vaccine

- India's first indigenous **African Swine Fever vaccine** was developed by **ICAR-NIHSAD, Bhopal**.
- It is a **live attenuated Genotype II vaccine** based on the **MA-104 cell line**.
- The vaccine is intended for healthy pigs **above eight weeks of age**, followed by a booster after 14 days.
- ASF does not infect humans but can cause **very high mortality among pigs**.
- The vaccine is particularly important for the **Northeastern States**, where pig farming is an important livelihood activity.

Antarctica

- **Antarctica** is Earth's southernmost continent and surrounds the **South Pole**.
- It is the **coldest, driest and windiest continent**.
- Almost the entire continent is covered by a massive **ice sheet** containing a major proportion of Earth's freshwater in frozen form.
- Antarctica plays an important role in **global sea level, ocean circulation, climate regulation and the Earth's albedo**.
- The continent has no permanent indigenous human population, but hosts scientific research stations operated by numerous countries.

Heatwaves and Lightning as Notified Natural Calamities

- **Heatwaves and lightning** have been included among notified natural calamities for purposes of disaster-management assistance.
- The change is significant because extreme heat and lightning are increasingly recognised as major causes of **human deaths, livestock losses and damage to infrastructure**.
- States and Union Territories can use prescribed disaster-management mechanisms for **preparedness, response and relief**.
- The development highlights the increasing importance of **climate-related extreme weather events** in India's disaster-risk framework.

Miyazaki Mango

- **Miyazaki mango** is a premium Japanese mango variety that is increasingly being cultivated in India.
- Indian cultivation has been reported in **Bihar, Karnataka, Odisha, Madhya Pradesh and Uttar Pradesh**.
- The variety is known for its high market value and premium quality.
- Its cultivation is relevant to **high-value horticulture, crop diversification and agricultural export potential**.

Bisalpur Dam

- **Bisalpur Dam** is located in **Tonk district of Rajasthan**.
- It is constructed across the **Banas River**, an important tributary of the Chambal.
- The reservoir is important for **drinking-water supply and irrigation**.
- It supplies water to major urban centres including **Jaipur, Ajmer and Tonk**.
- The project is therefore important for understanding **water-resource management in the semi-arid region of Rajasthan**.

Himalayan Serow

- The **Himalayan serow** is a shy, forest-dwelling mountain ungulate found in the **Himalayan region**.
- It inhabits steep and rugged mountain terrain.
- It has been recorded in the **Dalhousie forest division of Himachal Pradesh** after an absence of nearly two decades.
- Serows are members of the **goat-antelope group** and are associated with forested mountain habitats.
- Their presence can provide useful information about **forest connectivity and high-altitude biodiversity**.

Adyar River

- The **Adyar River** is one of the important rivers of **Tamil Nadu**.
- It originates from the **Chembarambakkam Lake region** and flows through the Chennai metropolitan area.
- It eventually enters the **Bay of Bengal**.
- The river is important for Chennai's urban geography but faces serious problems from **sewage, solid waste, encroachment and pollution**.

- Restoration of the Adyar is therefore closely linked with **urban flood management and ecological restoration in Chennai**.

Agni-4 Missile

- **Agni-4** is an Indian **intermediate-range ballistic missile** developed by the **DRDO**.
- It has a reported range of approximately **4,000 km**.
- It is a **two-stage, solid-fuelled missile**.
- It incorporates advanced navigation and guidance technologies, including a **Ring Laser Gyro-based Inertial Navigation System**.
- Its reported **Circular Error Probability is below 100 metres**, indicating high accuracy.
- It is designed to deliver strategic payloads and contribute to India's **credible minimum deterrence**.

Pakal Dul Hydroelectric Project

- **Pakal Dul Hydroelectric Project** is a **1,000 MW run-of-the-river hydropower project** under construction in **Kishtwar district, Jammu and Kashmir**.
- It is being developed on the **Marusudar River**, a tributary of the **Chenab**.
- The project includes a **167-metre-high concrete-face rockfill dam**.
- Its underground powerhouse will have **four 250 MW Francis turbine units**.
- It forms part of the broader development of hydropower potential in the **Chenab basin**.

GOBARdhan Scheme

- **GOBARdhan** promotes the conversion of cattle dung and other organic waste into **biogas, compressed biogas and bio-fertilisers**.
- Its nodal ministry is the **Ministry of Petroleum and Natural Gas**.
- The scheme seeks to increase India's domestic production of **Compressed Biogas (CBG)**.
- It supports the principles of **waste-to-wealth, circular economy, clean energy and rural income generation**.
- CBG can substitute part of the demand for conventional **compressed natural gas** in appropriate applications.

National Means-cum-Merit Scholarship Scheme

- The **National Means-cum-Merit Scholarship Scheme (NMMSS)** was launched in **2008**.
- It is implemented by the **Ministry of Education**.

- It aims to reduce the dropout rate among economically weaker students after the elementary level and encourage them to continue secondary education.
- Scholarships are targeted at **meritorious students from economically weaker sections**.
- Applications for the **2026–27 academic year** were invited through the prescribed scholarship system.

Trade Unions Act, 1926

- The **Trade Unions Act, 1926** provides legal recognition and protection to registered trade unions in India.
- Section **2(h)** defines a trade union as a combination formed primarily to regulate relations between workmen and employers or among workmen.
- It provides a legal framework for **registration and functioning of trade unions**.
- The Act supports **collective bargaining and lawful trade-union activities**.
- Registration requirements include the prescribed minimum number of members, subject to the conditions specified in the Act.

Dhabaleswar Temple

- **Dhabaleswar Temple** is a prominent Shiva temple in **Odisha**.
- It is situated on an island in the **Mahanadi River** near Cuttack.
- The temple is dedicated to **Lord Shiva** and is an important regional pilgrimage centre.
- Its island location makes it particularly relevant to the geography of the **Mahanadi river system**.
- The temple is associated with religious festivals and large gatherings in Odisha.

Scheme for Promotion of Culture of Science

- The **Scheme for Promotion of Culture of Science** is associated with the **National Council of Science Museums (NCSM)**.
- NCSM is an **autonomous organisation under the Ministry of Culture**.
- The programme seeks to popularise **science, scientific temper and scientific awareness** among the public.
- Science museums, centres and planetariums are important instruments for communicating scientific concepts through **interactive and experiential learning**.

UPI and MDR

- The **Taxation and Other Laws (Amendment) Bill, 2026** proposes changes relating to the **Payment and Settlement Systems Act, 2007**.
- The proposal would permit the possibility of a **Merchant Discount Rate (MDR)** on specified UPI transactions.
- MDR is a fee associated with processing digital payments and is generally paid by merchants through the payment ecosystem.
- The reported proposal envisages applicability to specified transactions above **₹2,000 and larger merchants meeting prescribed turnover conditions**.
- The issue is significant for understanding the economics of **digital-payment infrastructure and UPI financing**.

Mullaperiyar Dam

- **Mullaperiyar Dam** is a masonry gravity dam located in **Idukki district, Kerala**.
- It is constructed at the confluence of the **Mullayar and Periyar rivers** in the Cardamom Hills of the Western Ghats.
- Construction began in **1887** and was completed in **1895** under the British.
- Its principal purpose is to divert **Periyar water towards the Vaigai basin in Tamil Nadu** for irrigation and related uses.
- Although the dam is physically located in Kerala, it is **operated and maintained by Tamil Nadu** under the historical lease arrangement.
- The reservoir lies within the landscape of the **Periyar National Park**.
- The dam remains a long-standing **inter-State water and dam-safety issue between Kerala and Tamil Nadu**.

Begonia neelamorum

- Begonia neelamorum is a newly discovered perennial flowering plant belonging to the genus **Begonia** and family **Begoniaceae**.
- It was discovered in **Keyi Panyor district of Arunachal Pradesh**.
- It grows on **steep, moist rock walls along the Keyi River** at around **1,000 metres elevation**.
- The plant grows approximately **10–20 cm tall**, with a single light-green serrated leaf and white flowers.
- The species was named after the **Neelam clan of the Nyishi tribe**.
- Its Nyishi name is **Kobiirhopu Baabra**.

CURRENT AFFAIRS MAGAZINE – AUGUST

AIM-260 Joint Advanced Tactical Missile

- **AIM-260 JATM** is a next-generation **beyond-visual-range air-to-air missile (BVRAAM)** being developed by **Lockheed Martin** for the United States.
- It is designed for **long-range interception**, particularly against advanced fighter aircraft and high-value airborne assets.
- The programme has been developed under a highly classified **Special Access Program**, so many technical specifications remain undisclosed.
- It is estimated to be around **4 metres long**.
- It is expected to use **advanced solid-rocket propulsion**, potentially including dual-pulse technology.
- Its guidance architecture is expected to include **inertial mid-course guidance, two-way datalink and a dual-mode terminal seeker**.
- Its effective range is expected to be **at least 200 km**, with speeds likely exceeding **Mach 4**.

Everest Engine

- **Everest** is an **800 kN Full-Flow Staged Combustion (FFSC) rocket engine** developed by **Astrobase Space Technologies**, a Bengaluru-based Indian space-tech company.
- It is described by the source as **India's first privately developed high-thrust FFSC engine**.
- It is designed for **reusable medium-lift launch vehicles** and aims to support high launch frequency and improved launch economics.
- It uses **liquid oxygen and liquid methane**, commonly referred to as **methalox**.
- In a full-flow staged-combustion engine, both fuel and oxidiser are partially burned in separate pre-burners before their respective hot gases drive turbopumps and enter the main combustion chamber.
- The technology permits operation at very high chamber pressures and is considered an advanced rocket-propulsion architecture.
- **SpaceX** is identified by the source as the only company that had previously flown an FFSC engine on an orbital rocket.

World Tribal Day 2026

- **International Day of the World's Indigenous Peoples**, commonly referred to as **World Tribal Day**, is observed annually on **9 August**.

- The UN General Assembly designated **9 August in 1994** for raising awareness about indigenous peoples' rights and promoting their protection.
- The date commemorates the first meeting of the **UN Working Group on Indigenous Populations**, held in Geneva in **1982**.
- The **2026 theme** is **"Honouring Indigenous Midwives: Safeguarding Life and Well-being."**

Indigenous peoples constitute less than **6% of the world's population** but represent a significant share of the world's extremely poor population.

Indigenous territories are important repositories of **forests, biodiversity and traditional food systems**.

Slender-billed Vulture

- The **slender-billed vulture (**Gyps tenuirostris**)** is an Old World vulture found mainly in the **sub-Himalayan region**.
- In India, its distribution extends from the **Gangetic plains through Himachal Pradesh and Assam**, with records towards northern Odisha.
- It also occurs in parts of **Bangladesh, Nepal, Myanmar and Cambodia**.
- It is primarily a **carrion feeder** and is adapted for soaring over large areas in search of carcasses.
- Its population decline has been strongly associated with exposure to **diclofenac and other NSAIDs** present in livestock carcasses.
- It is classified as **Critically Endangered by the IUCN**.
- Under India's Wildlife Protection Act, 1972, it is listed in **Schedule I**.
- Five captive-bred slender-billed vultures were recently released into the wild from a **BNHS conservation facility in Assam**.

Facility for Antiproton and Ion Research

- **FAIR**, or the **Facility for Antiproton and Ion Research**, is a major international particle-accelerator facility being constructed at **Darmstadt, Germany**.
- It is designed to conduct research using **ions and antiprotons**.
- India is a **founding member**, joining the initiative in **2010**.
- India's contribution is funded jointly in a **50:50 ratio by the Department of Science and Technology and Department of Atomic Energy**.
- **Bose Institute, Kolkata** is India's shareholder in FAIR GmbH and the nodal Indian institution for implementation.

- The **Super-FRS (Superconducting Fragment Separator)** produces radioactive beams, for which specialised beam-catcher equipment is required.
- The beam-catcher components supplied to FAIR were designed by **CSIR-CMERI, Durgapur**, under the supervision of Bose Institute.

National Gopal Ratna Award

- The **National Gopal Ratna Awards** are described as India's highest honours in the **livestock and dairy sector**.
- They were established under the **Rashtriya Gokul Mission in 2021**.
- The Rashtriya Gokul Mission was launched in **December 2014** to conserve and scientifically develop indigenous bovine breeds.
- Awards are given to the **Best Dairy Farmer**, **Best Dairy Cooperative Society/Milk Producer Company/Dairy Farmer Producer Organisation**, and **Best Artificial Insemination Technician**.
- A special award is provided for the **North Eastern Region and Himalayan States/UTs**.
- For the top three positions in the relevant categories, cash prizes are **₹5 lakh, ₹3 lakh and ₹2 lakh**, respectively.

Dhansiri River

- The **Dhansiri River** is a transboundary river flowing through **Nagaland and Assam**.
- It is an important tributary of the **Brahmaputra River**.
- It originates from **Laisang Peak in Nagaland**.
- It flows through Dimapur and Golaghat before joining the Brahmaputra at **Dhansirimukh in Assam**.
- Its total length is approximately **352 km**.
- Major tributaries include **Intaki, Bara Monglu, Langlong Nadi and Amaluma Jan**.
- The river flows through a biodiversity-rich landscape along the **Nagaland-Assam region**, with **Dhansiri Reserved Forest** and **Intanki National Park** occurring along its course.

Delft Island

- **Delft Island**, also known as **Neduntheevu**, is located in the **Palk Strait**, off the northern coast of Sri Lanka.
- It lies south-southwest of the **Jaffna Peninsula**.
- It is the largest of the seven inhabited islands in the region and covers approximately **50 sq. km**.

- The island is **flat and oval-shaped** and is surrounded by shallow waters and coral-and-sand beaches.
- It has no streams; freshwater is mainly obtained from **natural depressions and artificial ponds**.
- Its history reflects **Chola, Portuguese, Dutch and British** influences.
- The island contains important **Dutch colonial fort ruins**.
- Its location makes it particularly important for questions involving the **Palk Strait, India-Sri Lanka maritime geography and fishing disputes**.

Kambalakonda Wildlife Sanctuary

- **Kambalakonda Wildlife Sanctuary** is located near **Visakhapatnam, Andhra Pradesh**, in the **Eastern Ghats**.
- It covers more than **70 sq. km** and consists predominantly of hilly terrain with steep slopes.
- It contains **dry evergreen forests**, a highly threatened forest type occurring in India mainly in **Andhra Pradesh and Tamil Nadu**.
- The sanctuary contains several plant species characteristic of the **Eastern Ghats**.
- The **Indian leopard** is regarded as an indicator species of the sanctuary.
- Other fauna include **Indian jackal, chital, Indian pangolin, Indian muntjac, partridges, quails, treepies, Asian paradise flycatcher, chameleon and Indian cobra**.

Exercise Pitch Black

- **Exercise Pitch Black** is a **biennial multinational air exercise** hosted by the **Royal Australian Air Force (RAAF)**.
- The exercise derives its name from its emphasis on **night-time flying over large unpopulated areas**.
- The 2026 edition was conducted from **RAAF Bases Darwin and Tindal in the Northern Territory and RAAF Base Amberley in Queensland**.
- It involved **19 nations, more than 100 aircraft and over 4,400 personnel**.
- The Indian Air Force contingent included **Su-30MKI fighters, C-130 and C-17 aircraft and Garud commandos**.
- The exercise focuses on **offensive counter-air operations, air-defence tracking, tactical coordination, electronic warfare and network-centric operations**.
- India had previously participated in the **2018, 2022 and 2024 editions**.

CURRENT AFFAIRS MAGAZINE – AUGUST

Mount Bromo

- **Mount Bromo** is an active volcanic **cinder cone** located on the Indonesian island of **Java**.
- It lies within the **Sandsea Caldera**, which itself forms part of the larger **Tengger Caldera**.
- The Sandsea Caldera was formed approximately **8,000 years ago**.
- Bromo has experienced repeated eruptions, with historical records dating from **1804**.
- Its most recent eruption mentioned by the source occurred in **2004**.
- The surrounding ecosystem contains substantial floral diversity, including numerous **orchid species** and medicinal and ornamental plants.

Qadr-F Missile

- **Qadr-F** is an Iranian **ballistic missile** developed as part of Iran's national missile programme.
- It is based on the **Shahab-3** missile.
- Its existence was publicly disclosed by the Iranian Armed Forces during a **2007 military parade**.
- It is approximately **17 metres long** and weighs around **15–17.5 tonnes**.
- It uses a **dual-stage propulsion system involving liquid and solid fuel**.
- Its maximum range is approximately **2,000–2,500 km**.
- It is designed with a **radar-evading warhead** and can carry a single blast-fragmentation warhead or multiple re-entry vehicles.

Sonai Rupai Wildlife Sanctuary

- **Sonai Rupai Wildlife Sanctuary** is located in the **northwestern part of Sonitpur district, Assam**.
- It covers approximately **220 sq. km**, with a core area of about **175 sq. km**.
- It extends along the **foothills of the Himalayas**.
- The sanctuary has a **subtropical climate**, with heavy summer rainfall and associated flooding.
- The **Burhidihing River** flows through the sanctuary, while the **Namchang River** enters from Arunachal Pradesh and joins the Burhidihing.
- Vegetation is dominated by **evergreen forests and grasslands**.
- Important fauna include **elephant, Indian bison, rhinoceros, leopard and tiger**.
- Important birds include the **white-winged wood duck**, an endangered species.

Palau

- **Palau** is an island nation in the **western Pacific Ocean** consisting of approximately **300 islands**.
- It lies in both the **Northern and Eastern Hemispheres**.
- It has maritime boundaries with the **Federated States of Micronesia, Indonesia and the Philippines**.
- A major **barrier reef system** surrounds much of the archipelago.
- **Babeldaob** is its largest island.
- **Ngerulmud**, located on Babeldaob, is the capital and is noted as the world's least populous national capital.
- **Koror** is the largest and most populous city and the country's principal commercial centre.
- Palau became independent in **1994** and maintains a **Compact of Free Association with the United States**.

Microbacterium pollutisoli

- Microbacterium pollutisoli is a newly discovered **bacterial species** identified from highly contaminated soil at a banned pesticide dumpsite in **Uttar Pradesh**.
- Its name combines Latin words referring to **polluted/contaminated soil**.
- It forms **shiny yellow circular colonies** and has a short rod-shaped structure.
- It can grow across a relatively broad temperature range of approximately **12°C to 46°C**.
- Its genome contains biosynthetic gene clusters capable of producing compounds such as **carotenoids, ectoine and beta-lactones**.
- Such microorganisms are significant for research into **bioremediation and microbial production of useful bioactive compounds**.

Centralised Public Grievance Redress and Monitoring System

- **CPGRAMS** is the Government of India's flagship digital platform for **public grievance redressal**.
- It is developed and monitored by the **Department of Administrative Reforms and Public Grievances (DARPG), Ministry of Personnel, Public Grievances and Pensions**.
- It provides a single digital interface connecting **Central Ministries, Departments, States and Union Territories**.
- Citizens can file grievances **24×7**.
- The platform supports submissions in **22 Scheduled Languages in addition to English**.
- Each complaint receives a unique registration number through which its status can be tracked.

- Grievances are expected to be resolved within a maximum period of **21 days**.
- An **appeal mechanism** is available when citizens are dissatisfied with the resolution.

Nyishi Tribe

- The **Nyishi** are the **largest ethnic group in Arunachal Pradesh**.
- They are concentrated across districts including **East Kameng, Pakke-Kessang, Papum Pare, Lower Subansiri, Kamle, Kra Daadi, Kurung Kumey and Upper Subansiri**.
- Traditional livelihoods include **slash-and-burn agriculture, hunting and fishing**.
- The community is also known for **weaving, cane and bamboo work, pottery, blacksmithing, wood carving and carpentry**.
- Major festivals include **Boori-Boot, Nyokum and Longte**.
- The community traces descent **patrilineally** and is divided into several clans.
- The newly discovered Begonia neelamorum was named after the **Neelam clan** of the Nyishi.

Roselle Crop

- **Roselle** has the scientific name Hibiscus sabdariffa and belongs to the **Malvaceae family**.
- In Odisha's **Malkangiri district**, it is locally known as **Bhenda Dal** and has traditionally been cultivated by tribal communities.
- It performs well in **rainfed uplands and marginal land** with relatively low water and input requirements.
- It is cultivated in several warm regions, including **India, Indonesia, Malaysia, the Philippines, Egypt and parts of Central America**.
- It has both **food and medicinal value**.
- The plant contains **vitamin C, anthocyanins, flavonoids, polyphenols, iron, calcium and dietary fibre**.
- Its deep red colour is associated with **anthocyanin pigments**, which possess antioxidant properties.

Yemen

- **Yemen** is situated at the **southwestern corner of the Arabian Peninsula** in Western Asia.
- It shares land borders with **Saudi Arabia to the north and Oman to the east**.
- It has coastlines along the **Red Sea, Gulf of Aden and Arabian Sea**.

- Yemen lies close to the **Bab-el-Mandeb Strait**, a major maritime chokepoint connecting the Red Sea with the Gulf of Aden and the wider Indian Ocean.
- Its capital is **Sanaa**.
- **Jabal an Nabi Shu'ayb**, about 3,760 metres high, is its highest point.
- The **Rub' al Khali** extends into the region.
- Yemen lacks perennial rivers and lakes, reflecting its predominantly **arid climatic conditions**.

Russula griseopurpurata

- Russula griseopurpurata is a newly identified **mushroom species**.
- It was first collected beneath a **sal tree in Ri-Bhoi district of Meghalaya** and has also been recorded from **West Bengal**.
- It generally occurs singly or in scattered groups beneath sal trees.
- Its characteristic feature is a **greyish-purple cap** that develops cracks as it matures.
- Its gills show characteristic **forking near the stalk**.
- It belongs to the large and diverse genus **Russula**, which contains around **2,000 species globally**.
- The source specifically notes that the species **has not been established as edible**.

Cessna C172

- The **Cessna 172 Skyhawk** is a **four-seat, single-engine fixed-wing aircraft** manufactured by Cessna, now part of Textron Aviation.
- It was introduced in **1956** and has had more than **44,000 aircraft produced**.
- It is widely used for **pilot training and private aviation**.
- Its high-wing configuration provides good visibility for trainee pilots.
- The aircraft is known for **stability, forgiving handling and relatively simple controls**.
- It has a maximum cruise speed of approximately **124 knots** and a maximum range of about **640 nautical miles**.
- It remains in production.

Lake Mead

- **Lake Mead** is a major reservoir on the **Colorado River**, located on the border between **southern Nevada and northwestern Arizona, USA**.
- It was created by the construction of the **Hoover Dam** in the mid-1930s.

- It is the **largest reservoir in the United States when full**.
- The reservoir receives most of its water from **Rocky Mountain snowmelt and runoff**.
- It supplies drinking water to approximately **25 million people**.
- Since 1999, prolonged **drought and rising water demand** have contributed to a major decline in its water level.
- The **Colorado River** rises in the Rocky Mountains, flows through seven US states and two Mexican states, and ultimately reaches the **Gulf of California**.
- The river is associated with major geographical features including the **Grand Canyon** and reservoirs such as **Lake Mead and Lake Powell**.

Phulkari

- **Phulkari**, meaning **"flower work,"** is a traditional embroidery art of **Punjab**.
- It traditionally uses a thick cotton fabric called **khaḍḍer** with silk thread known as **pat**.
- Designs include **geometrical patterns, flowers and local fauna**, including peacocks, elephants, birds and camels.
- Phulkari is strongly associated with **Punjabi women's traditions, marriage ceremonies and family life**.
- References to the craft occur in Punjabi literature, with the source noting an early literary reference from the **18th century**.
- **Phulkari received a Geographical Indication tag in 2010**.

Suckermouth Catfish

- **Suckermouth catfish** belongs to the armoured catfish family **Loricariidae**.
- Its scientific name given by the source is Hypostomus plecostomus.
- It is native to **South America**, particularly the Amazon-region ecosystem, and entered India through the **ornamental aquarium trade**.
- It has an accessory breathing structure that enables it to tolerate periods outside water.
- It is an **opportunistic omnivore**, feeding on algae, plants, invertebrates and small fish.
- It can consume fish eggs and burrow into riverbanks and earthen structures.
- Its resilience and adaptability make it an important **invasive fish species**.
- BNHS has undertaken active removal of the species from **Ujani Reservoir**.

CURRENT AFFAIRS MAGAZINE – AUGUST

Thoti Tribe

- The **Thoti** are a small tribal community concentrated mainly in **northern Telangana**.
- They are classified as a **Particularly Vulnerable Tribal Group (PVTG)**.
- Traditionally, they served as **village messengers, ballad singers and folk artists**.
- Their oral traditions include narrating episodes from the **Mahabharata** using instruments such as the **burra, maddela and harmonium**.
- Their mother tongue is **Gonti**, belonging to the **Dravidian language family**.
- Traditional ceremonial instruments include the **kingri**, a three-stringed fiddle.
- Thoti women are traditionally known for their **tattooing skills**, including tattoo traditions associated with Gond women.
- The community is currently facing concerns related to **population decline**.

E-Samudra Platform

- **E-Samudra** is a comprehensive digital platform for **maritime governance**.
- It is an initiative of the **Directorate General of Shipping** under the **Ministry of Ports, Shipping and Waterways**.
- It brings services for **seafarers, shipping companies, ports and other stakeholders** into a single digital window.
- It seeks to replace fragmented, physical administrative procedures with **integrated digital workflows**.
- Features include **online payments, real-time tracking, automated processes and digitally issued certificates**.
- It is part of the broader **Maritime India Vision 2030**.
- The platform aims to strengthen maritime administration through **Digital First and Faceless Governance**.

Tadoba-Andhari Tiger Reserve

- **Tadoba-Andhari Tiger Reserve** is located in **Chandrapur district, Maharashtra**.
- It is the **largest and oldest tiger reserve in Maharashtra**.
- It was established in **1955** and comprises **Tadoba National Park and Andhari Wildlife Sanctuary**.
- The **Andhari River** gives the reserve part of its name.

- The reserve has corridor linkages with **Nagzira-Navegaon and Pench Tiger Reserves**.
- It contains **tropical dry deciduous forests** of the central Indian landscape.
- Important flora includes **teak, bamboo, bija, dhaoda, haldu, salai, semal and tendu**.
- Important fauna include **tiger, leopard, sloth bear, gaur, dhole, striped hyena, marsh crocodile, sambar, chital and four-horned antelope**.
- The reserve has recently supplied **tigresses for translocation to Similipal Tiger Reserve in Odisha**.

Mithun

- **Mithun**, also known as **gayal**, is a semi-domesticated bovine with the scientific name Bos frontalis. It
- is commonly called the **"cattle of the mountain."**
- The largest concentration of mithun occurs in **Northeastern India**, with **Arunachal Pradesh** having the highest population.
- It also occurs in **China, Bhutan, Myanmar and Bangladesh**.
- It is associated with **tropical evergreen rainforest environments**.
- Mithun is the **state animal of Arunachal Pradesh and Nagaland**.
- The **Soulung festival** of the Adi community of Arunachal Pradesh is associated with the mithun.
- It is classified as **Vulnerable on the IUCN Red List**.
- A recent outbreak of **Foot-and-Mouth Disease (FMD)** caused significant mithun mortality in Dibang Valley.
- FMD is caused by an **Aphthovirus of the family Picornaviridae** and affects cloven-hoofed animals, but **does not infect humans**.

Myoglobin

- **Myoglobin** is an oxygen-binding protein found predominantly in **skeletal and cardiac muscle**.
- It belongs to the **globin superfamily**, which also includes haemoglobin.
- Unlike haemoglobin, which transports oxygen through the blood, myoglobin functions mainly as an **intracellular oxygen reservoir in muscle**.
- It contains **one oxygen-binding site** associated with its heme group.
- It helps maintain intracellular oxygen availability during periods of increased muscular demand or **hypoxia**.
- Myoglobin levels in **blood or urine** can serve as indicators of muscle-cell damage.

- Scientists have recently engineered **lettuce and tobacco plants to produce myoglobin**, highlighting potential applications in biotechnology.

Betwa River

- The **Betwa River** is an important **right-bank tributary of the Yamuna River**.
- It originates from **Jhirri village in Raisen district, Madhya Pradesh**, in the Vindhya Hills at an elevation of around 460 metres.
- It flows through **Madhya Pradesh and Uttar Pradesh** before joining the Yamuna near **Hamirpur**.
- Its total length is approximately **590 km**, with about 358 km in Uttar Pradesh and 232 km in Madhya Pradesh.
- Its major tributaries include the **Jamni and Dhasan rivers**.
- The river is associated with the **Ken-Betwa Link Project**.
- **Orchha**, famous for its historical architecture, lies on the banks of the Betwa.
- The Betwa is also associated with the ancient **Chedi Kingdom**, whose capital Suktimati is mentioned as having stood on its banks.

Sree Padmanabhaswamy Temple

- The **Sree Padmanabhaswamy Temple** is located in **Thiruvananthapuram, Kerala**.
- It is dedicated to **Lord Vishnu**, depicted in the **Anantha Shayanam** posture, reclining on the serpent Adishesha.
- Its architecture represents a combination of **Kerala and Dravidian styles**.
- The temple has a prominent **seven-tiered gopuram**.
- The temple complex contains approximately **three million palm-leaf manuscripts**, known as **Mathilakam records**, containing administrative and financial information relating to the temple and Travancore kingdom.
- **Marthanda Varma**, ruler of Travancore, dedicated his kingdom to the deity in **1750**.
- The temple attracted global attention in 2011 following the discovery of enormous quantities of **gold, precious stones and other valuables in its vaults**.

Kalaburagi Fort

- **Kalaburagi Fort**, also known as **Gulbarga Fort**, is located in **Kalaburagi, Karnataka**.
- It was initially constructed in the **12th century** by Raja Gulchand, a feudatory of the **Kakatiya dynasty**.

- It was later strengthened by **Alauddin Hasan Bahman Shah**, founder of the **Bahmani Sultanate**.
- Kalaburagi served as the **capital of the Bahmani Sultanate** during the medieval period.
- Its architecture combines **Hindu and Islamic architectural traditions**.
- The fort contains massive defensive walls, bastions, gateways, mosques, palaces and tombs.
- It has **15 towers and 26 large guns**, with some guns measuring about eight metres in length.

Merchant Discount Rate

- **Merchant Discount Rate (MDR)** is the fee charged to a merchant for accepting a digital payment.
- It forms part of the commercial structure involving entities such as **payment processors, acquiring banks, issuing banks and payment networks**.
- MDR is generally calculated as a **percentage of the transaction value**.
- India removed MDR on **UPI and RuPay debit-card transactions in January 2020** to encourage digital-payment adoption.
- The 2026 proposal allows the government to levy MDR on **selected electronic payment transactions**, potentially including specified business-directed UPI transactions.
- The proposed MDR discussed by the source is around **0.25% to 0.4%** for eligible transactions.
- **Person-to-person UPI transfers are expected to remain free**, while the proposed charge is targeted at selected merchant transactions above the prescribed threshold.

Pteris madhusoodananii

- Pteris madhusoodananii is a newly discovered **fern species**.
- It was discovered in the **Kolli Hills of the Eastern Ghats in Tamil Nadu**.
- The species is currently known from only **two small sites covering approximately 8 sq. km**.
- It has been classified as **Critically Endangered** because of its extremely restricted distribution and habitat threats.
- It possesses **stiff, leathery, deep-green leaves**.
- Its spores have a distinctive narrow, wavy-edged **cingulum**, helping distinguish it from related species.
- The discovery highlights the biological importance of the **Kolli Hills and Eastern Ghats**.

Dirac Medal

CURRENT AFFAIRS MAGAZINE – AUGUST

- The **Dirac Medal** is awarded by the **International Centre for Theoretical Physics (ICTP)** for outstanding contributions to theoretical physics.
- It was first awarded in **1985** in honour of physicist **Paul Adrien Maurice Dirac**.
- It is awarded annually on **8 August**, Dirac's birthday.
- The 2026 award included Indian theoretical physicist **Deepak Dhar** as a co-recipient.
- The ICTP was established in **1964** and is located in **Trieste, Italy**.
- It operates under a tripartite arrangement involving the **Government of Italy, UNESCO and the IAEA**.
- ICTP is a **UNESCO Category 1 Institute**.

Prakriti Gyan Dham

- **Prakriti Gyan Dham** is India's first **Eco-Educational Hub**.
- It has been developed by the **CSIR-National Botanical Research Institute (CSIR-NBRI)**.
- It aims to connect **scientific knowledge with public environmental education** through experiential and interactive learning.
- **PAaVan Path** is an interpretive heritage trail displaying plant collections representing different ecological regions.
- **Vibhav Enclave** is a garden dedicated to threatened plants of India.
- **Bhairav Enclave** presents officially designated **State Plants of India and Union Territories**.
- The initiative focuses on biodiversity conservation, habitat degradation, climate change and conservation of **plant genetic resources**.

India-US Explosive Ordnance Disposal Exercise

- The **India-US Explosive Ordnance Disposal Exercise 2026** is a bilateral exercise between the **Indian Navy and US Navy**.
- The eighth edition is being conducted at the **Southern Naval Command, Kochi**.
- The exercise has been conducted by the two countries since **2005**.
- It focuses on enhancing interoperability between specialist **diving and Explosive Ordnance Disposal teams**.
- Activities include **subject-matter expert exchanges, cross-training, equipment demonstrations and scenario-based practical exercises**.

- It enables both navies to exchange contemporary EOD techniques, technologies and operational best practices.

Philippines

- The **Philippines** is an island country in **Southeast Asia in the western Pacific Ocean**.
- It is surrounded by the **South China Sea to the west and north, Philippine Sea to the east, Celebes Sea to the south and Sulu Sea to the southwest**.
- Capital: **Manila**.
- **Mount Apo** is the highest point.
- The **Cagayan River** is the country's longest river.
- **Laguna de Bay** is its major lake.
- **Mayon Volcano** is one of its most active volcanoes.
- The country is rich in **nickel, cobalt, copper, gold, silver and petroleum**.
- It is the **third-largest producer of geothermal energy globally**, after the United States and Indonesia.

Export Promotion Capital Goods Scheme

- The **Export Promotion Capital Goods (EPCG) Scheme** is an export-promotion scheme administered by the **Directorate General of Foreign Trade** under the Ministry of Commerce and Industry.
- It allows **duty-free import of capital goods** required for producing goods and services for export.
- It was operationalised on **1 April 2015**.
- The scheme covers capital goods used for **pre-production, production and post-production** activities.
- It applies to manufacturer exporters, merchant exporters with supporting manufacturers and eligible service providers.
- **Second-hand goods are not permitted** under the EPCG Scheme.
- The recent procedural change removed the requirement to submit **physical duty-payment challans** while applying for Export Obligation Discharge Certificates.

Amphora

- An **amphora** is an ancient vessel used particularly by Mediterranean cultures for **storage and transportation**.

- It generally has **two handles and a narrow neck** compared with the body.
- The word originates from the Greek term meaning **"carried on both sides."**
- Amphorae were widely used to transport commodities such as **wine, oil and grains**.
- Functional amphorae often had pointed bases, whereas decorative forms could have flat bases.
- Their archaeological discovery provides information about **ancient trade, food practices, maritime commerce and social life**.
- A Roman shipwreck more than **2,100 years old** was recently found off **Mazara del Vallo, Sicily**, carrying around 500 amphorae.

Colletes bhutanicus

- Colletes bhutanicus is a rare **solitary Himalayan plasterer bee** recorded for the first time in India.
- It was recorded in **Tawang district of Arunachal Pradesh** by scientists from the Zoological Survey of India.
- It was found at elevations between approximately **1,500 and 3,800 metres**.
- The species is also known from **Bhutan and China, including the Xizang region**.
- Unlike honeybees, Colletes bees are **solitary** and do not live in large colonies.
- The species was observed visiting **25 flowering plant species belonging to 10 botanical families**.
- Important visited crops include **mustard, buckwheat, coriander, beans, chilli and eggplant**.
- It belongs to the family **Colletidae**, commonly called plasterer or cellophane bees.

Hallaniyat Islands

- The **Hallaniyat Islands**, also known as the **Kuria Muria Islands**, are an archipelago of **five islands off southeastern Oman in the Arabian Sea**.
- From west to east, the islands are **Al-Hasikiyah, Al-Sawda, Al-Hallaniyah, Qarzawit and Al-Qibliyah**.
- **Al-Hallaniyah** is the largest and the only inhabited island.
- The islands contain **coral reefs, rocky areas and sandy substrates**.
- They overlap with the **Halaaniyaat Islands Key Biodiversity Area** and the Oman Arabian Sea **Ecologically or Biologically Significant Marine Area**.
- Seasonal **upwelling** brings cold, nutrient-rich water to the surface, supporting high marine productivity.

- The waters support diverse **corals, sponges, algae, seaweeds and fish** and are important along regional maritime routes.

Shruti Patrol Vessel

- **Shruti** is a **Next Generation Offshore Patrol Vessel (NGOPV)** launched at **Garden Reach Shipbuilders & Engineers, Kolkata**.
- NGOPVs are being constructed at both **GRSE and Goa Shipyard Limited**.
- The name **Shruti** refers to the four Vedas.
- The vessels are designed for **maritime surveillance, search and rescue, offshore-asset protection, HADR and anti-piracy operations**.
- They have a displacement of approximately **3,000 tonnes**.
- Their maximum speed is about **23 knots**.
- They have an endurance of approximately **8,500 nautical miles at a cruising speed of 14 knots**.
- The programme supports India's objectives of **indigenous shipbuilding and Aatmanirbhar Bharat**.

Container Manufacturing Assistance Scheme

- The **Container Manufacturing Assistance Scheme (CMAS)** has been proposed with a financial outlay of **₹10,000 crore over five years**.
- Its objective is to establish a competitive **domestic shipping-container manufacturing industry**.
- It supports both **Greenfield manufacturing facilities and expansion of Brownfield units**.
- It also provides support for **testing infrastructure, skilling and capacity building**.
- The scheme targets annual domestic manufacturing capacity of up to **7.5 lakh TEUs**.
- It complements **Make in India, Maritime Amrit Kaal Vision 2047, PM Gati Shakti, National Logistics Policy and Sagarmala**.
- Nodal ministry: **Ministry of Ports, Shipping and Waterways**.

Binsar Wildlife Sanctuary

- **Binsar Wildlife Sanctuary** is located in the **Kumaon region of Uttarakhand**.
- It lies at an elevation ranging from approximately **900 to 2,500 metres**.
- It is named after the **Bineshwar Mahadev Temple**, a 16th-century Shiva temple.
- **Zero Point, also called Jhandi Dhaar**, is the highest point in the sanctuary.

- The sanctuary contains **oak and rhododendron forests at higher elevations** and **chir pine forests at lower elevations**.
- Fauna include **barking deer, Himalayan bear, leopard, musk deer, langur, porcupine, flying squirrel and chital**.
- It has been designated an **Important Bird Area**, with more than 200 bird species recorded, including the **Himalayan monal**.

Pradhan Mantri National Dialysis Programme

- The **Pradhan Mantri National Dialysis Programme (PMNDP)** was launched in **2016** under the **National Health Mission**.
- It aims to make dialysis services **accessible and affordable**, particularly through district hospitals.
- **BPL beneficiaries** receive free dialysis services at public health facilities, while non-BPL patients can access services at subsidised rates.
- The programme has two major components: **haemodialysis and peritoneal dialysis**.
- Haemodialysis filters blood through an external dialysis machine, whereas peritoneal dialysis uses the **lining of the abdomen as a natural filtering membrane**.
- The PMNDP portal was launched in **2022** to integrate dialysis centres and support a **"One Nation-One Dialysis"** approach.
- Nodal ministry: **Ministry of Health and Family Welfare**.
- The programme is currently implemented across **all 36 States and Union Territories**.

Sangeet Natak Akademi

- The **Sangeet Natak Akademi** is India's national academy for **music, dance and drama**.
- It was established on **31 May 1952** and became functional the following year.
- **Dr. P. V. Rajamannar** was its first Chairman.
- President **Dr. Rajendra Prasad** inaugurated it on **28 January 1953**.
- It is an autonomous body under the **Ministry of Culture** with headquarters in **New Delhi**.
- It promotes, preserves and documents India's performing-arts traditions.
- The **Sangeet Natak Akademi Awards** are the highest national recognition for practising artists in the performing arts.
- It also confers **Akademi Fellowships** and the **Ustad Bismillah Khan Yuva Puraskar** for young artists.

CURRENT AFFAIRS MAGAZINE – AUGUST

Namibia

- **Namibia** is located on the **southwestern coast of Africa**.
- It shares borders with **Angola, Zambia, Botswana and South Africa**.
- The **Zambezi River** forms a small section of its northeastern boundary with Zimbabwe.
- It has an extensive coastline along the **Atlantic Ocean**.
- Its major geographical regions include the **Namib Desert, Central Plateau and Kalahari region**.
- Important rivers include the **Kunene, Okavango, Mashi, Zambezi and Orange**.
- **Brandberg**, also known as Mount Brand, is the country's highest mountain.
- Namibia is rich in **uranium, lithium, graphite and manganese**.
- Capital: **Windhoek**.

NAVYA Programme

- **NAVYA** stands for **Nurturing Aspirations through Vocational training for Young Adolescent Girls**.
- It was launched in **2025** to empower adolescent girls aged **16–18 years** in aspirational districts.
- It is a joint initiative of the **Ministry of Skill Development and Entrepreneurship** and the **Ministry of Women and Child Development**.
- It is implemented under **Pradhan Mantri Kaushal Vikas Yojana 4.0**.
- Training includes industry-relevant skills with embedded **On-the-Job Training**.
- The programme also contains a **Holistic Development Module** covering digital literacy, financial literacy, career readiness and entrepreneurship.
- **Skill India Digital Hub** is used for real-time monitoring of registration, attendance, training, certification and other indicators

Ghatiana Karnataka

- **Ghatiana Karnataka** is a newly described species of freshwater crab discovered in **Mookambika Wildlife Sanctuary, Karnataka**.
- It belongs to the genus **Ghatiana**, a group of freshwater crabs associated with the **Western Ghats**.
- It is the **15th Ghatiana species** reported from the Western Ghats; eight, including this species, are endemic to Karnataka.
- It inhabits areas near **perennial streams and evergreen/semi-evergreen forests**.

- During monsoon, it occurs on **laterite rocks**, while in other seasons it has been observed inside moist tree cavities.
- It has a distinctive **dark-purple body and light-pink claws**.

Kuril Islands

- The **Kuril Islands** are an archipelago in the Russian Far East forming a natural boundary between the **Pacific Ocean and the Sea of Okhotsk**.
- They extend for about **1,300 km** from the southern tip of the **Kamchatka Peninsula** towards northeastern **Hokkaido, Japan**.
- The archipelago consists of **56 islands**, along with several islets and rocks.
- The islands lie within the **Pacific Ring of Fire** and contain numerous volcanoes and hot springs.
- Russia administers the entire archipelago, but **Japan claims the four southernmost islands** as its Northern Territories.
- The dispute involves **Iturup, Kunashir, Shikotan and the Habomai Islands** and remains an important Russia–Japan territorial issue.

Moon Base Programme

- NASA's **Moon Base Programme** aims to establish a sustained human presence near the **lunar South Pole**.
- The lunar South Pole is important because of **water ice in permanently shadowed regions**, scientific opportunities and potential future resource utilisation.
- The programme follows a **phased approach** involving robotic exploration, infrastructure development and eventually sustained human operations.
- **Phase I:** exploration, technology demonstration and identification of suitable locations.
- **Phase II:** deployment of power, cargo, logistics and communication infrastructure.
- **Phase III:** development of an enduring lunar outpost where astronauts can live and work for extended periods.
- India's **Chandrayaan-3** is significant in this context because it successfully landed near the lunar South Pole region in 2023.

Kollidam River

- The **Kollidam River**, also known as **Kolidam/Coleroon**, is the **northern distributary of the Kaveri River**.
- It is formed by the northern bifurcation of the Kaveri **just west of Srirangam** in Tamil Nadu.

- It flows for approximately **150 km** before entering the **Bay of Bengal**.
- It constitutes an important northern stream of the **Kaveri Delta**, one of southern India's major rice-producing regions.
- The river flows through the historical landscape of **Tamil Nadu**, including areas around Chidambaram.
- Archaeologists recently reported possible remains of a **Sangam-era irrigation structure** in the river near Lalgudi, highlighting the antiquity of water-management systems in the Kaveri basin.

Cascade Frogs

- Three new species of **cascade frogs** belonging to the genus **Amolops** have been discovered in Northeast India.
- Cascade frogs are generally associated with **rocky waterfalls and fast-flowing forest streams**.
- The genus Amolops has around **100 species distributed across Asia**.
- **Amolops ammachi** was discovered in the **Jampui Hills of Tripura**.
- **Amolops sendenyu** was discovered in **Nagaland**, while **Amolops bella** was discovered in **West Bengal**.
- Cascade frogs are important ecological indicators because they depend on **clean, flowing freshwater ecosystems** and link aquatic and terrestrial food webs.

Black-Necked Crane

- The **Black-necked Crane (**Grus nigricollis**)** is a high-altitude crane associated primarily with the **Tibetan Plateau and adjoining Himalayan regions**.
- In India, it occurs mainly in **eastern Ladakh**, with a smaller wintering population in **Sangti and Zimithang valleys of Arunachal Pradesh**.
- Major breeding areas include wetlands around **Hanle, Tso Kar and Nyoma** in Ladakh.
- It breeds at elevations of approximately **2,600–4,900 metres**.
- Conservation status: **IUCN – Near Threatened; CITES – Appendix I; Wildlife Protection Act – Schedule I**.
- It has strong cultural significance in **Ladakh's Buddhist traditions** and is regarded as a symbol of peace, purity and good fortune.

Liberia

- **Liberia** lies on the **western coast of Africa**, bordering Sierra Leone, Guinea and Côte d'Ivoire.

- Its southern and southwestern coast opens into the **Atlantic Ocean**.
- **Monrovia** is the capital.
- Major rivers include the **Mano, Morro and Cavalla**; some sections form international boundaries.
- **Mount Wuteve** is the highest peak of Liberia.
- Liberia is historically significant as **Africa's oldest republic** and, according to the source, the only African state never subjected to formal colonial rule.
- Major mineral resources include **iron ore, diamonds, gold, manganese and graphite**.

Sanchar Mitra Scheme

- The **Sanchar Mitra Scheme** seeks to use India's youth as catalysts for **digital empowerment and telecom awareness**.
- Student volunteers known as **Sanchar Mitras** spread awareness about mobile safety, telecom fraud prevention and government digital initiatives.
- Participation is open to students from technical institutions with programmes in **telecom, electronics, computers, cybersecurity and related fields**.
- Training is provided with support from the **National Communications Academy–Technology (NCA-T)**.
- Top-performing participants may receive exposure to **R&D projects, telecom start-ups, policy and standards work, field surveys and Department of Telecommunications initiatives**.
- The nodal department is the **Department of Telecommunications, Ministry of Communications**.

Southern African Customs Union

- **SACU** is a regional economic organisation comprising **South Africa, Namibia, Botswana, Lesotho and Eswatini**.
- Established in **1910**, it is described as the **world's oldest customs union**.
- Its Secretariat is located in **Windhoek, Namibia**.
- Member states maintain a **Common External Tariff (CET)** for goods entering the customs territory from non-member countries.
- SACU also provides for relatively free movement of goods within the customs union and sharing of customs revenues.
- All five SACU members are also part of the broader **Southern African Development Community (SADC)**.

CURRENT AFFAIRS MAGAZINE – AUGUST

SAMRIDH Programme

- **SAMRIDH** stands for **Startup Accelerator of MeitY for Product Innovation, Development and Growth**.
- It is a flagship programme of the **Ministry of Electronics and Information Technology (MeitY)**.
- It seeks to strengthen accelerators that identify and support promising **IT-based startups**.
- Key areas include **customer connect, investor connect and access to international markets**.
- The programme targets support for **300 technology startups over three years**.
- Implementation is through **MeitY Startup Hub and Digital India Corporation**.

Petermann Glacier

- **Petermann Glacier** is located in **northwestern Greenland**, east of the **Nares Strait**.
- The Nares Strait separates **Greenland from Ellesmere Island, Canada**.
- Petermann is an important outlet connecting the **Greenland Ice Sheet with the Arctic Ocean**.
- It periodically calves large icebergs and has experienced accelerated ice flow.
- A major ice island of about **76.4 sq km** was reported to have calved on **4 August 2026**.
- Its significance lies in the connection between **Greenland ice loss and global sea-level rise**.

Silicosis

- **Silicosis** is an occupational respiratory disease caused by prolonged inhalation of **respirable crystalline silica dust**.
- High-risk occupations include **mining, construction, stone cutting, pottery, sculpting and artificial-stone processing**.
- The disease causes progressive lung damage and can produce persistent **cough, breathlessness, weakness and fatigue**.
- **Chronic silicosis** develops after long-term exposure to relatively lower concentrations of silica.
- **Accelerated silicosis** develops after higher exposure over a shorter period, while **acute silicosis** follows very intense short-term exposure.
- Silicosis is **progressive and has no cure**, making prevention and occupational exposure control critical.

Srikalahasti Temple

- **Srikalahasteeswara Temple** is located at **Srikalahasti in Tirupati district, Andhra Pradesh**.

- It stands beside a hill on the banks of the **Swarnamukhi River** and is also known as **Dakshina Kailasam**.
- The temple is dedicated to **Lord Shiva** and is an important Shaivite centre.
- Its origins are traced to the **5th century**, while the major outer structure was developed during the **Chola period**.
- The **Vijayanagara Empire** also contributed to its architectural development.
- The temple is noted for its **Dravidian architectural style** and large gopurams.
- A ₹114.06-crore proposal was submitted under the **PRASAD scheme** for pilgrim and tourist infrastructure.

Gangaichthys indonepalicus

- **Gangaichthys indonepalicus** is a newly identified **earthworm eel** found beneath the **Indo-Gangetic Plain in Bihar**.
- It represents the first reported **subterranean/stygobitic fish from the Gangetic Basin**.
- It is extremely small, measuring around **4 cm**.
- Adaptations to subterranean darkness include **reduced eyes covered by skin and a translucent, unpigmented body**.
- It belongs to the earthworm eel family **Chaudhuriidae** and represents a distinct genus.

Indonesian Babirusa

- **Babirusas** are wild pigs commonly called **"pig-deer"**, belonging to the genus Babyrousa.
- Recognised extant species include the **Buru babirusa, North Sulawesi babirusa and Togian babirusa**.
- They occur on Indonesian islands including **Sulawesi, Togian, Sula and Buru**.
- They inhabit **tropical rainforests, moist forests and swampy habitats**.
- A distinctive feature is the development of **curved upper canine tusks in males**, which emerge through the snout and curve towards the face.
- The source gives their IUCN status as **Vulnerable**.

Voyager 2 Mission

- **Voyager 2** is an unmanned NASA spacecraft launched in **1977**.
- Its primary mission included exploration of the outer planets: **Jupiter, Saturn, Uranus and Neptune** and their moons.

- It is the **only spacecraft to have visited Uranus and Neptune**.
- Voyager 2 discovered new moons and rings around Uranus and Neptune and observed Neptune's **Great Dark Spot**.
- It became the **second human-made spacecraft to enter interstellar space**, after Voyager 1.
- The mission has been extended through power-saving measures to preserve scientific operations.

Shompen Tribe

- The **Shompen** are one of India's most isolated indigenous communities.
- They inhabit the dense tropical forests of **Great Nicobar Island** in the Andaman and Nicobar Islands.
- They are recognised as a **Particularly Vulnerable Tribal Group (PVTG)**.
- Traditionally, they follow a largely **nomadic hunter-gatherer lifestyle**.
- Their traditional diet includes rainforest resources, with **pandanus fruit** being an important food.
- Great Nicobar is therefore an important location for questions linking **PVTGs, island ecosystems and tribal protection**.

Kenya

- **Kenya** is located in **East Africa** and borders Somalia, Ethiopia, South Sudan, Uganda and Tanzania.
- It has a coastline along the **Indian Ocean**.
- **Nairobi** is the capital and hosts the headquarters of **UNEP and UN-Habitat**.
- Major lakes include **Lake Victoria** and **Lake Turkana**.
- Important rivers include the **Tana**, Kenya's longest river, along with the Athi/Galana and Mara.
- **Mount Kenya** is the country's highest mountain and the **second-highest peak in Africa after Mount Kilimanjaro**.
- **Lamu Island** forms part of the Lamu Archipelago in the Indian Ocean.

AH-64E Apache Helicopter

- The **AH-64E Apache Guardian** is an advanced **multi-role attack helicopter** developed in the United States.
- It is manufactured by **Boeing** and is the latest Apache variant used by the US Army.
- It is designed for **reconnaissance, precision strikes and close air support**.

- It is a twin-engine helicopter equipped with a **30 mm chain gun, 70 mm rockets and Hellfire missiles**.
- It can also employ **Stinger short-range air-to-air missiles**.
- India is among the countries operating the AH-64E Apache.

PM Vishwakarma Scheme

- **PM Vishwakarma** is a **Central Sector Scheme launched in 2023** for traditional artisans and craftspeople.
- The nodal ministry is the **Ministry of Micro, Small and Medium Enterprises (MSME)**.
- It covers **18 traditional trades** and is available to eligible artisans in both rural and urban areas.
- Major components include **skill upgradation, toolkit incentives, credit support, digital enablement and market linkages**.
- Basic training lasts **5–7 days**, while advanced training lasts **15 days or more**, with a training stipend.
- Eligible beneficiaries can receive collateral-free enterprise development loans up to **₹3 lakh in two tranches**, at a concessional interest rate of **5%**.

Green India Mission

- **Green India Mission (GIM)** was launched in **2014** as a Centrally Sponsored Scheme and is one of the **eight missions under the National Action Plan on Climate Change (NAPCC)**.
- It aims to protect, restore and enhance India's forest and tree cover while addressing climate-change adaptation and mitigation.
- The mission envisages increasing forest/tree cover over **5 million hectares** and improving the quality of another **5 million hectares**.
- It also targets enhanced annual **CO_2 sequestration of 50–60 million tonnes**.
- The nodal ministry is the **Ministry of Environment, Forest and Climate Change (MoEFCC)**.
- CAG has recently flagged shortcomings in its implementation.

Vishnugad-Pipalkoti Hydroelectric Project

- **VPHEP** is a **444 MW run-of-river hydropower project** on the **Alaknanda River** in Chamoli district, Uttarakhand.
- The project comprises a **65-metre concrete diversion dam**, a **13.4-km Head Race Tunnel** and a **3.04-km Tail Race Tunnel**.

- Its installed capacity is **444 MW (4 × 111 MW)** and it is designed to provide peaking power to the Northern Grid.
- Water diverted from the river will be returned approximately **18 km downstream**.
- It is being developed by **THDC India Ltd.** and financed partly through a **World Bank loan of US$648 million**.

Foreign Assets of Small Taxpayers – Disclosure Scheme

- **FAST-DS** is a **one-time voluntary disclosure scheme** contained in Chapter IV of the **Finance Act, 2026**.
- It allows eligible taxpayers to declare certain undisclosed foreign assets, foreign income and previously unreported foreign assets.
- For **Category 1**, the aggregate value must not exceed **₹1 crore**; the prescribed tax and additional tax are payable for immunity from prosecution.
- **Category 2** covers certain already-taxed/unreported foreign assets up to **₹5 crore**, with a prescribed **₹1 lakh fee**.
- Valid declarations provide immunity from further tax/penalty and prosecution under the **Black Money Act, 2015**.
- The **CBDT** is the nodal agency.

Mount Ararat

- **Mount Ararat** is a dormant **volcanic massif in eastern Turkey**, near the convergence of the **Turkey–Iran–Armenia** frontiers.
- At **5,165 m**, it is the highest mountain in Turkey and the highest peak in the Armenian Highlands.
- It consists of two major volcanic peaks: **Greater Ararat and Lesser Ararat**.
- It is also known as **Mount Agri** and **Mount Masis**.
- The only true glacier mentioned on the mountain is located on the northern side of **Greater Ararat**.

Subansiri River

- The **Subansiri** is the **largest tributary of the Brahmaputra** and a **right-bank tributary**.
- It originates in the **Tibetan Plateau** and flows through **Arunachal Pradesh and Assam**.
- It is an **antecedent, trans-Himalayan river**, with its course predating the rise of the Himalayas.
- It is popularly called the **"Gold River"** because of gold dust found in its waters.

- It enters India near **Taksing**, flows through the Eastern Himalayas and joins the Brahmaputra at **Jamurighat** in Assam.
- The **Lower Subansiri Hydroelectric Project**, a 2,000-MW run-of-river project, is being constructed at **Gerukamukh** on the Assam–Arunachal Pradesh border.

Cauvery Wildlife Sanctuary

- **Cauvery Wildlife Sanctuary** was established in **1987** in Karnataka and covers about **1,027 sq km**.
- It spans **Ramanagara, Chamarajanagar and Mandya districts**.
- The **Cauvery River** flows through a major part of the sanctuary.
- It contains **riverine, dry deciduous and scrub forests**.
- Important fauna include **tiger, leopard, elephant, gaur, sloth bear and sambar**.
- It supports more than **250 bird species**, including the Malabar Pied Hornbill and Great Hornbill.

Chips to Start-up Programme

- **Chips to Start-up (C2S)** is a MeitY capacity-building programme launched in **2022**.
- It has an outlay of **₹250 crore over five years**.
- It aims to develop **85,000 industry-ready semiconductor professionals** and catalyse **25 start-ups and 10 technology transfers**.
- Students receive hands-on exposure to **chip design, fabrication and testing**, including EDA tools and semiconductor foundries.
- The programme supports development of **ASICs, Systems-on-Chip (SoCs) and IP cores**.
- It is important for strengthening India's domestic **semiconductor design ecosystem**.

Leucas droupadiae

- **Leucas droupadiae** is a newly discovered plant species belonging to the **Lamiaceae (mint) family**.
- It was discovered on the **sandy shores of the Coromandel Coast in Cuddalore district, Tamil Nadu**.
- It is adapted to **nutrient-poor coastal sandy habitats**.
- Unlike related species, it has a **single, upright and unbranched stem**, reaching about 15 cm.
- Its distinctive nutlets are **golden yellow with irregular dark-brown spots**.
- It was named in honour of **President Droupadi Murmu** and is provisionally classified as **Data Deficient**.

CURRENT AFFAIRS MAGAZINE – AUGUST

SraVaani

- **SraVaani** is a multilingual Indian speech-recognition model developed by **IISc's SPIRE Lab**, with ARTPARK and Google.
- It covers **20 Scheduled languages and 45 regional languages/dialects**.
- It can convert speech into text across **10 scripts** and automatically identify the spoken language.
- It is based on **Project Vaani**, which has assembled around **31,000 hours of speech data** from more than 156,000 speakers.
- It uses a **FastConformer-based automatic speech-recognition architecture**.
- Applications include **education, banking, healthcare, e-governance and digital services**.

Hara Mangrove Forest

- The **Hara mangrove forests** are located around **Qeshm Island in the Persian Gulf**, extending into the **Strait of Hormuz**.
- They consist mainly of the grey mangrove **Avicennia marina**.
- The Hara forests are designated a **UNESCO Biosphere Reserve**, with the designation dating to **1976**.
- Their specialised roots allow them to tolerate **saline conditions** and also protect coastlines from erosion.
- They function as **blue-carbon ecosystems** and important nurseries for shrimp, crabs and fish.
- Recent satellite imagery highlighted an **oil-spill threat** to the mangroves.

Friedreich Ataxia

- **Friedreich ataxia (FA)** is a rare inherited disorder causing progressive damage to the **nervous system**.
- It is associated with mutations in the **FXN gene**, which codes for the mitochondrial protein **frataxin**.
- Reduced frataxin impairs mitochondrial energy production and contributes to accumulation of toxic by-products.
- Major manifestations include **ataxia, muscle weakness, speech problems, involuntary eye movements and scoliosis**.
- It generally begins during childhood or adolescence.
- The source notes that there is currently **no cure**; treatment focuses on managing symptoms.

New Development Bank

- The **New Development Bank (NDB)** was established by the BRICS countries: **Brazil, Russia, India, China and South Africa**.
- The founding agreement was signed at the **2014 BRICS Summit in Fortaleza, Brazil**, and the bank became operational in **2015**.
- Its headquarters is in **Shanghai, China**, with regional/additional offices including Johannesburg, São Paulo and Moscow.
- It finances **infrastructure and sustainable-development projects** in emerging and developing economies.
- Its areas include **clean energy, transport, water and sanitation, environmental protection, social infrastructure and digital infrastructure**.
- The source reported Iran's expected accession to the NDB.

Mahadayi River

- The **Mahadayi/Mandovi/Mhadei River** is a **rain-fed west-flowing river** shared by **Karnataka and Goa**.
- It originates in **Bhimgad Forest in the Western Ghats of Belagavi district, Karnataka**.
- It flows westwards and enters the **Arabian Sea at Panaji, Goa**.
- The river is about **81 km long**, with 29 km in Karnataka and 52 km in Goa.
- Important tributaries include **Kalasa, Bhandura, Rogaro, Kushavati, Nanorem, Nanuz, Valvota and Mapusa**.
- The river is at the centre of the long-running **Karnataka–Goa water dispute**, particularly concerning diversion towards the Malaprabha basin.

Mount Elbrus

- **Mount Elbrus** is located in the **Caucasus Mountains of southern Russia**.
- At **5,642 m**, it is the highest peak of the Caucasus and is commonly regarded as the **highest mountain in Europe**.
- It is an **inactive/dormant volcanic massif** with two principal summits.
- It forms part of the **Seven Summits**.
- Its snowfields contain numerous glaciers, including **Bolshoi Azaou and Irik Glacier**.
- Rivers such as the **Baksan, Malka and Kuban** originate from glaciers associated with the mountain.

SAFTA

- **South Asian Free Trade Area (SAFTA)** is the regional free-trade arrangement under **SAARC**.
- It came into force in **2006**, succeeding the **1993 SAARC Preferential Trading Arrangement (SAPTA)**.
- Members are **Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka**.
- Its objectives include reducing trade barriers, facilitating cross-border movement of goods and promoting fair competition.
- It incorporates provisions for **special and differential treatment of Least Developed Countries**.
- **Afghanistan was the last country to join SAFTA**.

Nancy Grace Roman Space Telescope

- The **Nancy Grace Roman Space Telescope** is NASA's next major flagship space observatory.
- Its principal scientific objectives include studying **dark energy, dark matter and exoplanets**.
- It will operate around the **Sun–Earth L2 Lagrange point**.
- Its **Wide Field Instrument** uses a 300-megapixel infrared camera with a field of view much larger than Hubble's infrared instrument.
- Its microlensing survey is expected to identify thousands of exoplanets.
- It will also study distant galaxies, isolated black holes and small icy bodies in the outer Solar System.

National Consumer Disputes Redressal Commission

- **NCDRC** is a quasi-judicial consumer-dispute redressal body established in **1988** under the **Consumer Protection Act, 1986**.
- Its headquarters is in **New Delhi**.
- It provides inexpensive and speedy redressal of consumer disputes and exercises **original, appellate and revisional jurisdiction**.
- The Commission is headed by a serving/retired **Supreme Court Judge or Chief Justice of a High Court**.
- The source notes its jurisdiction over complaints involving the prescribed monetary threshold and appeals from State Commissions.
- It functions under the **Ministry of Consumer Affairs, Food & Public Distribution**.

Loggerhead Sea Turtle

- **Loggerhead sea turtle (**Caretta caretta**)** belongs to the family **Cheloniidae**.

- It is the **world's largest hard-shelled sea turtle** and the second-largest extant turtle after the leatherback.
- It occurs in oceans worldwide except the coldest seas.
- Major nesting areas include the western margins of the **Atlantic and Indian Oceans**, including **Oman, the United States and Australia**.
- Its large head and powerful jaws help it feed on hard-shelled prey.
- It uses the **Earth's geomagnetic field for long-distance navigation** and is classified as **Vulnerable by the IUCN**.

Rotating Detonation Engine

- A **Rotating Detonation Engine (RDE)** is a propulsion technology that uses **supersonic detonation waves** rather than conventional subsonic deflagration.
- In an RDE, detonation waves continuously rotate through the combustion chamber.
- This can produce **greater thrust for the same quantity of fuel**.
- The technology can potentially improve **range, speed, payload capacity and affordability**.
- RDEs have relatively simple mechanical architecture because they can operate **without moving parts**.
- An India-based defence start-up demonstrated an RDE at a **DRDO facility in Hyderabad**.

Medak Fort

- **Medak Fort** is a historic hill fort in **Medak, Telangana**.
- It was built during the **Kakatiya period** under ruler **Pratapa Rudra** and was initially known as **MethukuDurgam**.
- It later served as a command post under the **Qutb Shahis**.
- The fort contains three principal entrances: **Prathama Dwaram, Simha Dwaram and Gaja Dwaram**.
- The main entrance features the **Gandabherundam**, associated with the Vijayanagara Empire.
- A **17th-century mosque**, granaries, barracks and a large cannon are also located within the fort complex.

National Anubhav Awards

- The **National Anubhav Awards** were launched in **March 2015** by the **Department of Pension & Pensioners' Welfare (DoPPW)**.

- The awards recognise and incentivise valuable contributions, suggestions and experiences of retiring government employees.
- Eligible categories include employees of **Central Government, CPSEs and Public Sector Banks** who are approaching retirement or have recently retired.
- The initiative creates a repository of significant experiences and suggestions that can support **policy and administrative improvements**.
- Awardees receive a **medal, certificate and ₹10,000 prize**; jury certificate winners receive a medal and certificate.

Appeal and Complaint Management System

- **AppCoMS 2.0** is the upgraded **Appeal and Complaint Management System** of the **Central Information Commission (CIC)**.
- The original online system was introduced in **September 2016**.
- It enables citizens to file **Second Appeals and Complaints** electronically.
- The upgraded version provides user accounts linked to email/mobile numbers and allows applicants to track **case timelines, documents, hearing notices and decisions**.
- It also supports **Digital Signature Certificates (DSCs)** for digitally signing notices and orders.
- The CIC is the appellate authority for **second appeals under the RTI framework**.

Lake Powell

- **Lake Powell** is a large artificial reservoir on the **Colorado River** in the United States, extending across **Utah and Arizona**.
- It was created by the construction of **Glen Canyon Dam**, which flooded Glen Canyon.
- It is the **second-largest reservoir in the United States by volume**, after Lake Mead.
- Its water originates substantially from snowmelt in the **Upper Colorado River Basin**.
- It functions as an important water-storage reservoir for states of the Upper Colorado Basin.
- Falling water levels have raised concerns regarding **Colorado River water availability and drought**.

INS Imphal

- **INS Imphal** is an indigenously built **stealth guided-missile destroyer** of the Indian Navy under **Project P-15B**.
- It was commissioned in **December 2023** and is part of the **Western Fleet**.

CURRENT AFFAIRS MAGAZINE – AUGUST

- It is the first Indian naval warship named after a city in Northeast India, **Imphal**, the capital of Manipur.
- It is designed for **anti-air, anti-surface and anti-submarine warfare**.
- It has about **75% indigenous content**, a displacement of approximately **7,400 tonnes** and a speed exceeding **30 knots**.
- Its weapons include **BrahMos missiles, surface-to-air missiles, anti-submarine rocket launchers and a 76-mm gun**.

Electronics Components Manufacturing Scheme

- The **Electronics Components Manufacturing Scheme (ECMS)** was launched in **2025 by MeitY**.
- Its objective is to establish a robust domestic ecosystem for **electronic-component manufacturing** and integrate India with global value chains.
- It provides three incentive models: **turnover-linked, capex-linked and hybrid**.
- Employment generation is a mandatory requirement for applicants.
- The scheme particularly focuses on **passive components** such as resistors, capacitors, speakers, microphones, relays, switches and connectors.
- **Active electronic components** fall under the broader **India Semiconductor Mission** framework.

Huntington's Disease

- **Huntington's disease (HD)** is a progressive **hereditary neurodegenerative disorder** affecting brain function.
- It results from a mutation in the **HTT gene** and follows an **autosomal-dominant inheritance pattern**; an affected parent gives an individual a 50% chance of inheriting the condition.
- Neuronal degeneration particularly affects the **basal ganglia** and also the cerebral cortex.
- Symptoms include **chorea, abnormal postures, cognitive decline, emotional disturbances and personality changes**.
- Symptoms commonly begin between **30 and 50 years**, although juvenile and late-onset forms occur.
- There is currently **no cure**; treatment is directed towards symptom management.

Exercise MAITREE-XV

- **Exercise MAITREE** is a bilateral military exercise between **India and Thailand**, instituted in **2006**.
- The 2026 edition is the **15th edition**.

- The Indian Army contingent includes personnel primarily from **9 Gorkha Rifles**.
- Training focuses on **jungle and semi-urban terrain**.
- It aims to improve capabilities for **joint counter-insurgency and counter-terrorist operations** under **Chapter VII of the UN Charter**.
- The exercise includes field training, combat discussions, lectures, demonstrations and a final validation exercise.

Mount Kanlaon

- **Mount Kanlaon** is an **active stratovolcano on Negros Island, Philippines**.
- At about **2,465 m**, it is the highest peak of the **Visayas region** and the tallest mountain on Negros Island.
- It lies within the **Pacific Ring of Fire**.
- Its summit contains a broad northern **caldera with a crater lake** and a historically active southern crater.
- It has erupted more than **30 times since 1819**.
- Most eruptions are **phreatic**, involving steam-driven explosions that produce ash.

Kikuchi-Fujimoto Disease

- **Kikuchi-Fujimoto Disease (KFD)**, also called **histiocytic necrotizing lymphadenopathy**, is a rare inflammatory disorder primarily affecting the lymph nodes.
- It commonly causes **painful cervical lymph-node swelling, fever and fatigue** and can mimic **tuberculosis and lymphoma**.
- The exact cause remains uncertain; viral infections and autoimmune mechanisms have been suggested as possible triggers.
- It is generally **self-limiting**, although severe or recurrent cases may require symptomatic treatment.
- There is **no specific cure**; NSAIDs and, in severe cases, corticosteroids may be used.

Helicase

- **Helicase** is an essential enzyme involved in **DNA replication, repair and transcription**.
- It acts as a molecular motor that uses **ATP** to unwind double-stranded DNA into two single strands.
- Its action creates the characteristic **Y-shaped replication fork**.
- **Topoisomerases** relieve the torsional stress that develops ahead of the replication fork as DNA is unwound.

- Recent research highlighted the role of **Sld3-Sld7 proteins** in detecting activated MCM2-7 helicase and recruiting **Cdc45** to initiate DNA replication.

Giloy

- **Giloy (**Tinospora cordifolia**)** is a climbing shrub belonging to the family **Menispermaceae**.
- It is also known as **Guduchi, Giloe and Amrita** and is native to India.
- It is widely used in **Ayurvedic and traditional medicine**.
- The **stem** is particularly valued for its medicinal compounds, although all parts of the plant are used traditionally.
- The plant contains alkaloids, steroids, glycosides, sesquiterpenoids and other bioactive compounds.

Central African Republic

- The **Central African Republic (CAR)** is a **landlocked country in Central Africa**, with **Bangui** as its capital.
- It borders **Chad, Sudan, South Sudan, Democratic Republic of the Congo, Republic of the Congo and Cameroon**.
- The country is largely a **plateau with savannah vegetation** and has a tropical climate.
- The **Ubangi River** is a major tributary of the Congo River, while the **Chari River** drains northwards towards Lake Chad.
- **Mount Ngaoui** in the Karre Mountains is the country's highest point.
- The country possesses deposits of **diamonds, gold, uranium, iron ore, copper and manganese**.

Tamirabharani River

- **Tamirabharani (Porunai)** is a **perennial river flowing entirely through Tamil Nadu**.
- It originates at **Agastyarkoodam Peak in the Pothigai Hills of the Western Ghats**.
- It flows through **Tirunelveli and Thoothukudi districts** before entering the **Gulf of Mannar**.
- It receives water from both the **Southwest and Northeast Monsoons**.
- Important tributaries include **Servalar, Manimuthar, Gadananathi, Pachaiyar, Chittar and Ramanathi**.
- Major associated reservoirs/dams include **Karaiyar, Manimuthar, Gadananathi and Ramanathi**.
- The river is significant for irrigation, drinking water and the ecological landscape of southern Tamil Nadu.

CURRENT AFFAIRS MAGAZINE – AUGUST

Mushk Budji

- **Mushk Budji** is an indigenous **aromatic short-grain rice variety of Kashmir**.
- It is traditionally cultivated in the higher reaches of the Kashmir Valley at around **5,000–7,000 ft**.
- It is characterised by **short, slightly translucent, ivory-coloured grains**, distinctive aroma and a delicate nutty flavour.
- It received a **Geographical Indication (GI) tag on 31 July 2023**.
- It is traditionally associated with special occasions and festivals in Kashmir.

National Sports Awards

- The **National Sports Awards** are administered by the **Ministry of Youth Affairs and Sports**.
- The **Arjuna Award** recognises sustained sporting performance along with qualities of leadership, sportsmanship and discipline.
- The **Arjuna Award (Lifetime)** recognises sportspersons who continue contributing to sports after retirement.
- The **Dronacharya Award** is given to outstanding coaches who enable athletes to excel at international events.
- The **Rashtriya Khel Protsahan Puraskar** recognises organisations, including companies and NGOs, for promoting sports.
- National Sports Awards are associated with **29 August, National Sports Day**.

Regional Rural Banks

- **Regional Rural Banks (RRBs)** were created to provide banking and credit facilities in rural areas, particularly to **small and marginal farmers, agricultural labourers, artisans and small entrepreneurs**.
- Their establishment followed the recommendations of the **Narasimham Working Group (1975)** and the **Regional Rural Banks Act, 1976**.
- The first RRB, **Prathama Grameen Bank**, was established on **2 October 1975**.
- Ownership is divided among the **Central Government, State Government and sponsoring commercial bank in the ratio 50:15:35**.
- RRBs are **regulated by RBI** and supervised by **NABARD**.
- Their prescribed **Priority Sector Lending target is 75%** of total outstanding advances.

Escherichia coli

- **Escherichia coli (E. coli)** is a rod-shaped bacterium belonging to the family **Enterobacteriaceae**.
- It normally occurs in the **intestines of humans and animals**; many strains are harmless.
- Certain pathogenic strains can cause **diarrhoea, urinary infections and other illnesses**.
- **Shiga toxin-producing E. coli (STEC)** can cause severe intestinal disease, including bloody diarrhoea.
- Transmission can occur through **contaminated food, contaminated water or faecal contamination**.
- Some harmless intestinal E. coli contribute to the synthesis of **Vitamin K**.

Thames River

- The **River Thames** flows through **southern England** and is approximately **346 km long**.
- It is the **longest river in England** and the second longest in the United Kingdom after the **River Severn**.
- It originates at **Thames Head near Kemble in the Cotswold Hills**.
- It enters the **North Sea through the Thames Estuary**.
- Important tributaries include the **Lea, Kennet, Windrush, Evenlode, Ock and Loddon**.
- The river passes through or near major places including **London, Oxford, Windsor and Reading**.

Senchal Wildlife Sanctuary

- **Senchal Wildlife Sanctuary** is located in the **Darjeeling hills of West Bengal**.
- Established in **1915**, it is among India's older wildlife sanctuaries.
- It lies at an elevation of approximately **1,500–2,600 m** and is described as the southeastern extension of **Singalila National Park**.
- Vegetation includes **oak, pine and birch**, along with temperate and alpine forests.
- Important fauna include **Himalayan black bear, leopard, barking deer, wild boar, jungle cat and Himalayan flying squirrel**.
- The sanctuary is associated with the **Tragopan**.

Impatiens nimspurjai

- **Impatiens nimspurjai** is a newly discovered Himalayan plant belonging to the **touch-me-not family**.

- It is **endemic to western Nepal** and grows in temperate forests and forest margins around **2,800–2,900 m**.
- It was named in honour of Nepali mountaineer **Nirmal Purja**.
- The species is an annual herb that can grow to nearly **one metre**.
- It has **sessile oblong-to-lanceolate leaves** and small flower clusters with yellow and purple colouring.

Friends of MY Bharat Initiative

- **Friends of MY Bharat** is a digital initiative of the **Ministry of Youth Affairs and Sports**.
- It seeks to connect **Indian-origin youth living abroad** with India's nation-building and youth-oriented programmes.
- It is developed through the **Mera Yuva Bharat (MY Bharat)** platform.
- Opportunities include volunteering in **education, environment, health awareness, disaster relief and cultural preservation**.
- A **"Know Your India"** section provides information about India's culture, heritage, history and tourism.
- **MY Bharat** itself was launched in **October 2023** to facilitate youth volunteering, leadership, skills and civic participation.

Psammophaga holzmannae **and** Psammophaga sinhai

- These are two newly identified species of **microscopic marine foraminifera** discovered at **Rajapuri Creek, Raigad, Maharashtra**.
- The name Psammophaga means **"sand eater"**.
- Unlike many multi-chambered foraminifera, these organisms have a **single chamber with a soft wall** mainly composed of fine clay particles.
- They selectively ingest heavy minerals containing **titanium and iron**, including **ilmenite and magnetite**.
- They use temporary hair-like structures called **granuloreticulopodia** to interact with surrounding sediments.
- This unusual mineral-selection behaviour makes them particularly significant for studies of **microbial ecology and sedimentary environments**.

Dimna Lake

- **Dimna Lake** is an artificial reservoir located at the foothills of the **Dalma mountain range near Jamshedpur, Jharkhand**.
- It was constructed by **Tata Steel** under the Dimna Nala Water Supply Scheme.
- Construction began in **1940** and was completed in **1944**.
- The reservoir was created by damming the **Subarnarekha River** and covers approximately **27 sq km**.
- It was developed primarily to meet the water requirements of the growing industrial city of Jamshedpur.
- It lies near **Dalma Wildlife Sanctuary**.

Sea Lice

- The term **sea lice** in this context refers to larvae of certain **jellyfish and sea anemones**, not the parasitic head lice found in humans.
- They occur in **saltwater marine environments** and drift with ocean currents.
- Contact can produce **seabather's eruption**, an itchy skin rash caused when stinging cells discharge toxins.
- Symptoms commonly affect areas covered by **swimwear**, where pressure triggers the organisms.
- They are extremely small and nearly transparent, making them difficult to detect visually.

National Medical Commission

- The **National Medical Commission (NMC)** is India's apex statutory regulator for **medical education, medical professionals and medical institutions**.
- It was established under the **National Medical Commission Act, 2019**, which came into force on **25 September 2020**.
- It replaced the **Medical Council of India (MCI)**.
- Headquarters: **New Delhi**.
- Its four autonomous boards are the **Under-Graduate Medical Education Board, Post-Graduate Medical Education Board, Medical Assessment and Rating Board, and Ethics and Medical Registration Board**.
- It also works through the **Medical Advisory Council**, which provides a platform for States and UTs.

Glyphosate

- **Glyphosate** is a widely used **broad-spectrum herbicide** used to control weeds and grasses.

- It acts by inhibiting **EPSP synthase**, an enzyme involved in the synthesis of essential aromatic amino acids in plants.
- It is regulated in India under the **Insecticides Act, 1968**.
- Glyphosate binds strongly to soil particles and can be degraded by microorganisms in soil and water.
- It is primarily effective against **actively growing plants above water**, rather than submerged vegetation.

Sawalkote Hydroelectric Project

- **Sawalkote Hydroelectric Project** is a **1,856 MW run-of-the-river project** on the **Chenab River** in Jammu and Kashmir.
- It is located in **Udhampur and Ramban districts**.
- The project lies between the **Baglihar Project upstream and Salal Project downstream**.
- It is being constructed by **NHPC** and includes a proposed **192.5-metre concrete gravity dam**.
- It will have **nine turbines** and an underground power station.
- The project is strategically important for utilisation of India's share of the waters of the **western rivers under the Indus Waters Treaty framework**.

Methamphetamine

- **Methamphetamine** is a powerful and highly addictive **central nervous system stimulant** belonging to the amphetamine class.
- It is also known as **meth, ice and crystal**.
- It affects neurotransmitter systems, particularly **dopamine**, and can produce euphoria and increased activity.
- High doses can cause serious effects including **psychosis, seizures and intracranial bleeding**.
- It is a controlled psychoactive substance and is associated with major concerns relating to **drug trafficking and organised crime**.

RK-251 Drug

- **RK-251** is a proposed **smart anticancer drug** designed to become preferentially activated inside cancer cells.
- It was developed through collaboration involving **IASST** scientist Dr. Asis Bala and **IIT Guwahati** scientist Dr. K.P. Bhabak.

- Cancer cells with high levels of **reactive oxygen species (ROS)** trigger activation of RK-251.
- Activation releases the anticancer compound **NBDHEX**, which targets proteins involved in cancer-cell survival and resistance.
- The candidate showed activity against **triple-negative breast cancer cells** while producing substantially less effect on healthy cells.
- Its fluorescence response can also indicate activation in an **ROS-rich environment**.

Parichha Dam

- **Parichha Dam** is located on the **Betwa River near Jhansi, Uttar Pradesh**.
- It is an important component of the **Betwa Canal System**, supporting irrigation in drought-prone Bundelkhand.
- Construction began in **1881** and the dam became operational in **1886**.
- The **International Commission on Irrigation and Drainage (ICID)** recognised it as a **World Heritage Irrigation Structure (WHIS)**.
- The ICID's WHIS programme recognises historically significant irrigation and drainage structures that are more than **100 years old** and have engineering, historical or continuing agricultural importance.
- The **Sukwa-Dukwan Weir in Jhansi** was also included in the WHIS list in 2022.

Pradhan Mantri Janjatiya Vikas Mission

- **PMJVM** was launched in **2021–22** to strengthen the tribal forest economy through processing, value addition and marketing of **Minor Forest Produce (MFP)**.
- It is implemented by the **Ministry of Tribal Affairs**.
- A major component is the **Van Dhan Vikas Kendra (VDVK)** model.
- A typical VDVK clusters around **15 Self-Help Groups**, with approximately **300 tribal members**.
- At least **60% of members must belong to Scheduled Tribe communities**.
- Support includes **skill development, processing equipment, working capital, storage, transportation and market linkages**.
- The **Van Dhan Yojana**, launched in 2018, forms the foundation of the VDVK model.

Divyastra Mk3

- **Divyastra Mk3** is an indigenous **jet-powered loitering munition**, also described as a kamikaze or suicide drone.
- It was developed by Lucknow-based defence start-up **Kawa UAV Pvt. Ltd. (Hoverlt)**.

- Its maiden flight represented India's first reported instance of an indigenously designed, developed and manufactured **jet-powered loitering munition with an indigenous powerplant**.
- It is intended to destroy **high-value enemy assets, infrastructure and personnel**.
- The system uses an indigenous jet-propulsion system developed by **DG Propulsion**.
- It incorporates **autonomous flight control and AI-enabled target engagement**.

Christmas Island

- **Christmas Island** is an **Australian territory in the Indian Ocean**.
- It lies approximately **360 km south of Java** and about **1,400 km northwest of Australia**.
- It is the summit of an oceanic mountain, with **Murray Hill** as its highest point at about **361 m**.
- Around **63% of the island is a national park**, with tropical rainforest covering much of the island.
- **Flying Fish Cove** is the principal settlement and port.
- The island is famous for the annual migration of the **Christmas Island red crab (**Gecarcoidea natalis**)**.

Sea Urchin

- **Sea urchins** are marine invertebrates belonging to the phylum **Echinodermata**.
- Other echinoderms include **starfish and sea cucumbers**.
- They possess a hard internal skeleton or **test** composed of interlocking plates and movable spines.
- Their body exhibits **fivefold radial symmetry**, characteristic of echinoderms.
- They generally feed on **algae and plant material**.
- Their specialised mouth apparatus, called **Aristotle's lantern**, scrapes algae and food from rocks or the seafloor.
- IIT Mandi researchers developed a **sea-urchin-inspired surface coating for 3D-printed bone implants**, aimed at mechanically disrupting bacteria and improving bone integration.

AIKosh Platform

- **AIKosh** is a national platform providing access to **datasets, AI models and related resources** for India's AI ecosystem.
- It seeks to improve the **discoverability, accessibility and responsible use of AI-ready resources**.
- It provides shared toolkits, use cases, tutorials and **AI sandbox capabilities**.
- AIKosh is an initiative under the **IndiaAI Mission**.

- The nodal ministry is the **Ministry of Electronics and Information Technology (MeitY)**.
- The IndiaAI Mission includes pillars such as **Common Compute Facility, AI Kosha, AI Innovation Centre, AI Application Development Initiative, Future Skills and Startup Financing**.

Singhbhum Craton

- The **Singhbhum Craton** is one of the oldest cratonic blocks of the **Indian Shield**, located mainly in **Jharkhand and Odisha**.
- It lies between the **Chhota Nagpur Plateau and the Eastern Ghats**.
- Parts of the craton date back approximately **3.5 billion years**.
- Its ancient geological formations include **greenstone successions**, comprising predominantly submarine volcanic rocks with some sedimentary rocks.
- Its geology shows similarities with ancient greenstone belts of **Barberton in South Africa and the Pilbara Craton of Australia**.
- It provides important evidence for understanding **Archaean tectonics, early Earth environments and the possible emergence of life**.

National Centre for Polar and Ocean Research

- **NCPOR** is India's premier institution for research and expeditions concerning the **polar regions and Southern Ocean**.
- It was established on **25 May 1998** as an autonomous R&D institution.
- It was formerly known as the **National Centre for Antarctic and Ocean Research (NCAOR)**.
- It functions under the **Ministry of Earth Sciences** and is located at **Vasco da Gama, Goa**.
- It coordinates and implements India's **Antarctic Programme** and undertakes expeditions to the Antarctic, Arctic, Southern Ocean and Himalayas.
- India's research stations associated with its polar programme include **Dakshin Gangotri, Maitri and Bharati in Antarctica**, **Himadri in the Arctic**, and **Himansh in the Himalayas**.

Zambia

- **Zambia** is a **landlocked country in south-central Africa**, with **Lusaka** as its capital.
- It shares borders with **DRC, Tanzania, Malawi, Mozambique, Zimbabwe, Botswana, Namibia and Angola**.
- The **Zambezi River** is its most significant river and ultimately drains into the **Indian Ocean**.
- Other important rivers include the **Kafue and Luangwa**.

- **Lake Tanganyika** and **Lake Kariba** are important water bodies associated with the country.
- The **Mafinga Mountains** form an important highland region.
- Zambia is rich in **copper, cobalt, uranium, zinc, gold, silver and emeralds**.
- The **Zambezi River forms Victoria Falls**, a major geographical landmark shared by Zambia and Zimbabwe

Ervebo Vaccine

- **Ervebo** is a licensed vaccine against **Ebola Virus Disease (EVD)** caused by **Zaire ebolavirus**.
- It is a **replication-competent, live, attenuated recombinant vesicular stomatitis virus (VSV) vaccine**.
- The vaccine carries a protein from Zaire ebolavirus and stimulates an immune response without causing Ebola disease.
- It is indicated for active immunisation of individuals **1 year of age and older**.
- It is manufactured by **Merck** and does not protect against other orthoebolavirus or orthomarburgvirus species.
- Ebola is transmitted mainly through contact with infected body fluids; it is **not an airborne disease**.

National Animal Disease Control Programme

- **NADCP** was launched in **2019** as a major livestock-health initiative.
- It is a **Central Sector Scheme**, with **100% central funding** to States/UTs.
- It aims to control and eradicate **Foot and Mouth Disease (FMD)** and **Brucellosis** through vaccination and surveillance.
- It targets **100% livestock vaccination against FMD twice a year**.
- **Female bovine calves aged 4–8 months** receive one lifetime vaccination against Brucellosis.
- The nodal ministry is the **Ministry of Fisheries, Animal Husbandry & Dairying**.

INS Mangrol

- **INS Mangrol** is the third of eight **Anti-Submarine Warfare Shallow Water Craft (ASW-SWC)** being constructed for the Indian Navy.
- It has been indigenously designed and built by **Cochin Shipyard Limited (CSL)**.
- Its principal role is **anti-submarine warfare in shallow coastal waters**.

- It can also undertake underwater surveillance, **Search and Rescue, Low Intensity Maritime Operations and mine-laying**.
- The vessel is about **78 m long**, has a displacement of around **900 tonnes** and can reach **25 knots**.
- It uses **diesel-engine/waterjet propulsion**, shallow-water sonar, lightweight torpedoes and indigenous ASW rockets, with **over 80% indigenous content**.
- It is named after **Mangrol in Gujarat's Surat district**.

Online Bond Platform Provider

- An **Online Bond Platform Provider (OBPP)** is a **SEBI-registered platform** facilitating buying and selling of bonds.
- It acts as a digital bridge between **bond issuers and retail investors**.
- Investors can compare bonds on parameters such as **credit rating, yield, maturity and issuer profile**.
- The minimum investment value mentioned by Vajiram is **₹10,000**.
- For listed debt securities, orders are routed through the **Request for Quote (RFQ)** platform of a recognised stock exchange.
- Settlement takes place through a recognised clearing corporation, with bonds credited to the investor's **Demat account**.

Polysilicon

- **Polysilicon** is a highly purified form of silicon composed of multiple small silicon crystals.
- It is a crucial raw material for manufacturing **solar cells**, forming the basis of the solar PV supply chain.
- Polysilicon is melted into **ingots**, which are sliced into wafers and subsequently processed into solar cells and modules.
- It is also important in the **semiconductor industry** for manufacturing integrated circuits and electronic components.
- High-purity polysilicon can be produced through processes such as the **Siemens process** and **fluidized bed reactor (FBR) technology**.
- Global solar-grade polysilicon production is highly concentrated, with **China accounting for the large majority of output**.

Golconda Fort

- **Golconda Fort** is located on the western outskirts of **Hyderabad, Telangana**; the name derives from Telugu **"Golla Konda"**, meaning Shepherd's Hill.
- The original fort was erected around **1143 under the Kakatiya dynasty**.
- It rose to prominence under the **Qutb Shahi dynasty**, which made Golconda its capital from **1518 to 1591**.
- **Aurangzeb** finally captured the fort in **1687** after a prolonged siege.
- The fort stands on a granite hill and has multiple fortification walls, **8 gates and 87 bastions**.
- **Fateh Darwaza** is famous for its acoustic properties.
- The Golconda region was historically renowned for its **diamond mines**, associated with famous diamonds such as the Koh-i-Noor.

Lake Erie

- **Lake Erie** is the **fourth-largest and southernmost** of North America's five Great Lakes.
- It is the **shallowest, warmest and smallest by volume** among the Great Lakes.
- It forms part of the international boundary between **Canada and the United States**.
- It receives the discharge of **Lake Huron through the Detroit River** and drains into **Lake Ontario through the Niagara River**.
- **Pelee Island** is the largest island in the lake.
- Major ports include **Detroit, Cleveland, Toledo and Buffalo**.
- The lake forms an important link in the **Saint Lawrence Seaway**, connecting the Great Lakes with the Atlantic Ocean.

National Financial Reporting Authority

- **NFRA** is an independent regulatory body established under **Section 132(1) of the Companies Act, 2013**.
- Its headquarters is in **New Delhi** and it functions under the **Ministry of Corporate Affairs**.
- It oversees compliance with **accounting and auditing standards** and seeks to improve the quality and transparency of financial reporting.
- It can recommend accounting and auditing standards for adoption by the Central Government. NFRA
- can investigate professional or other misconduct by **chartered accountants and audit firms**. It
- possesses powers similar to those of a **civil court** under the Code of Civil Procedure while trying a suit.

Pradhan Mantri Annadata Aay Sanrakshan Abhiyan

- **PM-AASHA** was launched in **September 2018** to strengthen implementation of **MSP** and provide remunerative prices to farmers.
- Its **Price Support Scheme (PSS)** provides procurement at MSP when market prices fall below MSP, mainly covering **pulses, oilseeds and copra**.
- Procurement under PSS is undertaken through agencies such as **NAFED and NCCF**.
- **Price Deficiency Payment Scheme (PDPS)** compensates farmers for the difference between MSP and the actual market price without physically procuring the produce.
- **Price Stabilization Fund (PSF)** uses buffer stocks to control price volatility in commodities such as pulses, onions and potatoes.
- **Market Intervention Scheme (MIS)** covers perishable agricultural and horticultural commodities for which MSP does not apply.

Brazil

- **Brazil** occupies almost half of South America's landmass and borders the **Atlantic Ocean**.
- It is crossed by both the **Equator and Tropic of Capricorn**.
- It shares land borders with every South American country except **Chile and Ecuador**.
- Major physical regions include the **Brazilian Highlands, Amazon Rainforest and Pantanal Wetlands**.
- Major rivers include the **Amazon, São Francisco and Iguacu**.
- **Pico da Neblina** is Brazil's highest peak.
- Brazil is rich in resources including **iron ore, tin, copper, pyrochlore and bauxite**.

United Kingdom Maritime Trade Operations

- **UKMTO** is a **British Royal Navy-sponsored organisation** established in **2001** to handle distress calls and support maritime security.
- It was initially established with an office in **Dubai** and shifted to **Portsmouth, UK, in 2014**.
- It serves as a key contact point between **commercial vessels and military forces** in the region.
- Its operational area covers **West Asia and the Indian Ocean Region**.
- Its **Voluntary Reporting Area (VRA)** covers almost 2.5 million square miles, including the **Red Sea, Arabian Sea, Gulf of Aden, Gulf of Oman, Persian Gulf and much of the northwestern Indian Ocean**.

- Shipmasters are encouraged to submit entry, daily transit and exit reports while inside the VRA.

Mauritius

- **Mauritius** is an island country in the **southwestern Indian Ocean**, off the southeast coast of Africa.
- It forms part of the **Mascarene Islands**, which originated largely through volcanic activity.
- **Port Louis** is the capital.
- Mauritius is a member of **COMESA** and **SADC**.
- Both the **Indian Ocean Rim Association (IORA)** and the **Indian Ocean Commission (IOC)** have their headquarters in Mauritius.
- Important geographical features include **Lake Vacoas, Grand River South East and Black River**.

Narwhal

- The **narwhal (**Monodon monoceros**)** is a medium-sized toothed whale belonging to the family **Monodontidae**; the other living member is the beluga whale.
- It is primarily distributed in the **Arctic Ocean**, particularly its Atlantic sector.
- Major populations occur around **Canada, Greenland and eastern Russia**.
- Its characteristic **long, spiralled tusk is an elongated tooth**, usually developed by males.
- Narwhals are deep-diving marine mammals and can remain underwater for roughly **25–30 minutes**.
- They feed on **fish, squid and shrimp** and use sound for communication, navigation and hunting.
- IUCN status: **Least Concern**.

Thiksey Monastery

- **Thiksey Monastery** is one of the largest and most prominent monastic complexes in **central Ladakh**.
- It was founded in **1433** and belongs to the **Gelugpa or Yellow Hat school of Tibetan Buddhism**.
- Its architecture resembles the **Potala Palace of Lhasa**.
- The monastery is a **12-storey complex** and houses a famous **15-metre-high Maitreya Buddha statue**.
- It contains stupas, thangkas, wall paintings and other Buddhist artefacts.
- The annual **Gustor festival** is held from the 17th to 19th day of the ninth month of the Tibetan calendar.
- It functions as an important centre for **Buddhist studies and spiritual training**.

CURRENT AFFAIRS MAGAZINE – AUGUST

Long-Tailed Marmot

- The **long-tailed marmot (**Marmota caudata**)**, also called the golden marmot, belongs to the family **Sciuridae**.
- It occurs in high-altitude regions of **Central and South Asia**.
- In India, it is found mainly in **Jammu & Kashmir and Ladakh** at approximately **3,200–4,850 m**.
- Its habitat includes **alpine meadows and rocky slopes**.
- It is herbivorous, diurnal and social.
- It **hibernates from approximately September to April/May**.
- IUCN status: **Least Concern**.

Squint Eye

- **Squint eye**, medically termed **strabismus**, occurs when the two eyes do not align properly.
- One eye may turn inward (**esotropia**), outward (**exotropia**), upward or downward.
- Causes can include genetic factors, neurological or developmental conditions, premature birth, diabetes, thyroid eye disease, stroke or trauma.
- In children, untreated strabismus can interfere with normal visual development and cause **amblyopia**.
- Adults may experience double vision, blurred vision, eye strain, headaches or impaired depth perception.
- Treatment may involve **glasses**, other corrective measures or surgery depending on the cause and severity.

Endoscopic Camera

- An **endoscopic camera** allows doctors to view and record images from small or difficult-to-reach areas of the body.
- Modern systems often use **"chip-on-tip" technology**, integrating the lens and imaging electronics into a miniature unit at the tip.
- Illumination is generally provided by **fibre optics or LEDs**.
- Different endoscopes serve different purposes: **cystoscope, laryngoscope, otoscope, gastroscope, laparoscope, arthroscope and duodenoscope**.
- Endoscopic techniques allow internal examination and procedures with substantially less invasive access than conventional surgery.

- The technology is also used beyond medicine, including **industry, research and security**.

Terrier Cyber Quest 2026

- **Terrier Cyber Quest 2026 (TCQ 3.0)** is a national-level hackathon focused on **cybersecurity, defence and digital threats**.
- It is organised by the **Territorial Army in collaboration with CyberPeace**.
- The three major tracks are **Bug Hunting, AI Kavach and Creators Challenge**.
- Bug Hunting involves identifying vulnerabilities in simulated critical-infrastructure systems.
- **AI Kavach** focuses on AI/ML-based threat detection and cyber defence.
- The Creators Challenge addresses **deepfakes, phishing, online scams and misinformation**.
- The Territorial Army is popularly described as the **"Second Line of Defence"** and operates through volunteer personnel who retain civilian employment.

KN-30 Missile

- **KN-30** is the Western designation for North Korea's **Hwasong-11C**, also known as **Hwasong-11Da**. It
- is a **short-range ballistic missile (SRBM)** and an enlarged member of the Hwasong-11 family.
- It uses a **solid-fuel engine** and is launched from a mobile ground-based launcher.
- Solid fuel allows quicker readiness and easier storage compared with traditional liquid-fuel systems.
- Its estimated range is approximately **600–900 km**, with a claimed warhead mass of about **2,500 kg**. It
- can reach approximately **Mach 5–6** and can follow a low quasi-ballistic trajectory.

Chromium

- **Chromium** is a naturally occurring element present in rocks, soil, plants and animals.
- **Trivalent chromium [Cr(III)]** and **hexavalent chromium [Cr(VI)]** are important chemical forms; Cr(VI) is highly toxic.
- Chromium is a hard, grey metallic element and develops a protective oxide layer.
- It is extensively used in **stainless steel, alloys, metal plating, pigments, leather processing and refractories**.
- The principal ore of chromium is **chromite**.
- **Odisha** has the highest chromite reserves in India.

Crimean-Congo Hemorrhagic Fever

- **CCHF** is a serious **zoonotic viral haemorrhagic disease** caused by a tick-borne virus of the **Nairovirus** group.
- Its principal vector is the **Hyalomma tick**.
- It occurs across parts of **Africa, Asia, the Middle East and Europe**.
- Transmission occurs through infected tick bites or contact with infected blood/tissues of ticks, humans or livestock.
- High-risk groups include **livestock workers, slaughterhouse workers and veterinary personnel**.
- The reported case-fatality rate is approximately **10–40%**.
- There is no specific cure; treatment is primarily supportive, while **Ribavirin** has shown some benefit.

Ribociclib

- **Ribociclib** is an anticancer medicine used with other medicines to treat certain forms of **breast cancer**.
- It belongs to the **CDK 4/6 inhibitor** class.
- CDK4 and CDK6 are proteins involved in **cell growth and division**.
- By inhibiting these kinases, ribociclib helps slow the growth and spread of cancer cells.
- It is used in certain **locally advanced and metastatic breast cancers**.
- It is administered along with **hormone therapy** for breast cancer treatment.

Regenerative Agriculture

- **Regenerative agriculture** focuses on actively restoring **soil health, biodiversity and ecosystem functions**, rather than merely maintaining existing conditions.
- Major principles include **minimum soil disturbance, maintaining soil cover, protecting living roots, integrating livestock and reducing chemical inputs**.
- Indian practices include **natural farming, micro-irrigation, green manuring, cover cropping and mulching**.
- Integrated farming can combine crops with **livestock, fisheries, horticulture, agroforestry and apiculture**.
- Agroforestry can improve soil moisture, moderate local temperatures and enhance **carbon storage**.
- The approach is increasingly relevant to **climate-resilient agriculture and sustainable land management**.

Periyar Cow

- **Periyar Cow**, locally called **Periyar Kullan**, is an indigenous cattle breed associated with Kerala.
- It is traditionally found in the **Periyar River basin and adjoining forest and plantation landscapes of Ernakulam and Thrissur**.
- It is the **second native cattle breed from Kerala to receive national recognition**, after Vechur.
- It is adapted to **semi-feral, low-input and agroforestry conditions** and can survive largely through natural grazing.
- It is a compact animal weighing around **150–200 kg** and standing approximately **105–110 cm**.
- It is valued for its adaptability and low maintenance requirements.

Cloud and AI Skilling Initiative

- The nationwide **Cloud and AI Skilling Initiative** seeks to provide foundational AI and cloud literacy to **1.5 lakh learners**.
- It also provides intensive job-oriented training to **10,000 participants** through the **AWS re/Start programme**.
- It was launched by **NSDC and Cultus Education in collaboration with Amazon Web Services (AWS)**.
- The initiative is supported by the **Ministry of Skill Development and Entrepreneurship**.
- It particularly targets youth in **Tier-2 and Tier-3 cities** across India.
- Training covers areas including cloud infrastructure, networking, security, programming, databases and AI fundamentals.

Guruvayur Temple

- **Guruvayur Temple** is located in **Guruvayur, Thrissur district, Kerala**, and is popularly called the **"Dwarka of the South."**
- It is dedicated to **Guruvayurappan**, a form of Lord Vishnu worshipped as **Baby Krishna**.
- The temple is renowned for traditional **Kerala-style architecture**, wooden carvings, gabled roofs and intricate sculptures.
- Important architectural elements include the **Nalambalam, Balikkal and Deepastambam**.
- The temple has historic **17th-century murals** and a gold-covered Dwajasthamba.
- **Thulabharam** is a prominent offering in which devotees are weighed against materials such as jaggery, coconuts, sugar or bananas.
- The nearby **Punnath[illegible]** is associated with the traditional Asian elephants.

CURRENT AFFAIRS MAGAZINE – AUGUST

Vishwamitri River

- The **Vishwamitri River** is a small **non-perennial river in Gujarat**.
- It originates from the **western and southern slopes of the Pavagadh Hills**.
- It flows through **Vadodara** before joining the Dhadar and Jambuva systems and ultimately reaching the **Arabian Sea through the Gulf of Khambhat**.
- The river is approximately **200 km long** and flows between the **Mahi and Narmada rivers**.
- Its ravines support diverse fauna, including porcupines, civets, jungle cats, snakes and Bengal monitors.
- It is particularly important for the **mugger crocodile (**Crocodylus palustris**)**; a 2025 census recorded 442 muggers along a 21-km stretch through Vadodara.

Indian Star Tortoise

- The **Indian Star Tortoise (**Geochelone elegans**)** is a medium-sized terrestrial tortoise named after the **star-like patterns on its shell**.
- It inhabits **dry areas and scrub forests** across parts of India and Sri Lanka.
- In India, it occurs particularly in western and southeastern regions, including **Karnataka, Kerala and Tamil Nadu**.
- Females are considerably larger than males.
- It is generally **crepuscular**, being active during early morning and late afternoon in hot conditions.
- IUCN status: **Vulnerable**.

Nilgiri Biosphere Reserve

- **Nilgiri Biosphere Reserve** is located in the **Nilgiri Mountains of the Western Ghats**, spanning **Tamil Nadu, Kerala and Karnataka**.
- Established in **1986**, it was **India's first biosphere reserve**.
- It became part of UNESCO's **World Network of Biosphere Reserves in 2000**.
- Important protected areas within it include **Mudumalai, Wayanad, Bandipur, Nagarhole, Mukurthi and Silent Valley**.
- Vegetation includes **shola-grassland systems, tropical evergreen, moist deciduous and dry deciduous forests**.
- Important fauna include **Nilgiri tahr, lion-tailed macaque, elephant, tiger, gaur, sambar and chital**.

- It is home to several indigenous communities including **Todas, Kotas, Irulas, Kurumbas and Paniyas**.

Smew

- **Smew (**Mergellus albellus**)** is a medium-sized migratory duck belonging to the family **Anatidae**.
- It breeds mainly in the **northern taiga of Europe and Asia**.
- It winters around regions including the **Baltic Sea, Black Sea, Caspian Sea, East Asia, Korea and Japan**.
- It is an occasional visitor to the **Indian subcontinent**.
- It has a narrow bill with **tooth-like edges and a hooked tip**, adapted for catching fish.
- **Laokhowa Wildlife Sanctuary in Assam** recorded the species for the first time; the sanctuary lies along the southern bank of the **Brahmaputra** and forms part of the Laokhowa–Burachapori ecosystem.
- IUCN status: **Least Concern**

Mongolia

- Mongolia is a **landlocked country of north-central Asia**, situated between **Russia to the north and China to the south**.
- Its capital is **Ulaanbaatar**.
- Major physical regions include the **Khentii, Khangai and Altai Mountains**, along with forest-steppe, steppe, semi-desert and desert zones.
- **Nayramadlin Orgil (Khüiten Peak)** is its highest point at about 4,374 m.
- The **Orkhon River** is an important river, while **Lake Khövsgöl** is one of Asia's major freshwater lakes.
- Mongolia is rich in **coal, copper, gold, silver and fluorite**.

Dihing Patkai National Park

- **Dihing Patkai National Park** is located in **Dibrugarh and Tinsukia districts of Assam**.
- It lies in the **Patkai Hill region** and is associated with the **Dehing River**, a tributary of the Brahmaputra.
- It contains one of India's largest stretches of **lowland tropical rainforests**.
- The area was declared a wildlife sanctuary in **2004** and upgraded to a national park in **2020**.
- Important species include **Asian elephant, tiger, leopard, slow loris, pig-tailed macaque and stump-tailed macaque**.

- Tribal communities associated with the landscape include **Tai Phake, Khamyang, Khampti and Singpho**.

Adi Vaani Platform

- **Adi Vaani** is India's first **AI-powered translator focused on tribal languages**.
- It was developed by a consortium led by **IIT Delhi**, with institutions including BITS Pilani, IIIT Hyderabad and IIIT Nava Raipur.
- It uses AI models including **No Language Left Behind (NLLB)** and **IndicTrans2**.
- It supports translation between Hindi/English and tribal languages through **text, speech and document processing**.
- It also aims to digitally preserve **folklore, oral traditions and tribal cultural heritage**.
- The platform has applications in **healthcare communication, education, civic inclusion and access to government schemes**.

Dak MITRA and Dak Sewa Apps

- **Dak MITRA** is designed as a unified operational platform for more than **1.4 lakh Branch Post Offices**.
- It enables paperless and real-time postal and financial transactions including **mail booking, doorstep delivery, banking, insurance and Aadhaar-based e-KYC**.
- It was developed indigenously by the **Centre for Excellence in Postal Technology (CEPT)** under the Advanced Postal Technology platform.
- **Dak Sewa App** provides services such as tracking, booking, complaints, Post Office and PIN-code locators and financial calculators.
- Dak Sewa supports **23 Indian languages through BHASHINI**.

Lead

- **Lead (Pb)** is a dense, soft metal belonging to **Group 14** of the periodic table.
- Its principal ore is **galena (PbS)**; other ores include cerussite and anglesite.
- Major applications include **lead-acid batteries, radiation shielding and industrial products**.
- Lead is highly toxic and can affect multiple body systems, with **children particularly vulnerable**.
- ICMR-NIN research highlighted disruption of the natural **waste-clearing and recycling mechanisms of nerve cells** following lead exposure.

Information Technology Resilience Index

- **ITRI** was introduced by **SEBI** for Market Infrastructure Institutions such as stock exchanges, depositories and clearing corporations.
- It assesses the **resilience and functioning of IT systems**.
- Nine parameters include **availability, security, integrity, governance, reliability and monitoring, business continuity, modularity/flexibility and scalability**.
- **Availability and security carry the highest weight of 20% each**.
- MIIs are required to calculate the index **half-yearly** and submit comparative analysis and corrective actions.
- An **Early Warning System** is also required to identify deterioration in IT resilience.

Doronicum sanctum

- **Doronicum sanctum** is a newly discovered plant species belonging to the **Asteraceae family**.
- It was discovered in the high-altitude region of **Tawang, Arunachal Pradesh**, at about **4,086 m**.
- It is the first documented member of the **Doronicum genus** from Northeast India.
- Its type locality lies near the **Chumi Gyatse Holy Waterfalls**, which inspired the species name sanctum.
- It has yellow flowers, heart-shaped leaves and distinctive reproductive characteristics.
- Arunachal Pradesh forms part of the **Himalaya and Indo-Burma biodiversity hotspots**.

GENESIS

- **GENESIS** stands for **Gen-Next Support for Innovative Startups**.
- It is a flagship initiative of **MeitY Startup Hub** aimed particularly at entrepreneurs in **Tier-II and Tier-III cities**.
- It supports startups from ideation and prototyping through validation, investment and scaling.
- The **Entrepreneur-in-Residence (EIR)** component can provide up to **₹10 lakh per startup**.
- The total outlay is **₹490 crore**, with a target of supporting **1,600 startups**.
- Focus areas include **AI/ML, IoT, semiconductor/VLSI, cybersecurity, blockchain, quantum technology and AR/VR**.

Guggal

- **Guggal (**Commiphora wightii**)** is a spiny shrub/small tree of the **Burseraceae family**.

- It occurs naturally in arid and semi-arid regions of **Rajasthan, Gujarat, Madhya Pradesh and Karnataka**.
- Its resin, called **guggul**, has important uses in **Ayurvedic medicine, perfumes, incense, lacquers and ointments**.
- It is adapted to **poor soils, drought and salinity**.
- The plant has slow growth and its saplings may take around **10 years to mature**.
- The **National Medicinal Plants Board** identifies Guggal as an important medicinal plant for conservation.

Waterspout

- A **waterspout** is a rotating column of air and mist occurring over a water body.
- Two major types are **tornadic waterspouts** and **fair-weather waterspouts**.
- Tornadic waterspouts are essentially tornadoes occurring over water and are associated with severe thunderstorms.
- Fair-weather waterspouts generally form under relatively calm conditions beneath developing cumulus clouds and develop **from the water surface upward**.
- They are favoured by **high humidity and relatively warm water compared with the overlying air**.
- A rare waterspout-like phenomenon was observed over the **Brahmaputra in Assam's Barpeta district**.

ICGS Ajit

- **ICGS Ajit** is an indigenously built **Fast Patrol Vessel (FPV)** constructed by **Goa Shipyard Limited**.
- It is about **51.43 m long**, 8 m wide and has a displacement of around **330 tonnes**.
- It uses twin marine diesel engines with **controllable-pitch propellers**.
- It can attain more than **27 knots** and has an endurance of around **1,500 nautical miles**.
- Its roles include **coastal patrol, fisheries protection, anti-smuggling, anti-piracy and search and rescue**.
- It is particularly useful for surveillance around India's **island territories and Exclusive Economic Zone**.

PRAGATI Platform

- **PRAGATI** stands for **Pro-Active Governance and Timely Implementation**.
- It was launched in **2015** as an ICT-enabled governance platform.

- It combines **digital data management, video conferencing and geospatial technology**.
- It follows a **three-tier structure** involving the PMO, Union Government Secretaries and State Chief Secretaries.
- It enables the Prime Minister to directly review major infrastructure projects, government programmes and public grievances.
- Its purpose is to identify bottlenecks and ensure **time-bound implementation**.

Morocco

- **Morocco** is located in the **Maghreb region of North Africa**.
- It has the **Atlantic Ocean to the west and Mediterranean Sea to the north**.
- It borders **Algeria** and the disputed territory of **Western Sahara**.
- **Rabat** is the capital.
- The **Atlas Mountains** dominate much of its interior, with **Jebel Toubkal** as the highest peak.
- The **Moulouya River** originates in the Atlas Mountains and flows into the Mediterranean Sea.

Alzheimer's Disease

- **Alzheimer's disease** is a progressive **neurodegenerative disorder** and the most common cause of dementia.
- Major pathological hallmarks include **amyloid-beta plaques and tau tangles**.
- Amyloid-beta aggregation produces extracellular plaques associated with neuronal dysfunction.
- Symptoms include progressive **memory loss, cognitive decline and behavioural changes**.
- Age, genetic factors and environmental/lifestyle factors can influence disease risk.
- A new fluorescence-responsive molecular probe was reported for detecting **amyloid-beta biomarkers**.

National Shipping Board

- The **National Shipping Board (NSB)** is a permanent statutory body established in **1959** under the **Merchant Shipping Act, 1958**.
- It advises the Government of India on matters relating to **shipping and maritime development**.
- Its nodal ministry is the **Ministry of Ports, Shipping and Waterways**.
- The Board consists of a Chairman and members representing Parliament, government, shipowners and seafarers.

- It recently proposed a roadmap aimed at adding **100 vessels to India's merchant fleet over five years**.

UN Mission in South Sudan

- **UNMISS** was established on **8 July 2011** under UN Security Council Resolution **1996 (2011)** following South Sudan's independence.
- It operates under **Chapter VII of the UN Charter**.
- After the outbreak of civil conflict in 2013, its mandate was strengthened towards **civilian protection and humanitarian assistance**.
- It also supports human rights, peace processes, institutional reforms and transitional justice.
- As of April 2026, **India was the largest troop contributor**, with 1,775 Indian military personnel deployed.

Garbhini Mitra Course

- The **Garbhini Mitra Course** was launched by the **All India Institute of Ayurveda (AIIA), New Delhi**, under the Ministry of Ayush.
- It is a six-month healthcare skill-development programme focusing on **pregnancy and postnatal support**.
- It draws on Ayurvedic concepts such as **Garbhini Paricharya, Sutika Paricharya and Garbhadhana Vidhi**.
- Training includes dietetics, lifestyle guidance, pregnancy-safe yoga, emotional support, newborn care and basic life support.
- Candidates must generally have passed **10+2 and be at least 18 years old**.

Peppara Wildlife Sanctuary

- **Peppara Wildlife Sanctuary** is located in **Thiruvananthapuram district, Kerala**.
- It was declared a wildlife sanctuary in **1983**.
- It is connected ecologically with **Kalakkad-Mundanthurai Tiger Reserve** and **Neyyar Wildlife Sanctuary**.
- The sanctuary forms the catchment of the **Peppara Dam**, built across the **Karamana River**.
- Vegetation includes **tropical evergreen, moist deciduous, semi-evergreen and Myristica swamp forests**.
- Fauna includes **tiger, elephant, leopard, lion-tailed macaque, Nilgiri langur and Nilgiri tahr**.

CURRENT AFFAIRS MAGAZINE – AUGUST

Lithium

- **Lithium** is the lightest solid element and the first element of **Group 1 (alkali metals)**.
- It has the **lowest density among metals** and reacts vigorously with water.
- Important sources include **spodumene, petalite and saline brines**.
- The **Lithium Triangle** consists of **Argentina, Bolivia and Chile**.
- Lithium is crucial for **rechargeable batteries, electric vehicles and portable electronics**.
- Lithium compounds also have applications in **glass, ceramics, lubricants and pharmaceuticals**.

Carbosulfan

- **Carbosulfan** is a **carbamate insecticide** used against agricultural pests.
- It has been used particularly in **paddy, cotton and horticultural crops**.
- It acts as an **acetylcholinesterase inhibitor**.
- It can rapidly metabolise into **carbofuran**, a highly toxic metabolite associated with severe cholinesterase inhibition.
- It is particularly toxic to **fish and aquatic organisms**.
- The Central Government has proposed a **complete ban on carbosulfan**.

Mission Samriddh Gaon

- **Mission Samriddh Gaon** aims to create **poverty-free, employment-rich villages with assured basic amenities**.
- It is under the **Ministry of Rural Development**.
- Pilot models are being developed in **Budni block of Sehore district and Khategaon block of Dewas district, Madhya Pradesh**.
- It follows an integrated framework at the **family, Gram Panchayat and block levels**.
- It seeks convergence of schemes related to **agriculture, employment, health, education, livelihoods and basic amenities**.
- Special attention is given to identifying **women farmers and connecting rural women with livelihood opportunities**.

Ammannia telanganensis

- **Ammannia telanganensis** is a newly discovered **freshwater flowering plant** from Telangana.
- It belongs to the **Lythraceae family**.

- It was discovered in the **Amrabad Tiger Reserve** in Nagarkurnool district.
- It grows in **wet sandy soils along seasonal streams and water bodies**.
- Its seeds have a distinctive **brain-like/cerebriform surface pattern**.
- Amrabad Tiger Reserve lies in the **Nallamala Hills of the Eastern Ghats** and is associated with the **Krishna River system**.

Small Industries Development Bank of India

- **SIDBI** was established on **2 April 1990** under an Act of Parliament.
- It was initially a wholly owned subsidiary of **IDBI** and was delinked from IDBI in 2000.
- It is the principal financial institution for the **promotion, financing and development of MSMEs**.
- It provides direct finance, refinancing, venture capital and other forms of financial support.
- Its headquarters is at **Lucknow, Uttar Pradesh**.
- SIDBI is also involved in expanding **MSME co-lending with Regional Rural Banks**.

Sathyamangalam Tiger Reserve

- **Sathyamangalam Tiger Reserve** is located in **Erode district, Tamil Nadu**.
- It lies at the junction of the **Eastern and Western Ghats** and forms part of the **Nilgiri Biosphere Reserve**.
- It is contiguous with **Mudumalai Tiger Reserve, Bandipur Tiger Reserve and other protected areas of Karnataka**.
- Important rivers include the **Bhavani, Moyar and Noyyal**.
- Vegetation ranges from **dry thorn forests and deciduous forests to semi-evergreen and riparian forests**.
- Major fauna include **tiger, elephant, leopard, gaur, sloth bear, blackbuck and Nilgiri langur**.

Gut Microbiome

- The **gut microbiome** is the community of microorganisms inhabiting the gastrointestinal tract, including **bacteria, viruses, fungi and parasites**.
- It contributes to **digestion, nutrient extraction and immune regulation**.
- It helps maintain the **intestinal barrier**, limiting the movement of bacteria and toxins into the bloodstream.
- Gut microbes can contribute to the synthesis of certain **essential vitamins**.

- The microbiome develops from early life through **birth, breastfeeding, diet and environmental exposure**.
- Research is examining how lifestyle, diet and ecology influence microbiome diversity across **South Asian populations**.

Jojari River

- The **Jojari River** is a **seasonal river in Rajasthan**.
- It originates near **Pandalu/Poondloo village in Nagaur district**.
- It passes through **Jodhpur** and joins the **Luni River near Balotra**.
- It is described by Vajiram as the **only right-bank tributary of the Luni River** and the only branch not originating in the Aravallis.
- The river faces severe pollution from **industrial effluents and untreated sewage**, especially from Jodhpur's textile and steel industries.
- The Supreme Court prohibited hazardous industries within **500 m on either side of the existing flood line** and imposed restrictions on development near the river.

Military Combat Parachute System

- **MCPS** is an indigenous military parachute system developed by **DRDO**.
- It was designed by **Aerial Delivery Research and Development Establishment (ADRDE), Agra**, and **Defence Bioengineering and Electromedical Laboratory, Bengaluru**.
- It has been tested at high altitude, including **Nyoma in Ladakh**.
- The system can support deployment above **25,000 feet** and has undergone a combat freefall test from **32,000 feet**.
- It provides improved **steering and controlled descent** and is compatible with **NavIC**.
- It is intended to strengthen India's indigenous capability for high-altitude airborne operations.

Vietnam

- **Vietnam** occupies the eastern portion of mainland Southeast Asia.
- It borders **China, Laos and Cambodia** and has maritime boundaries with the **South China Sea and Gulf of Thailand**.
- Its capital is **Hanoi**.
- Major rivers include the **Red River and Mekong River**, both draining towards the South China Sea.

- The **Annamese Cordillera** is a major mountain system, while **Phan Xi Pang/Fansipan** is the highest peak.
- Vietnam possesses resources including **bauxite, coal, rare earth elements, offshore oil and gas**.

Neelakurinji

- **Neelakurinji (**Strobilanthes kunthiana**)** is a purplish flowering shrub of the **Acanthaceae family**.
- It famously blooms approximately **once every 12 years**.
- It occurs in high-altitude **shola-grassland ecosystems** of southern India.
- Its distribution is concentrated in mountain landscapes of the **Western Ghats**, with one reported population in the Eastern Ghats.
- It is listed as **Vulnerable on the IUCN Red List**, with habitat loss being a major threat.
- The **Nilgiri Hills** derive their name from the blue appearance associated with Neelakurinji blooms.
- The **Paliyan tribe** traditionally uses its flowering cycle as a reference for calculating age.

Spoon-Tailed Duskhawker

- **Spoon-tailed duskhawker (**Gynacantha basiguttata**)** is a species of **dragonfly** belonging to the family **Aeshnidae**.
- Photographic evidence was recently verified from **Arunachal Pradesh**, an important range extension.
- It is associated with **streams and forest pools**.
- It is a fast aerial predator feeding on **mosquitoes, small flies and other flying insects**.
- Its distinctive expanded abdominal appendages give it the **spoon-like appearance**.
- It has a black T-shaped mark on the frons and characteristic wing pigmentation.

SAFE Defence Fund

- **SAFE** stands for **Security Action for Europe**.
- It is an EU joint-borrowing instrument designed to strengthen **European defence capabilities**.
- The instrument can provide up to **€150 billion in loans** to EU member states.
- It supports common procurement involving areas such as **air and missile defence, artillery ammunition, drones, cyber, AI, electronic warfare and naval systems**.
- Only EU Member States can obtain SAFE loans, although certain partner countries can participate in common procurement.

- Countries including **India, Japan, Canada, Norway and the United Kingdom** are among those identified as eligible partners for participation.

Buckingham Canal

- **Buckingham Canal** is a man-made navigational canal running along India's **eastern coast**.
- It extends for about **450 km**, with approximately 250 km in Andhra Pradesh and 200 km in Tamil Nadu.
- Historically, it connected with the **Krishna and Godavari canal systems**, forming a much longer navigable network.
- It played an important role in transporting commodities such as **fuel, salt and dried fish** to Madras/Chennai.
- The original waterway was constructed in stages beginning with **Basil Cochrane's Cochrane Canal**.
- It was renamed Buckingham Canal in **1878** after the Duke of Buckingham and Chandos.
- Major contemporary problems include **encroachment, sewage and solid-waste pollution**.

Jago AI Assistant

- **Jago AI Assistant** is an AI-powered conversational assistant launched by the **Ministry of Tribal Affairs**.
- It is designed to improve access to information relating to **tribal welfare schemes, policies, programmes and official documents**.
- Users can ask questions in simple language and obtain relevant government information.
- It is intended to bridge the gap between **government information and tribal beneficiaries**.
- The platform currently supports **English and Hindi**, with scope for expanding its knowledge base and language coverage.

Salmonella

- **Salmonella** is a group of bacteria capable of causing gastrointestinal and systemic infections.
- **Salmonella Typhi and Salmonella Paratyphi** cause typhoid and paratyphoid/enteric fever.
- Salmonella is widely found among **domestic and wild animals**, particularly poultry, pigs and cattle.
- Human infection commonly occurs through **contaminated food or water** and can also spread by the faecal-oral route.
- Typical symptoms include **diarrhoea, fever and abdominal cramps**.
- Severe infection can lead to bloodstream infection and other complications.

CURRENT AFFAIRS MAGAZINE – AUGUST

Corbett Tiger Reserve

- **Corbett Tiger Reserve** is located in the **foothills of the Himalayas in Uttarakhand**.
- It originated as **Hailey National Park in 1936**, making it India's first national park.
- It was also the **first national park brought under Project Tiger**.
- The landscape includes **Bhabar and lower Shivalik regions**.
- Important rivers include the **Ramganga, Pallaen and Sonanadi**.
- Vegetation includes **sal and mixed forests, grasslands and riparian vegetation**.
- Important fauna include **tiger, elephant, leopard, sambar, hog deer and spotted deer**.

INS Samarthak

- **INS Samarthak** is India's first **Multi-Purpose Vessel (MPV)**.
- It has been built by **Larsen & Toubro at Kattupalli**.
- It contains more than **75% indigenous content**.
- It is designed as a trial and evaluation platform for **next-generation weapons and sensors**.
- It can undertake maritime surveillance, patrolling and **launch/recovery of surface and aerial targets**.
- It can also support **humanitarian assistance and anti-pollution operations**.
- The vessel is approximately **107 m long**, has a displacement above 3,750 tonnes and can attain about 15 knots.

PM SVANidhi

- **PM Street Vendor's AtmaNirbhar Nidhi (PM SVANidhi)** was launched in **June 2020**.
- It is a **Central Sector Scheme** supporting street vendors through working capital, financial inclusion and social protection.
- Vendors can access progressive collateral-free loans of **₹15,000, ₹25,000 and ₹50,000**.
- Interest subsidy and credit-guarantee support are provided to eligible borrowers.
- Vendors successfully repaying the second tranche can obtain **UPI-linked RuPay Credit Cards** with limits up to ₹30,000.
- **SVANidhi se Samriddhi** links beneficiaries with selected Central welfare schemes.
- Implementation involves the **Ministry of Housing and Urban Affairs and Department of Financial Services**.

CURRENT AFFAIRS MAGAZINE – AUGUST

Canada

- **Canada** is the world's **second-largest country by area after Russia**.
- It is bounded by the **Arctic Ocean to the north, Atlantic Ocean to the east and Pacific Ocean to the west**.
- It shares the world's longest international land border with the **United States**.
- **Ottawa** is the capital.
- Major rivers include the **Mackenzie, Yukon and Saint Lawrence**.
- Five Great Lakes—**Superior, Michigan, Huron, Ontario and Erie**—are associated with the Canada–US boundary; **Lake Michigan lies entirely within the United States**.
- Canada is rich in **nickel, uranium, potash, rare earth elements, gold, copper and diamonds**.

National Disaster Response Force

- **NDRF** was established under **Section 44 of the Disaster Management Act, 2005**.
- It became operational in **2006**, initially with eight battalions; it has since expanded to **16 battalions**.
- It functions under the **Ministry of Home Affairs**, with the **National Disaster Management Authority** as the controlling authority.
- Its personnel are primarily drawn from CAPFs including **BSF, CRPF, CISF, ITBP, SSB and Assam Rifles**.
- It specialises in response to **floods, cyclones, earthquakes, landslides, building collapses and transport accidents**.
- It also participates in international disaster-response cooperation.

National Bank for Financing Infrastructure and Development (NaBFID)

- **NaBFID** is a specialised Development Finance Institution established in **2021** under the **NaBFID Act, 2021**.
- Its primary purpose is to address India's long-term financing requirements for **infrastructure development**.
- It seeks to promote **long-term non-recourse finance**, deepen bond and derivatives markets and support sustainable economic growth.
- NaBFID is regulated and supervised by the **Reserve Bank of India as an All-India Financial Institution (AIFI)**.

- Recently, **NABARD and NaBFID signed an MoU** for financing infrastructure projects having significant rural impact.

Promotion of Research and Innovation in Pharma MedTech Scheme

- The **PRIP Scheme** was launched in **2023** by the **Department of Pharmaceuticals, Ministry of Chemicals and Fertilizers**.
- It has a total financial outlay of **₹5,000 crore**.
- It seeks to transform India into a global centre for **pharmaceutical and medical-technology R&D** and strengthen industry–academia linkages.
- **Component A** focuses on Centres of Excellence in the seven existing **NIPERs**, with an allocation of ₹700 crore.
- **Component B** supports research by industry, MSMEs, startups and academic institutions.
- Priority areas include **new chemical/biological entities, complex generics and biosimilars, precision medicine, medical devices, orphan drugs and antimicrobial-resistance drug development**.

Gene-Edited Rice Varieties

- India has developed two genome-edited rice varieties: **DRR Dhan 100 (Kamala)** and **Pusa Rice DST1**.
- **Pusa Rice DST1** is derived from **MTU1010** and was developed by **ICAR–Indian Agricultural Research Institute (IARI), New Delhi**.
- Its genome edit targets the **Drought and Salt Tolerance (DST) gene**, improving tolerance to drought and salt-affected soils.
- **DRR Dhan 100 (Kamala)** was developed by **ICAR–Indian Institute of Rice Research, Hyderabad**, from **Samba Mahsuri (BPT 5204)**.
- Kamala matures around **20 days earlier** than Samba Mahsuri and has stronger stalks, reducing lodging.

Kuwait

- **Kuwait** is located in **Western Asia**, at the northern end of the Persian Gulf.
- It shares land borders with **Iraq to the north and west** and **Saudi Arabia to the south**.
- Its eastern boundary opens into the **Persian Gulf**.
- **Kuwait City** is the capital.
- Kuwait is a member of the **GCC, Arab League, OIC and OPEC**.

- It has a **hyper-arid desert climate** and no perennial rivers or lakes; petroleum and natural gas are its major resources.

Sesame

- **Sesame (**Sesamum indicum**)** is considered one of India's oldest indigenous oilseed crops.
- Archaeological evidence of sesame seeds has been reported from **Harappa and Mohenjo-daro**.
- It grows best under temperatures of about **25–35°C** and prefers well-drained light-to-medium soils.
- It is cultivated as a **kharif crop in arid/semi-arid regions** and as a rabi/summer crop in cooler areas.
- Major producing states include **West Bengal, Madhya Pradesh, Rajasthan, Uttar Pradesh, Gujarat, Andhra Pradesh and Telangana**.

PARIVARTAN Scheme

- **PARIVARTAN** stands for **Programme for Accelerated Renewal and Incentivization of Vehicle Assets for Reducing Transport Air Pollution and Network Emissions**.
- It aims to replace older, highly polluting **trucks and buses in the National Capital Region** with cleaner BS-VI or electric vehicles.
- It is implemented by the **Ministry of Road Transport and Highways** and funded by the **National Capital Region Planning Board**.
- Incentives include **motor-vehicle tax concessions, registration-fee waivers, 5% interest subvention, OEM discounts and financial assistance for electric vehicles**.
- The scheme integrates digital systems such as **VAHAN, V-Scrap, DigiELV and PFMS**.

Open General Export Licence

- **OGEL** is a standing, one-time export authorisation that facilitates India's **defence exports**.
- It was introduced in **2019** to simplify defence-export procedures.
- Eligible exporters can use it for multiple consignments of specified defence items without obtaining separate authorisation for every consignment.
- The revised framework has increased validity from **two years to three years**.
- Coverage has been expanded from **41 countries to all countries except specified sensitive/negative countries and those under UN Security Council sanctions or arms embargoes**.
- The framework also permits certain **civil-end-use exports of specified parts/components of small-calibre arms and protective equipment**.

CURRENT AFFAIRS MAGAZINE – AUGUST

Sree Narayana Guru

- **Sree Narayana Guru** was a major **saint, philosopher and social reformer of Kerala** who challenged caste discrimination and untouchability.
- His famous message was **"One Caste, One Religion, One God for Mankind."**
- The **Aruvippuram movement of 1888**, in which he consecrated a Shiva idol, challenged caste-based restrictions on temple worship.
- The **Sri Narayana Guru Dharma Paripalana Yogam (SNDP)** was established in **1903**, with Kumaran Asan as its general secretary.
- He was associated with the **Vaikom Satyagraha** and established the **Sivagiri foundation** in 1924.
- His literary works include Atmavilasam, Daiva Dasakam and Brahmavidya Panchakam.

National Test House

- **National Test House (NTH)** was established in **1912** under the then Railway Board.
- It is a major multidisciplinary government laboratory for **testing, calibration and quality evaluation**.
- It provides technical support relating to **BIS and NABL**.
- NTH is also India's pioneering government organisation for **drone certification** and undertakes EV-battery and organic-food testing.
- It functions under the **Department of Consumer Affairs, Ministry of Consumer Affairs, Food & Public Distribution**.
- Its branches include **Kolkata, Mumbai, Chennai, Ghaziabad, Jaipur, Guwahati and Varanasi**.

Javelin Missile

- **FGM-148 Javelin** is an American **man-portable, medium-range anti-tank guided missile**.
- It entered US military service in **1996** and is jointly produced by **Raytheon and Lockheed Martin**.
- It is a **fire-and-forget** weapon, allowing the operator to move immediately after launch.
- It can employ **top-attack or direct-attack modes**.
- Its standard effective range is around **2.5 km**.
- It is designed primarily against **armoured vehicles**, but can also engage fortifications, bunkers and helicopters.

CURRENT AFFAIRS MAGAZINE – AUGUST

PM-eBus Sewa Scheme

- **PM-eBus Sewa** aims to deploy **10,000 air-conditioned electric buses** in urban areas.
- It is implemented by the **Ministry of Housing and Urban Affairs (MoHUA)**.
- Cities with populations of **3–40 lakh** as per the 2011 Census are eligible; certain State capitals in northeastern and hilly regions below 3 lakh population are also covered.
- Bus operations follow a **Public-Private Partnership (PPP)** model.
- The scheme supports **bus depots, charging infrastructure, accessible bus stops, last-mile connectivity, Intelligent Transit Management Systems and NCMC-based ticketing**.
- The scheme has a reported total cost of **₹57,613 crore**, including a **₹20,000-crore Central share**.

Barrier Lake

- A **barrier lake** forms when **landslide debris blocks a river or stream valley**, creating a natural dam.
- Such lakes are common in **steep mountainous terrain with narrow valleys** prone to landslides, rockfalls and debris flows.
- The unstable natural dam can erode or collapse as water pressure increases.
- Failure can release very large quantities of water suddenly, producing **catastrophic downstream flooding**.
- A breach may also trigger **debris flows and secondary landslides**.
- Such lakes are particularly important in **Himalayan disaster-risk assessment**.

Argentina

- **Argentina** occupies much of southern South America and has its eastern coastline along the **South Atlantic Ocean**.
- It borders **Chile, Bolivia, Paraguay, Brazil and Uruguay**.
- Major geographical regions include the **Andes, Pampas, Patagonian Plateau and Gran Chaco**.
- Important rivers include the **Paraná, Paraguay and Uruguay**.
- **Cerro Aconcagua** is the highest peak in Argentina and the highest mountain outside Asia.
- Important resources include **lithium, petroleum, uranium, copper, iron ore, zinc and manganese**.

CosmoCube Mission

- **CosmoCube** is a proposed small satellite designed to study extremely faint radio signals originating from the **early Universe**.
- It is being developed by scientists led by the **University of Cambridge**.
- It would operate near the **Moon**, using the lunar far side as a natural shield against radio interference from Earth.
- The satellite could spend about **40 minutes on the lunar far side during each two-hour orbit**.
- Over a proposed two-year mission, it could collect around **1,000 hours of extremely low-frequency radio observations**.
- Its objective is to study the **cosmic dark ages and the transition towards the first stars and galaxies**.

Oriental Darter

- **Oriental Darter (**Anhinga melanogaster**)** is also known as the **Indian darter or snakebird**.
- It is a tropical waterbird of **South and Southeast Asia**, generally associated with freshwater lakes and streams.
- Its long, flexible neck and sharp bill enable it to **impale fish underwater**.
- The bird's body can remain submerged while its neck is rapidly projected forward to catch prey.
- Major threats include **wetland loss, pollution, pesticide contamination and egg collection**.
- IUCN status: **Near Threatened**.

Dung Beetle

- Dung beetles belong primarily to the family **Scarabaeidae** under the order **Coleoptera**.
- They occur on almost every continent except **Antarctica**.
- They feed on dung and are broadly divided into **rollers, tunnelers and dwellers** according to their behaviour.
- Some species use **celestial cues, including the Milky Way**, for navigation while rolling dung balls.
- Their ecological roles include **nutrient recycling, soil aeration, seed dispersal and suppression of parasites and flies**.
- They are therefore important components of grassland and forest ecosystems.

Index of Industrial Production

- **IIP** measures changes in the volume of industrial production over time.

- It is compiled and released monthly by the **National Statistical Office (NSO), MoSPI**.
- The current **base year is 2022–23 = 100**.
- The index covers major sectors of industrial activity and serves as an indicator of industrial growth or contraction.
- The series has undergone several base-year revisions, with the previous base being **2011–12**.
- July 2026 IIP was reported at **124.8**, unchanged from the revised June level.

National Health Claims Exchange

- **NHCX** is a digital gateway for exchanging **health-insurance claim information**.
- It has been developed under the **Ayushman Bharat Digital Mission (ABDM)**.
- It is developed by the **National Health Authority (NHA)** in consultation with **IRDAI**.
- It connects **insurers, hospitals/healthcare providers, beneficiaries and other stakeholders**.
- It uses **Fast Healthcare Interoperability Resources (FHIR)** standards to facilitate interoperability.
- Functions include **eligibility verification, pre-authorisation, claim submission, payment-status tracking and reprocessing requests**.

Epidermolysis Bullosa

- **Epidermolysis bullosa (EB)** is a group of rare inherited disorders characterised by **extremely fragile skin**.
- Even minor friction or trauma can produce **blisters and wounds**.
- Major types include **Epidermolysis Bullosa Simplex, Junctional EB, Dystrophic EB and Kindler syndrome**.
- Depending on the type, inheritance may be **autosomal dominant or autosomal recessive**.
- Complications include chronic wounds, scarring, nutritional problems and increased risk of **skin cancer**.
- There is currently **no definitive cure**, so treatment focuses on wound care and prevention of complications.

Larak Island

- **Larak Island** is a small Iranian island in the **Strait of Hormuz**.
- It lies south of **Hormuz Island**, approximately 45 km southeast of Bandar Abbas and about 18 km southeast of eastern Qeshm.

- The island covers roughly **49 sq km** but has considerable strategic importance because of its proximity to the Strait of Hormuz.
- The **Strait of Hormuz** connects the **Persian Gulf** with the **Gulf of Oman and Arabian Sea**.
- Iran lies along the northern side of the Strait, while the southern side is associated with **Oman and the UAE**.
- Other islands in the Strait include **Hormuz, Hengam and Qeshm**.

Rove Beetle

- Rove beetles belong to the family **Staphylinidae**, one of the largest beetle families.
- They generally have **shortened elytra**, leaving much of the flexible abdomen exposed.
- Many species can raise their abdomen in a **scorpion-like defensive posture**, although they do not possess a scorpion's sting.
- They inhabit leaf litter, soil, bark, fungi, dung, carrion, compost and nests of social insects.
- Many species are **predatory and beneficial as biological-control agents** by reducing pest populations.
- An Indo-German team recently discovered **15 species** in waterfalls and forests of **Arunachal Pradesh**.

Integrated Fertilizer Management System

- **iFMS** is India's digital platform for **fertilizer management**.
- It was developed and is technically supported by **NIC** for the **Department of Fertilizers**.
- It connects fertilizer production, imports, movement, stock availability, retail sales and **subsidy processing**.
- It includes dealer registration, stock tracking, dealer search, MIS and **DBT reports**.
- The system covers more than **14 crore Aadhaar-linked fertilizer buyers** and over **2.5 lakh retailers**.
- New dashboards allow monitoring at **national, State, district and retailer levels**.

Hanging Glaciers

- **Hanging glaciers** are ice masses situated on steep slopes, often above major valley glaciers.
- They can form when a main valley glacier **retreats and thins**, leaving tributary glaciers perched high above the valley floor.

- Sudden break-off of hanging glaciers can trigger **avalanches, debris flows and glacial lake outburst floods (GLOFs)**.
- They are highly sensitive to **climate warming and glacier retreat**.
- A study identified **219 hanging glaciers in the Alaknanda basin of the Garhwal Himalayas**.
- The Himalayan region has experienced significant warming and accelerated glacier retreat, increasing associated hazards.

Magnetars

- **Magnetars** are a special class of **neutron stars** possessing extraordinarily strong magnetic fields.
- They are formed through the **core-collapse of massive stars during supernova explosions**.
- Their magnetic fields can be around **1,000 times stronger than those of ordinary neutron stars** and vastly stronger than Earth's field.
- Their high-energy emissions are powered largely by the **decay of their intense magnetic fields**.
- Magnetars can produce powerful **X-ray and gamma-ray bursts/flares**.
- The magnetar **1E 1547.0−5408** provided evidence that an intense magnetic field can alter how light propagates through vacuum.

Malaria

- Malaria is a life-threatening disease caused by **Plasmodium parasites** and transmitted mainly by infected **female Anopheles mosquitoes**.
- It is not normally transmitted by casual person-to-person contact, although transmission can occur through **infected blood or contaminated needles**.
- Major symptoms include **fever, chills and headache**; severe disease can cause seizures, jaundice, respiratory difficulty and death.
- **Artemisinin-based combination therapies (ACTs)** are used for P. falciparum malaria.
- **Chloroquine** is used for susceptible P. vivax, while **primaquine** helps prevent relapse in P. vivax and P. ovale.
- India reported a substantial decline in malaria cases and deaths between **2015 and 2025**.

Kamlang Tiger Reserve

- **Kamlang Tiger Reserve** is located in **Arunachal Pradesh**, close to the Myanmar border.
- It forms part of the **Eastern Himalayan Biodiversity Hotspot**.

- The reserve is named after the **Kamlang River**, which flows through it and joins the Brahmaputra system.
- It lies between **Namdapha National Park to the south and the Lang River to the north**; the Lati and Tawe rivers form other boundary sections.
- Its vegetation ranges from **tropical evergreen forests to subtropical and temperate forests** at higher elevations.
- Fauna include **tiger, leopard, clouded leopard, snow leopard, hoolock gibbon, slow loris and Himalayan palm civet**.

Chile

- **Chile** is a long, narrow country along the southwestern coast of **South America**, between the **Andes and Pacific Ocean**.
- It borders **Peru, Bolivia and Argentina** and extends southwards towards the **Drake Passage**.
- **Santiago** is the capital.
- The **Atacama Desert** in northern Chile is one of the driest non-polar deserts on Earth.
- **Ojos del Salado** is the world's highest active volcano and the second-highest peak of South America.
- Chile lies along the **Pacific Ring of Fire** and is a major global producer of **copper and lithium**.

PM-SETU Scheme

- **PM-SETU** stands for **Pradhan Mantri Skilling and Employability Transformation through Upgraded ITIs**.
- It is a **Centrally Sponsored Scheme** aimed at modernising India's Industrial Training Institute ecosystem.
- It seeks to upgrade **1,000 government ITIs** through a **hub-and-spoke model**, comprising 200 hub ITIs and 800 spoke ITIs.
- Hubs receive modern infrastructure, innovation/incubation centres, production units, trainer facilities and placement support.
- Five NSTIs at **Bhubaneswar, Chennai, Hyderabad, Kanpur and Ludhiana** are being strengthened as Centres of Excellence.
- The scheme has a reported **₹60,000-crore outlay over five years** and is supported through global co-financing involving the **World Bank and Asian Development Bank**.

CURRENT AFFAIRS MAGAZINE – AUGUST

Solar Flare

- A **solar flare** is a sudden, intense release of energy from the Sun caused by the restructuring of **twisted magnetic fields**, usually around sunspots.
- Flares release radiation across the electromagnetic spectrum, including **radio waves, X-rays and gamma rays**.
- They are classified into **A, B, C, M and X classes**, with X-class being the most powerful.
- Solar flares can disrupt **radio communication, satellite systems and navigation**, and increase radiation exposure for astronauts.
- Strong solar activity can contribute to **geomagnetic storms**, affecting power grids and producing auroras at lower-than-usual latitudes.
- Recent observations suggest that small, short-lived brightenings may occur in the Sun's atmosphere **before major flares**, potentially helping future flare forecasting.

*****

© NDI. All Rights Reserved.