

FORTUNE Prelims Precise

August 2024



FORTUNE IAS

Toppers in Top 100



P K Sidharth Ramkumar
2024



Meera K
2021



Sidharth B
2017



Ayan Jain
2024



Dilip K Kainikkara
2022



Hamna Mariyam
2017



Sreelakshmi Ram
2019



Vishnu Sasikumar
2024



Anand
2016



Arya V M
2023



Archana P P
2024



Safna Nazarudeen
2020



Renjina Mary V
2019



Dr. Arun S Nair
2020



Alfred O V
2022



Hari Kallikkat
2018



Benjo P Jose
2024



Aparna M B
2021



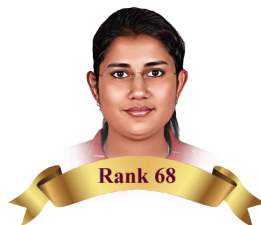
Dheenah Dastageer
2021



Akhil V Menon
2022



Arjun Mohan
2019



Kasturi Sha
2024



Fabi Rasheed
2024



Malini S
2023



Devi Nandana
2020



Annie George
2024



Kiran P B
2022

Preface

Fortune IAS Academy presents 'Prelims Precise', a monthly current affairs magazine through which we make prelims current affairs revision precise and effective.

This magazine is a comprehensive resource that condenses the significant news of each month into distinct sections such as polity and governance, economic development, science & technology, among others.

Each content is organised with the why in news context followed by its explanation.

Fortune Prelims Precise is available to all Prelims cum Mains batch students (2024) as part of the course study material. It can be purchased from Fortune IAS Academy for Rs. 50 per issue.

Soft copies of Prelims Precise, FWD (Fortune Weekly Digest for mains) and FINDER (Fortune IAS News Daily Explainer) is available on our telegram channel for free. Please scan QR code below to join our telegram channel.



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History & Culture

World's Oldest Calendar



- Scientists discovered the **earliest known Lunisolar calendar** at **Göbekli Tepe, Turkey**, home to the world's oldest man-made structures.
- The site's pillars feature **365 V-shaped markings**, likely representing days, and depict 12 lunar months plus 11 additional days.
- Both the **moon's and the sun's cycles are depicted** in these carvings and hence called the Lunisolar calendar.
- A **bird-like figure** may symbolise the **summer solstice** constellation, while other carvings tell of **comet fragments that struck Earth around 10,850 BC**, triggering a mini ice age



Ratnagiri Geoglyphs and Petroglyphs

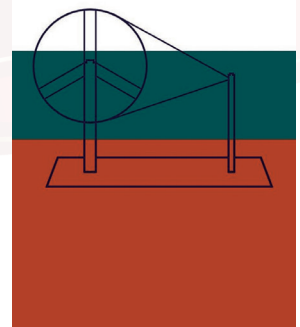
- The Maharashtra government has declared the geoglyphs and petroglyphs in **Ratnagiri** as '**protected monuments**' under the Maharashtra Ancient Monuments and Archaeological Sites and Remains Act, 1960.

- Petroglyphs** are made by scratching rock surfaces, while **geoglyphs** are larger ground markings formed by trenching or clearing soil.
- Ratnagiri has over **1,500 such artworks, known as "Katal shilpa,"** across 70 sites, with seven mentioned in UNESCO's tentative world heritage list.
- The carvings depict humans, animals, reptiles, aquatic creatures, and birds.
- India's largest geoglyph**, an 18x13 metre elephant, is located in Kasheli, Ratnagiri.



Pingali Venkayya

- Andhra Pradesh observed the **146th birth anniversary of Pingali Venkayya**, born on August 2, 1876, in Machilipatnam.
- After serving in the British Indian Army and **meeting Mahatma Gandhi in South Africa**, he joined the freedom movement.
- In 1916, Venkayya published a **book of 30 flag designs**.
- In 1921, at a Vijayawada meeting, his design with two bands—red and green with a charkha—was approved.
- Later, **Gandhi requested a white band, and the red was changed to saffron**, with the Ashok Chakra replacing the charkha.
- Venkayya passed away in poverty on July 4, 1963.



Aurobindo Ghosh



- Sri Aurobindo was born on **August 15, 1872**, in **Calcutta**.
- He studied at King's College, Cambridge, from 1890, mastering several languages including Greek, Latin, and French.
- After returning to India, he worked in **Baroda from 1893 to 1906 in various roles**, including Professor and Vice-Principal of Baroda College.
- In 1906, he became **politically active in Bengal but was arrested in the 1908 Alipore Conspiracy Case**, later released in 1909.
- Moving to **Pondicherry**, he developed Integral Yoga and wrote **The Synthesis of Yoga and The Life Divine**.
- He **founded Sri Aurobindo Ashram in 1926** and passed away on December 5, 1950.

Srimanta Sankaradeva

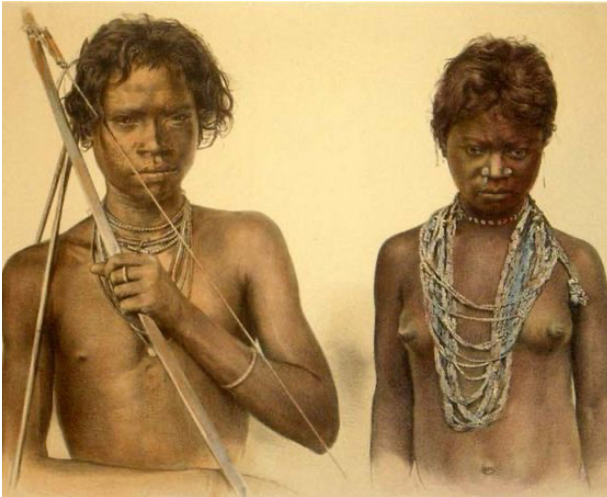
- The **Assam government and Vishva Bharati, Santiniketan**, signed a MoU to establish a Srimanta Sankaradeva Chair at the university.
- Sankaradeva, **born in 1449**, was a **Vaishnava saint**, scholar, playwright, and social-religious reformer who founded **Mahapurushiya Dharma** and unified Assam across major kingdoms.

- As a non-Brahmin, he **initiated followers from all castes and religions**, including Muslims, and led a significant social revolution against casteism.
- Srimanta Sankaradeva's cultural contributions include establishing **Satras** as centres of religious and cultural life, developing **Ankiya Nat** (traditional drama), composing **Borgeets** (devotional songs), advancing Assamese literature (Bhrajavali) and promoting social reform against casteism.
- He also introduced **Sattriya dance** and **Sankeerthana hymns** in praise of Vishnu

Guru Padmasambhava



- A two-day international conference on the **life and legacy of Guru Padmasambhava** was held at Nava Nalanda Mahavihara, Nalanda.
- Guru Padmasambhava, or **Guru Rinpoche**, **lived in 8th century** India and introduced Tantric Buddhism to Tibet, establishing its first Buddhist monastery.
- **Tantrism** is a spiritual tradition in Hinduism and Buddhism involving rituals, meditation, and mantras to achieve spiritual enlightenment and transcendence
- He is a member of the Yogācāra sect and also **taught at Nalanda**.



- The **District Level Committee of Keonjhar, Odisha**, granted **habitat rights under the Forest Rights Act (FRA) to the Juanga**, a particularly vulnerable tribal group (PVTG).
- The Juanga, an **Austroasiatic ethnic group**, reside in the **Gonsaika hills of Keonjhar** and are one of 13 PVTGs in Odisha.
- Traditionally practising **shifting cultivation**, many now engage in **settled agriculture, basket weaving**, and animal domestication.
- They have a **traditional political council** led by a non-hereditary Pradhan.
- Their dormitory house, the **“Mandaghar,”** is the central institution of their socio-cultural life.

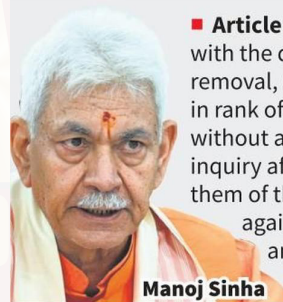
Polity & Governance

Article 311 of Indian Constitution

- The Jammu and Kashmir Lieutenant Governor **invoked Article 311 to terminate six government employees** with alleged terrorist links.
- Article 311 outlines procedures for **dismissing, removing, or reducing government employees in rank**, requiring an inquiry and a chance to defend.
- However, **Article 311(2)(c) allows dismissal without inquiry** if the President or Governor deems it necessary for state security.
- Probationary employees can also be dismissed without inquiry.
- Decisions made under Article 311 are subject to **judicial review**.

Sack order

Six government employees, five of them policemen, have been sacked under Article 311 of the Constitution



■ **Article 311** deals with the dismissal, removal, or reduction in rank of civil servants without a departmental inquiry after informing them of the charges against them and giving a reasonable

opportunity to be heard

■ The decision of the authority is final

■ A government spokesman says these employees had come to the adverse notice of **law enforcement and intelligence agencies**

A1 and A2 Labels

- The FSSAI has directed food businesses to **remove “A1” and “A2” labels from milk products**, calling them misleading, as this differentiation is not recognized by current regulations.
- A1 and A2 milk **differ in beta-casein protein based on cow breed**, with A2 products often priced higher due to perceived superior quality.
- Casein makes up 80% of protein in milk while beta-casein makes up its 30-35%.



OUR 14 TOPPERS FROM PRELIMS CUM MAINS BATCH

5 TOPPERS IN FIRST ATTEMPT



KASTURI SHA
AIR 68



FATI RASHEED
AIR 71



SIDDHANT KUMAR
AIR 114



MANJIMA P
AIR 235



PARVATHI GOPAKUMAR
AIR 282



SWATHI S BABU
AIR 322



DEVKRISHNA P
AIR 359



OORMILA J S
AIR 361



MRIDUL DARSAN
AIR 630



SAYANTH K
AIR 701



ANUSHA R CHANDRAN
AIR 791



SWATHI S
AIR 827



SACHIN ANAND
AIR 855



RAVEEN K MANOHARAN
AIR 888

BEST RESULTS FROM CLASSROOM PROGRAM
(PCM BATCH) IN KERALA

- A1 is found in **Holstein, Fresian varieties** whereas A2 is found in **Jersey and indigenous Indian cows.**



- Some studies suggest that A1 is difficult to digest, however, it is debatable.

Himachal Pradesh Raises Marriage Age for Women

- Himachal Pradesh assembly passed the **Prohibition of Child Marriage (Himachal Pradesh Amendment) Bill, 2024**, increasing the minimum marriage age for women from 18 to 21.
- Himachal Pradesh is the first state to introduce such legislation.
- Section 2(a) of the Prohibition of Child Marriage Act 2006, passed by Parliament, sets the **marriageable age at 21 for men and 18 for women.**
- **Entry 5 of the Concurrent List** allows both the Centre and states to enact laws regarding marriage and divorce, including child marriage.
- According to **Article 254 of the Indian Constitution**, any conflicting provisions of a state law are void if they contradict an existing central law on matters in the Concurrent List.
- Thus, the bill will now need presidential assent.

Section 27 of the Indian Evidence Act, 1872

- The Supreme Court recently held that the disclosure made by an accused under Section 27 of the Indian Evidence Act is irrelevant if the fact was previously known to the police.
- **Sections 25 and 26** of the Act establish **protection against self-incrimination** and abuse of power by the police authority, deeming confessions made in police custody without the presence of a magistrate as inadmissible before a court of law.
- However, **Section 27 provides an exception to this rule**, allowing the admission of confessions that lead to the discovery of new facts.

- The basic idea embedded in Section 27 of the Evidence Act is the **doctrine of confirmation by subsequent events.**

▶ This doctrine is founded on the principle that every part of the statement made at the instance of the accused, in police custody should **necessarily be confirmed by the subsequent events of discovery**, to make it admissible in court.

- The confession **cannot be used to prove the guilt** of the accused unless it is **corroborated by other evidence.**
- **Sections 23 (1) and 23 (2) of the Bharatiya Sakshya Adhiniyam, 2023 (BSA)** deal with confessions made to police officers.


Jiyo Parsi Scheme

- Union Minority Affairs Minister launches **Jiyo Parsi scheme Portal**
- It is a unique **Central Sector Scheme** implemented by the **Ministry of Minority Affairs** since 2013.
- It aims to **reverse the declining trend of Parsi population** by adopting a scientific protocol and structured interventions and to stabilise their population.
- The scheme provides financial assistance to the **Parsi Couples for medical treatment**, towards childcare and assistance to dependent elderly.

Sub Categorisation of SC/ST

- In the **State of Punjab Vs Davinder Singh 2024**, a seven-judge bench of the Supreme Court upheld the **constitutional validity of sub-classification** in the Scheduled Caste and Scheduled Tribe.
- The court has held that sub-classification for the purposes of reservation is part of **'substantive equality'** as against mere **'formal equality'**.
- The court stated two ground realities:
 - ▶ **SCs and STs are not a uniform class:** The inclusion in the list of SCs and STs, specified in **Article 341 and 342** respectively, does **not automatically lead to the formation of a uniform and internally homogenous**

class There are differences among the SC/ST and can be classified into different castes/groups.

 **Underrepresentation of certain castes:** The absence of sub-classification has ensured that only a few dominant castes in the reserved categories avail the benefit of reservation.

- **Article 341** - The President can specify which castes, races, or tribes are Scheduled Castes in a state or union territory.
- **Article 342** - The President can specify which tribes or tribal communities are Scheduled Tribes in a state or union territory.

Pradhan Mantri JI-VAN Yojana

CABINET DECISION
9TH AUGUST, 2024

Amendment in Pradhan Mantri JI-VAN Yojana



- Modified scheme extends timeline for implementation of scheme by 5 year i.e. till 2028-29
- Financial support to Advanced Biofuel Projects using lignocellulosic biomass and other renewable feedstock


Benefits:

- Will provide remunerative income to farmers for their agriculture residue
- Will contribute to India's energy security and self-reliance



- The **Ministry of Petroleum and Natural Gas** announced amendments to the scheme, extending its implementation timeline by five years to 2028-29 and financial support to Advanced Biofuel Projects using **lignocellulosic biomass**.

- PM JI-VAN stands for **Jaiv Indhan- Vatavaran Anukool fasal awashesh Nivaran** and aims to provide financial assistance to **2G Bioethanol** projects made from surplus biomass and agricultural waste.
- It is aimed at **promoting the production and use of advanced biofuels**, specifically **ethanol**.
- The scheme supports **“bolt-on” plants** and **“brownfield” projects**.

 Bolt-on technologies are **processes that can be added to existing ethanol plants** to increase production, improve efficiency, or generate new products.

- **Lignocellulosic biomass (LCB)** is a renewable resource made from plant dry matter, such as agricultural waste, forestry trash, and urban garbage.

Unified Pension Scheme (UPS)

- The Union Cabinet, chaired by the Prime Minister Narendra Modi, approved the Unified Pension Scheme (UPS) modifying the National Pension System (NPS).
- **Assured Pension:** The retiring government employees will **receive 50% of their average pay** from the last 12 months prior to retirement, provided they have completed a minimum of 25 years of service.
- **Assured Family Pension:** In the event of a government employee's death, the scheme ensures that 60% of the pension amount will be allocated to the spouse.
- **Assured Minimum Pension:** Employees will be entitled to a guaranteed minimum pension of ₹10,000 per month upon retirement, applicable after 10 years of service.
- **Pension Contribution:** The staff contribution to the scheme will remain at 10%, unchanged from the previous structure.
 - However, the Central Government's contribution will be **reassessed every 3 years**.
- **Implementation:** The UPS is set to take effect from April 2025. It will also be applied retroactively to government employees who retired from 2004 onwards.

Lakpathi Didis

- The Prime Minister attended **Lakpathi Didi Sammelan** in Maharashtra.
- **Lakpathi Didi is not a scheme** but an output of the Deendayal Antyodaya Yojana – National Rural Livelihoods Mission (DAY-NRLM).
- The DAY-NRLM scheme falls under the **Ministry of Rural Development (MoRD)**.

- A Lakhpati Didi is a **Self-Help Group member** who earns an **annual** household income of Rupees **One Lakh (Rs. 1,00,000) or more**.
- Since the inception of the Lakhpati Didi Initiative, more than one crore SHG women have already been made Lakhpati Didis.

Schedule M of Drugs and Cosmetics Act, 1945.

- Pharmaceutical Companies sought more time to implement revised manufacturing practices rules under Schedule M of the **Drugs and Cosmetics Act, 1945**.
- Schedule M under the Act, outlines the **Good Manufacturing Practices (GMP)** that must be followed for the manufacture of pharmaceutical products.
- It doesn't list specific drugs but sets standards for facilities, equipment, and procedures to ensure drug quality and safety.
- These regulations apply to all pharmaceutical products, including tablets, capsules, injectables, and other dosage forms, ensuring that drugs are consistently produced to meet quality standards.
- GMP was first incorporated in **Schedule M** in **1988**.

New India Literacy Program (NILP)

- The **Ministry of Education (MoE)** has defined 'literacy,' and what it means to achieve 'full literacy,' under the **New India Literacy Program**.
- The NILP is a **Centrally Sponsored Scheme** implemented during five years from the FYs 2022-23 to 2026-27.
- It is also known as **ULLAS (Understanding of Lifelong Learning for All in Society)**.
- The scheme aims to cover a target of **5 crore non-literates in the age group of 15 years and above**.
- The beneficiaries under the scheme are **identified through door to door surveys** on Mobile App by the surveyors in the States/UTs.
- The scheme is mainly based on **volunteerism for teaching and learning**.

Definition of Literacy:

- **Literacy** - encompasses the ability to read, write, and perform arithmetic with comprehension.
 - It also includes identifying, understanding, interpreting, and creating content, along with acquiring critical life skills like digital and financial literacy.
- **Full Literacy:** A State or Union Territory (UT) is considered fully literate when it achieves a 95% literacy rate.

Centralised Public Grievance Redress and Monitoring System (CPGRAMS)

- The Department of Administrative Reforms and Public Grievances (DARPG) recently reduced the **redressal time for public grievances under CPGRAMS portal**.
- CPGRAMS is an online platform available to the citizens **24x7 to lodge their grievances** to the public authorities on any subject **related to service delivery**.
- The redressal time has now been reduced to **21 days from 30 days**.
- The portal connects all the **Ministries/ Departments** of Government of India and States.
- The portal also provides for tracking of applications and appeals if not satisfied with the service delivered.
- Issues which are **not taken up for redress:** RTI Matters, Court related matters, Religious matters, Suggestions and Grievances of Government employees concerning their service matters including disciplinary proceedings etc. unless the aggrieved employee has already exhausted the prescribed channels.

Plea Bargaining

- The Ministry of Law & Justice said **only 0.11% cases were resolved through Plea Bargaining in 2022**.
- Plea bargaining allows defendants to admit guilt and negotiate for a lighter sentence.

- It applies to offences punishable by up to seven years in prison but excludes crimes against women, children, or socio-economic offences.
- The aim is to speed up the judicial process.
- Plea bargaining was added to the **Code of Criminal Procedure (CrPC)** in 2005 and later to the **Bharatiya Nagarik Suraksha Sanhita (BNSS)** under section 290.



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Economy

B-Ready Index

- India has laid the groundwork for the **World Bank's new flagship report**, the **Business-Ready or B-Ready Index**.
- B-Ready is **replacing the World Bank's Doing Business index** that ranked countries based on their business enabling environment.
- Every year, the project aims to measure the quality of the regulatory framework, the provision of public services in support of firms and markets, and how efficiently they are combined in practice.
- The B-Ready report focuses on the following **10 topics in the life cycle of businesses-**



Yen Carry Trade

- Recently, global stock markets saw a sharp decline due to the **unwinding of the yen carry trade**.
- Yen carry trade involves **borrowing money in countries with low interest rates**, like Japan, and investing in countries with higher rates.
- The goal is to profit from the difference in interest rates, **known as the "carry."**
- **Japan's interest rates were at 0% from 2011 to 2016 and below zero (-0.10%) after that.**
- In mid-March to July this year, Japan raised rates to 0.25%, reducing the yield gap.
- This led investors, who had borrowed yen and invested in currencies like the Brazilian real, Mexican peso, or Indian rupee, to sell off their assets, causing market declines.

Dynamic Reference Rate

- India and Russia are considering a **Dynamic Reference Rate for direct rupee-ruble transactions**.
- Currently, the process of converting **Rupee (INR) to Ruble (RUB) is complex and cumbersome**.
- First, converting INR to USD, and then USD to RUB.
- Additionally, **India's trade imbalance with Russia** has led Russian banks to accumulate a large amount of rupees in Vostro accounts held with Indian banks.
- A reference exchange rate or a direct exchange rate between INR and RUB called the **Dynamic Reference Rate has been identified as a better option**.
- It would be flexible and updated by the Reserve Bank of India and the Bank of Russia to reflect current market conditions.

Global Fintech Fest 2024

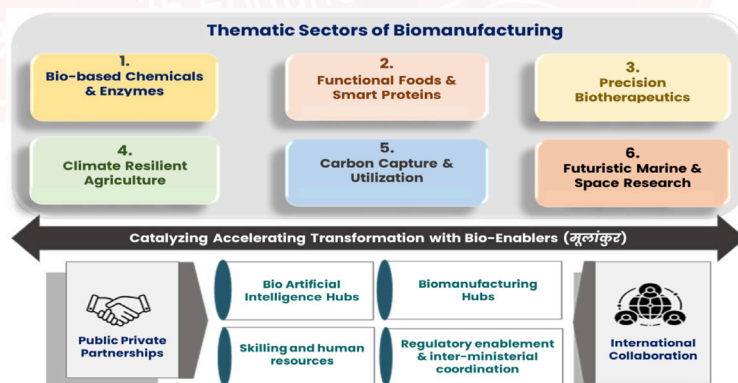
- The fifth edition of the Global Fintech Fest (GFF) was held in Mumbai where the term **Finternet** was discussed.
- The Finternet is a new approach to global finance which is defined by the **three 'U's' – it is user centric, unified, and universal**.
- The proposed system uses technologies such as **tokenization and unified ledgers**, with an underlying **economic and regulatory framework**, to expand the range and quality of financial services.
- This would help **transfer any financial asset, in any amount, at any time**, using any device, to anyone else, anywhere in the world.
- Tokenization** is the process of **converting financial transactions into digital tokens** that are recorded and processed on a blockchain network.
 - ♣ Tokenization replaces sensitive payment information with a token, which is a unique set of numbers or characters.
- A **unified ledger** is a financial system where all types of transactions and assets—such as payments, securities, and contracts—are recorded and managed in a single, integrated platform.

India, top Importer of Russian Oil

- India overtook China** as the world's biggest importer of Russian oil.
- This is also because the Chinese refiners bought less because of lower profit margins from producing fuels.
- Russian crude made up a record **44% of India's overall imports** in July 2024, which is 12% more than a year ago.
- The Indian refiners have been gorging on **Russian oil sold at discounts after Western nations imposed sanctions** in response to Russia's invasion of Ukraine.
- Iraq continued to be the second-largest oil supplier to India** in July, followed by Saudi Arabia and the United Arab Emirates.

BioE3

- Cabinet approves **BioE3 (Biotechnology for Economy, Environment and Employment) Policy for Fostering High Performance Biomanufacturing**.
- The policy is being implemented by the **Department of Biotechnology (DBT)**.
- The policy includes **innovation-driven support to R&D** and entrepreneurship across thematic sectors.
- This will accelerate technology development and commercialization by establishing **Biomanufacturing & Bio-AI hubs and Biofoundry**.
- A biofoundry is a facility that **combines biology, engineering, and chemical biology systems with automation** and other technologies to accelerate scientific discovery.
- This Policy will further strengthen Government's initiatives such as **'Net Zero' carbon economy & 'Lifestyle for Environment'**.



World Development Report 2024 – Middle Income Trap

- The World Development Report 2024 was recently released by the **World Bank**.
- The 2024 report focuses on the issue of the **‘middle-income trap’**.
- **The middle-income trap occurs** when a country grows from low to middle-income but struggles to reach high-income status.
- **Growth slows due to** rising wages, loss of competitiveness in low-cost industries, weak institutions, and lack of innovation
- The World Bank identified 108 countries, which were labelled as **middle income countries** with **annual GDP per capita between \$1,136 and \$13,845**.

Findings:

- The Report suggests that **at the current pace**, China could take more than 10 years, and **India could take as many as 75 years just to reach a quarter of the per capita income of the United States**.
- It says that 108 middle-income countries possessing 75% of the world’s population, generating 40% of global GDP, and contributing to 60% of global carbon emissions **face several challenges, even more severe than their predecessors, in escaping the ‘middle-income trap’**.
- The World Bank opined that **as the countries grow wealthier and reach 10% of the annual US GDP per capita**, they hit a trap whereby **their growth becomes stunted, restraining the economy from reaching the status of a high-income country**.
- To help countries avoid the trap it Proposed a **‘3 i’ strategy of investments, infusion, and innovation**.
 - **The low income countries** should first focus on **investments**,
 - **The lower-middle income countries** should focus on **investments and the infusion of technology**.
 - **The upper middle-income countries** should focus on **all these three ‘i’s**, and investments and infusion of technology should go hand in hand with innovation.

Surety Bonds

- **The Insurance Regulatory and Development Authority of India (IRDAI)** has formed a task force to address challenges and drive the growth of surety bond insurance.
- A surety bond is a **risk transfer mechanism** whereby an **insurance company provides a guarantee to the beneficiary** that the principal or contractor will meet their contractual obligations.
- The party that guarantees the debt is referred to as the surety or the guarantor.
- Sureties can be made by issuing surety bonds, which are legal contracts obligating one party to pay if the other fails to live up to the agreement.

Unified Lending Interface (ULI) – RBI

- **The Reserve Bank of India (RBI) announced a new technology platform** called the Unified Lending Interface (ULI).
- It is a platform that facilitates the seamless flow of a **customer’s digitised financial and non-financial data** from multiple data service providers to lenders.
- This will make **credit underwriting (risk of lending money to a borrower) seamless and customer journeys frictionless** for a diverse range of borrowers.
- ULI will bring down the **time taken for credit appraisal**, especially for smaller and rural borrowers without any credit history.
- Lenders can gain access to customer data from various silos, including government databases (for example, land records) and satellite imagery through standardised Application Programming Interfaces (APIs).

Joint Bank Account for Queers

- The Finance Ministry clarified that there are **no restrictions for LGBTQ individuals to open joint bank accounts** or nominate partners in a queer relationship as nominees.
- The notification came in connection with the Supreme Court’s 2023 judgement, in the case of **Supriya Chakraborty and another Vs. Union of India**.

- The SC recommended that queer partners be allowed to open joint bank accounts and name their partner as a **nominee to receive the balance if they die**.

- The RBI, in 2015, directed banks to **include a separate column 'third gender' in all their forms and applications** to help transgender persons open bank accounts and avail of related services.

Queer can refer to a sexual orientation or gender identity that is not heterosexual or cisgender.

Hurun Rich List 2024

- For the first time, the **Hurun India Rich List has exceeded 1,500 entries, recording individuals with wealth more than Rs 1,000 crore.**
- India created a **new billionaire every five days throughout 2023.**
- Industrialist **Gautam Adani secured the top position** with a staggering wealth of Rs **11.6 trillion**.
 - ➔ Mukesh Ambani's wealth was recorded at Rs 10.1 trillion, appearing second to the Adani family on the list.
- Indian **billionaires live across 134 cities**, with five of the top 10 residing in the **financial capital - Mumbai.**
- The total wealth of individuals featured on the List has soared to Rs 159 trillion.
 - ➔ This figure exceeds the combined GDP of Saudi Arabia and Switzerland,
 - ➔ And represents **more than half of India's national GDP.**

International Relations

Indo-Pacific Economic Framework (IPEF)

- India has been elected as Vice-Chair of the **Supply Chain Council**, one of the three bodies set up by the **14-member Indo-Pacific Economic Framework (IPEF) bloc.**
- IPEF was launched in 2022 at **Tokyo** to strengthen economic engagement and cooperation among partner countries.
- The members are Australia, Brunei, Fiji, India, Indonesia, Japan, Korea, Malaysia, New Zealand, Philippines, Singapore, Thailand, Vietnam and the U.S.
- The Supply Chain Council (SCC), Crisis Response Network (CRN), and Labor Rights Advisory Board (LRAB) are the 3 bodies for strengthening supply chain resilience.
- The framework is structured around **four pillars**:
 - 📌 Trade (Pillar I), Supply Chain Resilience (Pillar II), Clean Economy (Pillar III), and Fair Economy (Pillar IV).
 - 📌 India has joined **Pillars II to IV of IPEF** while it has maintained an observer status in Pillar-I.

International Conference of Agricultural Economists (ICAE)

- The **triennial** International Conference of Agricultural Economists (ICAE-2024) was held at National Agricultural Science Centre (NASC) Complex, New Delhi.
- This 32nd conference was centred on the theme "**Transformation Towards Sustainable Agri-Food Systems**".
- ICAE is organised by the **International Association of Agricultural Economists (IAAE)** and attracts about a thousand colleagues from around the world.
- IAAE has a **Blue Book**, which is a reference guide containing key information about the organisation's activities, membership, rules, conferences, and research priorities.

Voice of Global South Summit 2024

- India hosted the 3rd Voice of Global South Summit in virtual format.
- The Theme for 2024 - “**An Empowered Global South for a Sustainable Future**”.
- The Summit is an extension to the international arena of India’s philosophy of **Vasudhaiva Kutumbakam**, or “One Earth, One Family, One Future”.
- PM Modi proposed the ‘**Global Development Compact**’.

Global Development Compact

- It will be “human-centric, multi-dimensional, and promote a multi-sectoral approach to development”.
- This initiative reflects India’s experience in development co-operation, including capacity-building programmes, lines of credit, **grant-assisted projects**, trade and investment concessions, and technology transfers.
- The compact will ensure that **development and infrastructure financing will not impose a debt burden** on developing countries.

The Compact comprises four elements:

- ▶ Trade for development;
- ▶ Capacity building for sustainable growth;
- ▶ Technology sharing; and,
- ▶ Project specific concessional finance and grants.
- To strengthen trade promotion activities, India will also start a special fund of USD 2.5 million.

India-Japan 2+2 Dialogue



- The **third Japan-India 2+2 Foreign and Defence Ministerial Meeting** was held in New Delhi.
- The Ministers highlighted their **common strategic vision towards a free and open Indo-Pacific**.
 - One that is **inclusive, peaceful, prosperous and resilient**, as part of the rules-based international order.
- The 2+2 Ministerial Dialogue is a diplomatic summit that has been held every year since 2018 initially.
 - It started with the US and in 2019 with Japan.
 - India now has 2+2 ministerial level dialogue with Australia and Russia also.
 - India has official level 2+2 dialogue with South Korea, United Kingdom and Brazil.

Security of Supplies Agreement (SOSA)

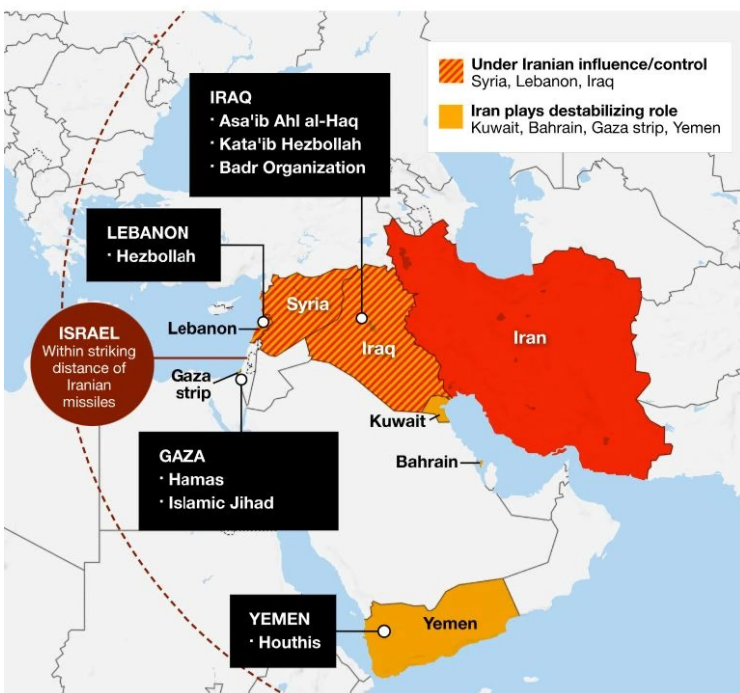
- The US Department of Defense (DoD) entered into a Security of Supply Arrangement (SOSA) with the Indian Ministry of Defence (MoD).
- Under SOSA, **the US and India will provide reciprocal priority support** for goods and services that promote national defence.
- SOSA will enable both countries **to acquire the industrial resources** they need from one another.
 - ★ This will **resolve unanticipated supply chain disruptions** to meet national security needs.
- India is the **18th SOSA partner** of the US and is **not legally binding**.
- It was signed to propel the **Major Defense Partner (MDP) status** provided to India in 2016.
- The Memorandum of **Agreement on the Assignment of Liaison Officers** was also signed.
 - ★ This aims to post Indian armed forces officers in key strategic US Commands.

Axis of Resistance Coalition

- Hamas leader Ismail Haniyeh was assassinated in an air strike in Tehran recently.
- Hamas is a part of a coalition of **Iranian-backed groups known as the 'axis of resistance'**.
- Hezbollah, Hamas, the Palestinian Islamic Jihad (PIJ), and the **Houthis** are some of the major groups in the alliance.
- The roots of the 'axis of resistance' go back to the **Iranian Revolution of 1979**.
 - ◆ The revolution paved the way for **radical Shia Muslim clerics to come to power**.
- The resistance was formed by Iran to expand its political and military influence in a region where most powers such as **Saudi Arabia (US-ally) — are Sunni-majority nations**.
- Iran's new regime began to support **non-state actors**.
- Another reason for this was **to deter threats from Israel and the US**.
 - ◆ Iran has seen Israel's creation in 1948 as a means for the US to influence the region for its strategic interests.

Iran's 'Axis of Resistance'

Fears of the Israel-Hamas war escalating have soared with concern it could extend across the Middle East under Iran's new 'Axis of Resistance'.



Orangutan Diplomacy

- Malaysia's Plantation and Commodities Minister proposed **sending critically endangered orangutans as gifts** to palm oil-purchasing countries, inspired by China's "panda diplomacy."
- However, he later **suggested importers sponsor orangutans** instead, with funds directed towards their conservation within Malaysia.
- Orangutans are found in the rainforests of **Borneo** and **Sumatra**, shared by **Malaysia, Indonesia**, and **Brunei**, but are threatened by deforestation from palm oil plantations.
- The three species are the **Bornean, Sumatran, and Tapanuli** orangutans.
- With a **population of around 120,000**, their habitat is shrinking.
- Malaysia (26%) is world's second largest palm oil producer after Indonesia (58%)
- Malaysia faces pressure to make its industry more sustainable due to its impact on orangutan habitats.

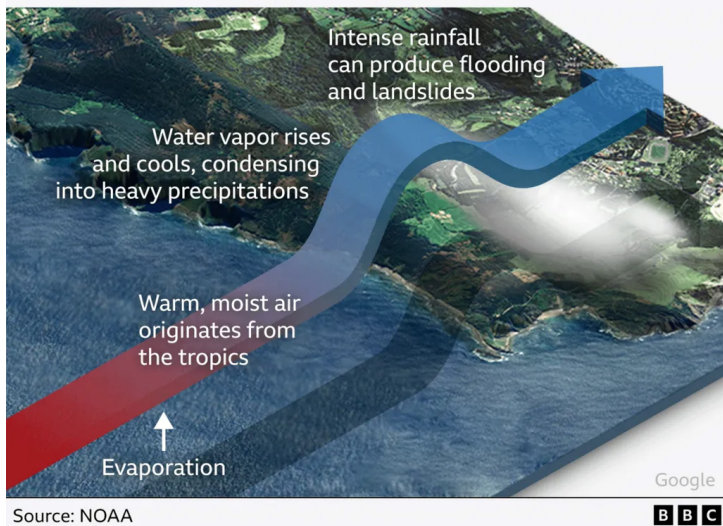
India-Malaysia ties elevated

- India and Malaysia officially upgraded their bilateral ties to a **Comprehensive Strategic Partnership** during the visit of Malaysian Prime Minister (PM) Anwar Ibrahim to India.
- This marks a significant enhancement in their relationship, building upon the **2010 Strategic Partnership** and the **2015 Enhanced Strategic Partnership**.
- The key agreements signed during the visit were MoUs on **workers' mobility, digital technologies, culture, tourism, sports, and education**.
- India also agreed to work with **Malaysia on its request to join the BRICS grouping**.
- Both countries had a **record-high bilateral trade** of \$19.5 billion in 2023.
- The target is to increase this to **\$25 billion by 2025**.

Atmospheric Rivers (ARs)

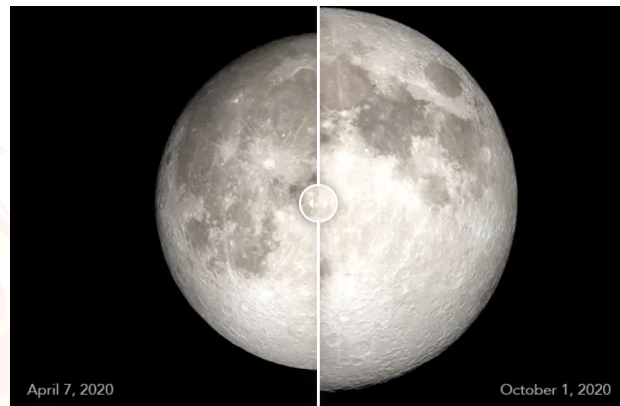
What are atmospheric rivers?

Long columns of water vapour travel thousands of miles and dump heavy rains



- Rivers in the sky or atmospheric rivers are becoming more intense and can be linked with devastating floods, heat stress and are also a cause for the recent Wayanad event.
- AR triggers when the water vapour forms a band or a column in the lower part of the atmosphere which moves from the tropics to the cooler latitudes.
- It comes down as rain or snow, devastating enough to cause floods or deadly avalanches.
- These invisible “rivers in the sky” carry some 90% of the total water vapour that moves across the Earth’s mid-latitudes.
- They can also be responsible for the increasing humid heat during the summer months.
- A 2023 study showed that 70% of all major floods in India in the last 35 years were associated with ARs.
- ARs are identified and measured using a metric called Vertically integrated water vapour transport (IVT).

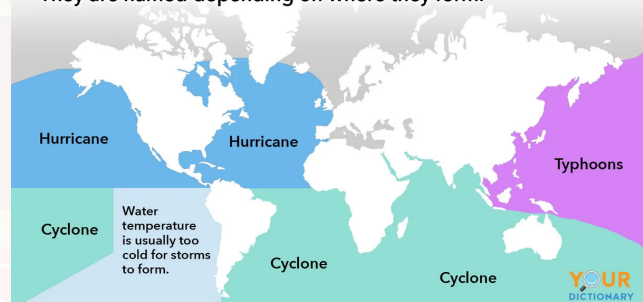
Super Blue Moon



- The rare and unusual astronomical feature — the full moon being both a “blue moon” and a “super moon,” giving rise to the “Super Blue Moon,” occurred in August.
- A supermoon happens when the full moon is at its closest point to Earth (perigee), making it appear larger and brighter.
- A blue moon refers to the occurrence of two full moons in a single month, which happens every two to three years due to the Moon’s cycle of 29.5 days.
- The term “blue moon” doesn’t indicate a colour change in the moon.
- Rather, it originated from the old saying, “once in a blue moon,” which suggests something that happens infrequently.

Typhoon Shanshan

Hurricanes, typhoons and cyclones are the same type of storm. They are named depending on where they form.



- Japan saw one of the strongest typhoons to hit the country in decades that has been named Shanshan.
- Both hurricanes and typhoons refer to an intensified “tropical cyclone”.
- If it’s above the North Atlantic, central North Pacific or eastern North Pacific oceans, we call it a hurricane.

- If it hovers over the **Northwest Pacific Ocean** (usually **East Asia**), we call it a **typhoon**.
- If it's circling over any other region, we continue to call it a **tropical cyclone**.
- Typhoons are named using a standardised system managed by the **World Meteorological Organization (WMO)**.
- Names are chosen from a **pre-approved list** contributed by countries in the Western North Pacific, including **Japan, China, South Korea, the Philippines, Vietnam, Taiwan, Thailand, Malaysia, and Hong Kong**.
- Names of particularly deadly or costly typhoons may be retired and replaced.
- The name "**Shanshan**" means "**coral**" in **Chinese**.

Water Spout



- A deadly waterspout is strongly suspected of sinking a yacht off the coast of Italy.
- **Waterspouts** are tornadoes that form over water. They appear as rotating columns of air and can occur in both fair and stormy weather. There are two main types:
 - **Fair-weather waterspouts:** These form in relatively calm conditions and are typically weaker. They develop when warm, moist air rises over cooler water.
 - **Tornadic waterspouts:** These are associated with severe thunderstorms and are more powerful. They can develop from tornadoes that move over water.
- They are associated with **severe thunderstorms**, and are often accompanied by high winds and seas, large hail, and **frequent dangerous lightning**.

Mass Wasting

The path of the Brahmaputra River



- Frequent mass wasting in **Tibet's Sedongpu Gully catchment** has been a cause for worry in India.
- Mass wasting is the **gravity-influenced movement of rock and soil down a slope**.
- A **gully** is a **landform created by erosion from running water, mass movement or both**.
- The Sedongpu Gully, in the catchment of the **Sedongpu glacier** and its valley, is 11 km long and covers 66.8 sq. km.
- It drains into the **Yarlung Zangbo, or the Tsangpo River**, near where it takes a sharp turn called the **Great Bend** — while flowing around **Mt. Namcha Barwa**.
- The **Great Bend** is close to **Tibet's border with Arunachal Pradesh**, where the Tsangpo flows as the Siang River.

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Environment & Ecology

Great Barrier Reef



- A study found the **Great Barrier Reef** waters were the warmest in 400 years over the past decade.
- Stretching 1,500 miles off Queensland (Australia), the reef saw largely stable temperatures before 1900, but warming began steadily from 1960 due to human influence.
- From 2016 to 2024, the reef experienced mass **coral bleaching** events, where rising temperatures caused corals to expel algae, leading to loss of colour and sometimes death.
- Coral reefs protect shorelines, support marine life, and boost tourism.
- The Great Barrier Reef is **not currently on UNESCO's list of world heritage sites that are in danger**.

Tagging of Horseshoe Crabs



- India's first **tagging** of horseshoe crabs, led by the Zoological Survey of India and Odisha Forest Dept, aims to study population patterns and threats.
- **Horseshoe crabs**, ancient creatures with strong immune systems, are vital for preparing diagnostic reagents.
- They are more associated with spiders than crabs and are found along northern America and parts of Asia.
- India has two species—**Tachypleus gigas** and **Carcinoscorpius rotundicauda**—found along the Odisha and West Bengal coasts.
- Listed under **Schedule 2 of the Wildlife Protection Act, 1972**, they face threats from destructive fishing practices and illegal smuggling.
- Horseshoe crabs have changed little in appearance since they first evolved in the **Triassic**, earning them the title of “**living fossil**”.

Gross Environmental Product Index (GEPI)

- **Uttarakhand has become the first state** to launch a Gross Environment Product Index.
- It not only calculates **what services we get from the environment** but also **what we put back into the environment**.
- There are **four pillars** of the Gross Environment Product Index: **air, soil, tree and water**.
 - $$\text{GEP index} = (\text{Air-GEP index} + \text{Water-GEP index} + \text{Soil-GEP index} + \text{Forest-GEP index})$$
- For instance, if we take Forest GEP, it counts the **new trees planted**, their types (e.g., broad-leaved vs. pine), and **their survival rates**.
- It also **subtracts** the number of trees cut down.

Samudra Pratap



- **First indigenously developed Pollution Control Vessel** of Indian Coast Guard, 'Samudra Pratap' was launched.
- The Ship has been built by Goa Shipyard Limited (GSL).
- The vessel will help to **check the oil spillage** in the country's sea coast.
- This is the first instance where these types of vessels are being designed and built indigenously in India.
- It is equipped with specialised equipment for the **containment, recovery, separation, and dispersal of oil** and other pollutants.

Mercury Bomb



- As the Arctic permafrost thaws due to climate change, large amounts of toxic mercury, known as the **Mercury bomb**, are being released.
- **Permafrost** is permanently frozen ground that remains at or below 0°C (32°F) for at least two consecutive years.
- Permafrost covers **25% of the Northern Hemisphere's exposed land**.
- Mercury is liberated during glacial erosion, with some being redeposited by rivers.
- **Finer sediments contain higher mercury levels.**
- While the immediate threat is minimal, the mercury could gradually accumulate in the food chain, posing long-term risks, particularly to Arctic communities.

Clean Plant Programme (CPP)

- Cabinet approved Rs 1,765 cr clean plant programme to boost horticulture.
- The programme, **proposed by the Ministry of Agriculture and Farmers Welfare**, aims to enhance the quality and productivity of fruit crops across the nation.
- The programme will be **implemented by the National Horticulture Board** in association with the **Indian Council of Agricultural Research (ICAR)**

Key components of the programme:

- ★ Establishment of **9 world-class Clean Plant Centres (CPCs)** across India.
- ★ CPCs will be equipped with **advanced diagnostic therapeutics and tissue culture labs**.
- ★ A robust certification system under the Seeds Act 1966.
- ★ Infrastructure support to **large-scale nurseries for efficient multiplication** of clean planting material.
- ★ It will provide farmers **access to virus-free, high-quality planting material**, leading to increased crop yields and improved income opportunities.

Science & Technology

Legionnaires' Disease

- At least 60 people in Melbourne were affected by **Legionnaires' disease**
- It is a serious form of pneumonia caused by the **Legionella** bacteria.
- The bacteria grows in **stagnant water, biofilms, and water systems** like shower heads, hot tubs, and air-cooling systems.
- Infection occurs by inhaling mist or accidentally swallowing contaminated water.
- Legionella can also cause **Pontiac fever**, a milder flu-like illness.
- Discovered in the 1970s during a convention in Philadelphia, the disease is treated with antibiotics.

Plastic-Eating Fungi

- Scientists in Germany have identified **plastic-eating fungi**, including **Aspergillus** and **Pestalotiopsis**, that could help tackle plastic pollution.
- These fungi are particularly effective at breaking down **polyurethane**, commonly used in construction foam.
- Research at **Lake Stechlin** showed that some microfungi can degrade synthetic polymers when no other carbon source is available.
- Of 18 fungal strains studied, four were especially efficient at consuming plastics, particularly polyurethane.

JUICE Mission



- The European Space Agency's **Jupiter Icy Moons Explorer - JUICE mission** is set to attempt the first-ever Lunar-Earth flyby.
- It was launched using the Ariane 5 rocket from Europe's Spaceport in **French Guiana**.
- It will make **detailed observations of the giant gas planet** and its **three large ocean-bearing moons** – Ganymede, Callisto and Europa.
- NASA is partnering with ESA for the JUICE mission, and will provide instruments and components for the spacecraft.

mPOX

- WHO declared **mpox** (formerly known as monkeypox) a **public health emergency of international concern (PHEIC)**.
- Caused by the **monkeypox virus**, first identified in monkeys in 1958, mpox causes symptoms like a painful rash, swollen lymph nodes, fever, and fatigue.
- It spreads through close contact with infected individuals, contaminated materials, or animals.
- The virus can also be transmitted to a foetus during pregnancy.
- The illness typically lasts 2-4 weeks, and recovery is aided by supportive care.
- The **MVA-BN vaccine** has been approved by WHO for prevention.

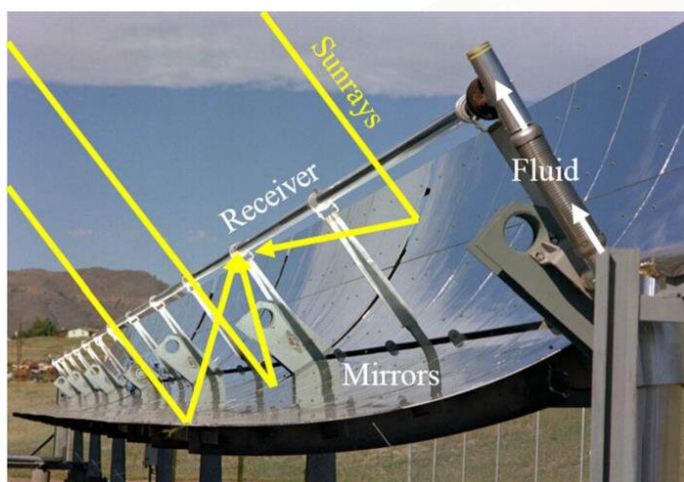
Cyanide Sensor for Enhanced Safety

- A research team at the **Central University of Kerala** has developed a highly sensitive and selective **cyanide sensor** capable of detecting cyanide in low concentrations.
- The material changes from yellow to colourless upon detecting cyanide, ensuring accuracy without interference from other ions.
- This advancement enhances the safety of drinking water and food products.
- **Cyanide**, a potent toxin found in plants, fruits, and microorganisms, can be present in foods like cassava, apple seeds, and almonds.
- The **WHO** limits cyanide in potable water to below **0.19 mg/L** due to its lethal

First National Space Day

- **August 23** is celebrated as the National Space Day.
- This is to mark the historic milestone when the **Chandrayaan-3 mission completed a soft landing** on the Moon in 2023.
- The theme: “**Touching lives while touching the Moon: India’s space saga**”.
- The landing made India the **fourth country** to accomplish the feat and the **first to land on the lunar South Pole**.

Solar Paraboloid Technology



- **Solar paraboloid technology** is emerging as a key solution in the shift to renewable energy.
- Using **Parabolic Trough Collector (PTC)** systems, it focuses sunlight onto a receiver tube through parabolic mirrors, heating a fluid to generate electricity or provide industrial heat.
- Unlike traditional **Photovoltaic panels**, which convert sunlight directly into electricity, solar paraboloids can operate at higher temperatures, up to **300°C**, increasing thermal efficiency significantly.

Mission Rhumi 1

- Mission Rhumi was launched in Chennai on August 24.
- It is India’s **first reusable hybrid rocket on a mobile launchpad**.

- An initiative of **Space Zone India** (an aero-technology company based in Chennai), Rhumi-1 carried **three cube satellites** designed to monitor and collect data on atmospheric conditions.
- The Rocket is equipped with a **generic-fuel-based hybrid motor** and electrically triggered parachute deployer and is 100% pyrotechnic-free and has 0% TNT.
- The mission mentor was Mylswamy Annadurai, former ISRO scientist and affectionately called the ‘**moon man of India**’.
- The mobile launch system allows scientists to adapt to various launch scenarios with ease from any location.



Dark Patterns

- The study by the **Advertising Standards Council of India (ASCI)** found that 52 of the top 53 apps have **deceptive UI (user interface)/ UX (user experience)**.
- Dark patterns are deceptive design practices that **mislead or trick users into actions they didn’t intend, undermining their autonomy and decision-making**.
- These tactics can amount to **misleading advertising**, unfair trade practices, or violations of consumer rights.
- **Health-tech** led the list of sectors where deceptive patterns are the highest, followed by travel booking and e-commerce.
- For instance, four of the five health-tech apps relied on creating **time-based pressure or a false urgency** to rush users into making decisions.

Some examples of Dark Patterns-

- ✳️ “**subscription trap**” - the process of making cancellation of a paid subscription impossible or a complex;
- ✳️ “**Drip pricing**” - elements of prices of a product are not revealed upfront.
- ✳️ “**basket sneaking**” - inclusion of additional items at the time of checkout without the consent of the user;
- ✳️ “**confirm shaming**” - using a phrase, video, audio or any other means to create a sense of fear or shame or ridicule or guilt in the mind of the user.

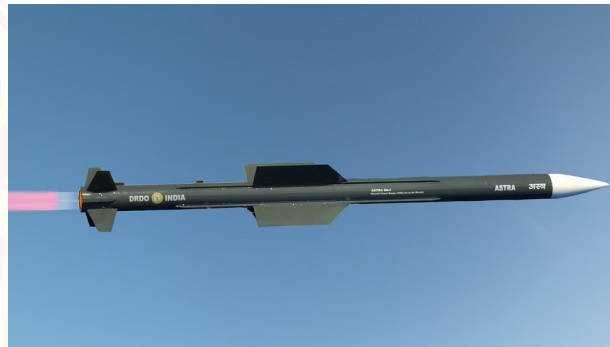
Tantalum



- The Central Government has listed 24 minerals, including tantalum, as **Critical and Strategic under the MMDR Act, 1957**.
- The Geological Survey of India is prioritising tantalum exploration.
- Tantalum (atomic number 73) is a **rare, grey, heavy, and highly corrosion-resistant metal**.
- It forms a tough oxide layer when exposed to air, and is **ductile in its pure form**.
- Tantalum is used in electronics, as a substitute for platinum, and in components for chemical and nuclear plants, aeroplanes, missiles, surgical equipment, and implants due to its resistance to bodily fluids.

Defence

Astra Mark 1 Missiles



- **The Indian Air Force** has given clearance for production of 200 Astra Mark 1 Missiles.
- It has been developed by the **Defence Research and Development Organisation (DRDO)** with **Bharat Dynamics Limited (BDL)** as its production agency.
- It is an all-weather, all-aspect **beyond-visual-range air-to-air missile (BVRAAM)**.
- It is developed under India's **Integrated Guided Missile Development Programme (IGMDP)**.

TENG Technology



- IIT Indore develops shoes that generate electricity for the Armed Forces.
- **Tribo-Electric Nanogenerator (TENG) technology** can generate electricity with every step.

- It is a self-powered, feasible solution to **convert mechanical energy into electricity.**
- The electricity will get stored in a **device fixed in the soles and can be used to operate small appliances.**
- It is equipped with a **global positioning system (GPS)** and radio frequency identification (RFID) technologies.

Gaurav



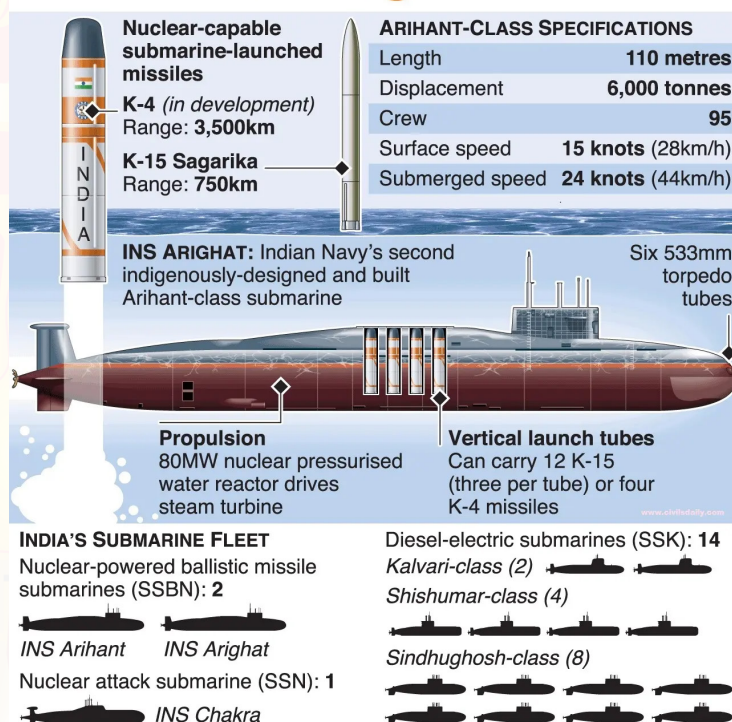
- DRDO successfully tests **Long-Range Glide Bomb (LRGB) Gaurav** off the coast of Odisha from a **Su-30 MK-I fighter jet**.
- GAURAV is an **air launched 1,000 kg class glide bomb** capable of hitting targets at long distance.
- A **glide bomb** is an air-launched weapon that does not have its own propulsion system, unlike a missile.
- Instead, it relies on aerodynamics and wing-like surfaces (winglets) to glide towards its target after being dropped from an aircraft
- It has a **highly accurate hybrid navigation scheme with a combination of Inertial Navigation System (INS),** which uses its own accelerometer and gyroscope data, **and GPS data.**
- GAURAV has been designed and developed indigenously by the Research Centre Imarat (RCI), Hyderabad.

INS Arighaat

- India's second nuclear submarine, **Arighaat**, has been commissioned into the Navy, armed with indigenously built K-15 missiles with a range of over 700 km.

- Named **"destroyer of the enemy,"** it follows INS Arihant (commissioned in 2016) and was built at the Ship Building Centre in **Visakhapatnam.**
- Construction began in 2017.
- A third, more advanced nuclear submarine, **INS Aridhaman**, is under construction and will weigh around 7,000 tonnes.

INS Arighat



Suicide Drones



- North Korea unveiled a new line of suicide drones, showcasing their growing capabilities in this field.

- Suicide drones, or **loitering munitions**, are **one-way unmanned aerial vehicles (UAVs)** that carry **explosives**.
- They **crash into targets**, providing a precision strike capability in modern warfare.
- Unlike **traditional drones that return after surveillance or strike missions**, suicide drones sacrifice themselves in the process of destroying the target.
- Other countries with suicide drones - India's Nagastra-1, Israel's HAROP Drone, USA's Switchblade, Russia's Lancet 3, Iran's Shahed-136, and China's CH-901.

Military Exercises

Exercise Name	Countries Participated	Armed Force(s) Involved	Objective	Held at
Tarang Shakti-2024	India, U.S., Germany, France, Australia, UAE, Singapore, and 23 others	Air Force	Showcase fighter jets, enhance interoperability between air forces	Coimbatore
Parvat Prahaar	India	Army (Infantry, Armoured, Artillery, Support units)	Prepare for high-altitude warfare, maintain readiness near India-China border	Ladakh
Udara Shakti 2024	India, Malaysia	Air Force (Su-30MKI, Su-30MKM)	Enhance interoperability and effectiveness of Su-30 operations	Malaysia
Mitra Shakti	India, Sri Lanka	Army	Develop interoperability, bonhomie, and camaraderie between armies, conduct operations in semi-urban environment	Sri Lanka

Miscellaneous

Voluntary Vehicle Modernization Programme (V-VMP)

- The **Ministry of Road Transport and Highways** has launched the Voluntary Vehicle Modernization Program or **Vehicle Scrapping Policy**.
- It aims to create an ecosystem for **phasing out unfit polluting vehicles** across the country.
- Registered **Vehicle Scrapping Facilities (RVSFs)** and **Automated Testing Stations (ATSS)** are created in connection with the policy.
- The Programme also provides a **Certificate of Deposit (Scrappage Certificate)**.
- Discount will be offered to a person buying a vehicle against a **Traded Certificate of Deposit** of a Scrapped Commercial Vehicle.

Grain ATM



- The first **24-hour 'grain ATM'** called '**Annapurthi**' was inaugurated in **Bhubaneswar**, Odisha, to enhance food security in the state.
- Launched by the **Government of Odisha in collaboration with the United Nations World Food Programme (WFP)**, these machines allow users to access grain using valid public distribution system ration cards from any state or Union territory.
- The ATM can **dispense up to 50 kilograms of grain in just five minutes**, reducing wait times by 70%.
- It requires **biometric authentication** and ensures consistent food rations.
- Additionally, it is **energy-efficient and can connect to solar panels** for automatic refilling.

Oropouche Virus



- Insect-borne Oropouche virus is spreading rapidly in **South America with more than 8,000 cases** reported since August 1.
- Also called **sloth fever**, it is similar to dengue.
- It is spread primarily by the **bite of infected Midges (Culicoides paraensis)**, a kind of fly.
- It was detected for the first time in 1955 and was found in **Trinidad and Tobago**.
- Now the virus has jumped geographies through travellers and it has also been reported in the US and Europe, which never had a history of this virus.
- Cases have **not been reported in India**.

Koleroga



- Agricultural scientists in **Kasaragod** have issued an advisory to farmers to control **koleroga (fruit rot disease)** or **Mahali** in arecanut plantations.
- The disease **causes rotting and extensive shedding of immature nuts**, which lose their green lustre and market value.
- It **spreads through heavy winds and rain splashes**.

- Conditions such as continuous heavy rainfall, low temperatures (20 to 23 °C), high humidity, and intermittent rain favour outbreaks.
- The most common cause of fruit rot is the **fungus Botrytis cinerea, which affects various fruits, including grapes and strawberries.**
- Cholera is an **acute diarrhoeal infection** caused by ingestion of food or water contaminated with the **bacterium Vibrio cholerae.**
- Cholera remains a global threat to public health and an indicator of inequity and lack of social development.

Leptospirosis

- Leptospirosis, or “rat fever,” has been detected in Kerala, caused by **bacteria in the urine of animal carriers, particularly rats.**
- The bacteria can **enter the body through skin breaks** when exposed to contaminated soil or water, making people in flooded areas especially vulnerable.
- The disease has a **high mortality rate**, with rising cases attributed to excessive rainfall and waterlogging during the southwest monsoon.
- **Doxycycline**, a broad-spectrum antibiotic is used as preventive medicine.

Scrub Typhus Disease

- Meghalaya Chief Minister was hospitalised **after testing positive for scrub typhus.**
- **Also known as bush typhus**, it is a disease caused by **bacteria called Orientia tsutsugamushi.**
- It is spread to people through **bites of infected chiggers (larval mites)** and its most common symptoms include fever, headache, body aches, and rash.
- No vaccine is available to prevent scrub typhus.
- People who are treated early with **doxycycline** usually recover quickly.

Oral Cholera vaccine (OCV)

- Vaccine maker Bharat Biotech International Ltd launched **Hillchol (BBV131)**, for preventing Cholera.
- At present, there is **only one manufacturer supplying OCVs worldwide** and a shortage of around **40 million doses annually.**

She-Box Portal

- **The Ministry of Women and Child Development** has launched the new SHE-Box portal.
- It deals with registering and monitoring complaints of **sexual harassment of women at the workplace.**
- It serves as a **centralised repository** of information related to **Internal Committees (ICs) and Local Committees (LCs)** formed across the country, encompassing **both the government and private sectors.**
- It offers a common platform **to file complaints, track their status** and ensure a time-bound processing of complaints by ICs.

RESET Programme

- The **RESET (Retired Sportsperson Empowerment Training)** programme was launched by the Sports Ministry on **National Sports Day** (August 29)
- It aims to keep retired athletes engaged in India's sports ecosystem.
- It facilitates the transfer of their skills and experience to young talents.
- Open to athletes aged **20-50** who have won international medals or have recognized national or state-level distinctions, the programme combines online self-paced learning with on-ground training and internships.
- Participants also receive placement assistance and entrepreneurial guidance upon completion.

Multidimensional Vulnerability Index (MVI)

- The UN General Assembly launched the **Multidimensional Vulnerability Index (MVI)**.
- It seeks to help Small Island States and Developing Nations (SIDS) access **low-interest financing** from institutions like the **World Bank** and **IMF**.
- It complements GDP by including factors like climate risk, import dependency, and social pressures.
- The MVI addresses the challenges SIDS face despite not being poor by GDP standards, justifying concessional loans for their development needs.



OUR TOPPERS IN TOP 100



P K SIDHARTH RAMKUMAR
AIR 04



AYAN JAIN
AIR 16



VISHNU SASIKUMAR
AIR 31



BENJO P. JOSE
AIR 59



KASTURI SHA
AIR 68



FABI RASHEED
AIR 71



ANNIE GEORGE
AIR 93

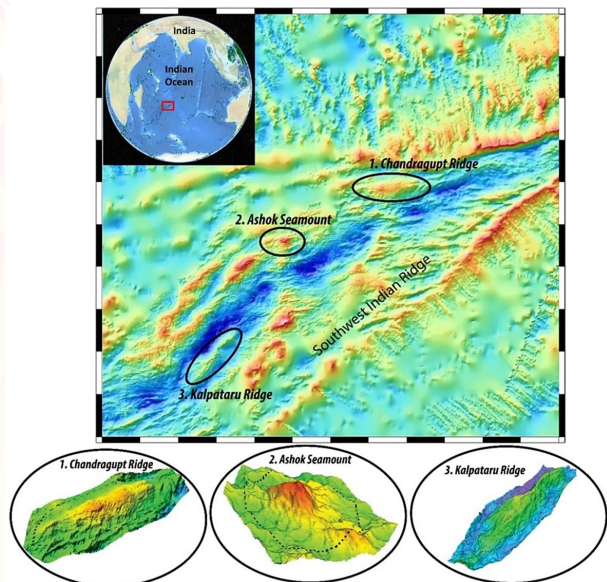
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Places in News

The Underwater Structures in Indian Ocean named

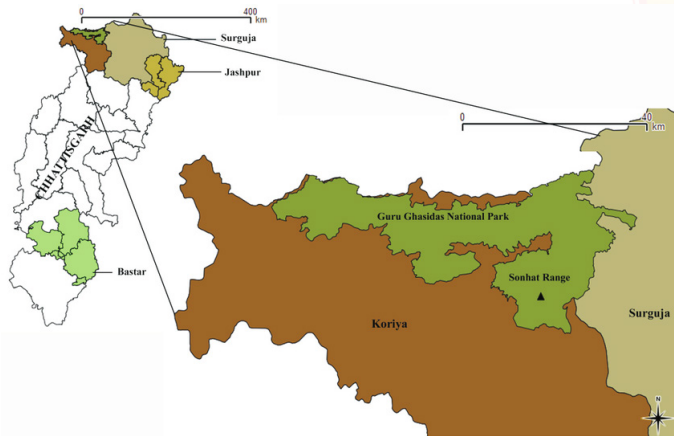


- Three underwater geographical structures located in the Indian Ocean have been awarded names proposed by India.
- The **International Hydrographic Organization (IHO)** and **UNESCO's Intergovernmental Oceanographic Commission (IOC)** awarded the name proposed by India.
- Ashoka Seamount, Chandragupt Ridge, and Kalpataru Ridge** are the names given.
- These are located along the **Southwest Indian Ridge area of the Indian Ocean**.
- Previous structures named after physicist **CV Raman (Raman Ridge)**, oceanographer **NK Panikkar (Panikkar Seamount)** and geologist **DN Wadia (DN Wadia Guyot)**.
- In all, there are now seven structures in the Indian Ocean named including the **Sagar Kanya Ridge**.

Guru Ghasidas-Tamor Pingla Tiger Reserve

- The Chhattisgarh government announced the establishment of a new tiger reserve, **making it the fourth such reserve in the forest-rich State**.

- It was created after integrating the regions of **Guru Ghasidas National Park** and **Tamor Pingla Sanctuary**.
- The decision comes following the **recommendations of the State Wildlife Board** and the concurrence of the **National Tiger Conservation Authority** under the Ministry of Environment, Forest and Climate Change.
- Chhattisgarh has three tiger reserves — **Indravati, Udanti-Sitanadi and Achanakmar**.



Madeira



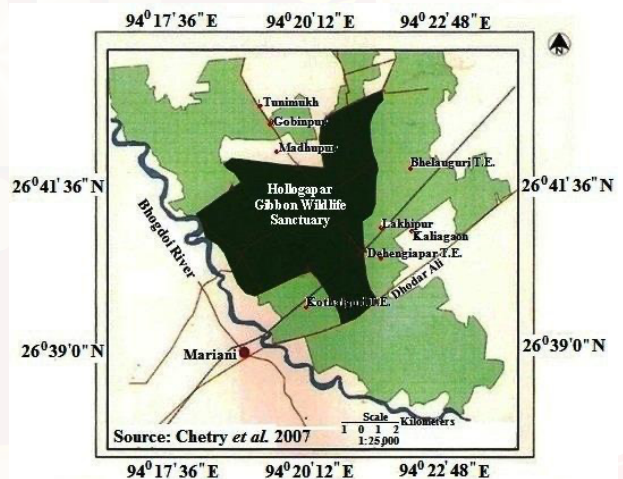
- The southern part of the **Portuguese island of Madeira** has been witnessing forest fires.
- They are the **largest surviving laurel (Laurus nobilis) forests** in the world
- Madeira is among the most popular tourist spots in the **Iberian Peninsula (Spain and Portugal)**.
- It is also a **UNESCO World Heritage Site**.

Vadhvan Port Project



- Prime Minister laid foundation stone of **Vadhvan Port project** worth around ₹76,000 crore in **Palghar, Maharashtra**.
- It is touted to be among the **top 10 ports in the world** when completed.
- It will be **one of India's largest deep-water ports** and will ease pressure on other Indian ports.
- Currently, about **65% of the total container traffic in the country** is routed through two ports— **Mundra (Gujarat)** and **JNPA (Maharashtra)**

Hoollongapar Gibbon Wildlife Sanctuary



- Assam allows oil exploration near hoollong gibbon habitat.
- It was formerly known as the **Gibbon Wildlife Sanctuary** or **Hollongapar Reserve Forest**.
- The Sanctuary is located in **Jorhat district of Assam** and situated in close proximity to the **Naga Hills**.

- The sanctuary is the home to **seven types of primates** – western hoolock gibbon, Bengal slow loris, stump-tailed macaque, northern pig-tailed macaque, eastern Assamese macaque, rhesus macaque, and capped langur.
- The Hoollongapar Gibbon Sanctuary contains **India's only gibbons** – the **hoolock gibbons**, and **Northeastern India's only nocturnal primate** – the **Bengal slow loris**.

Nacala Port in Mozambique



- Held up for months, import of **tur dal from Mozambique** resumed after MEA's intervention.
- India is the world's largest producer of pulses, but it is still dependent on imports to meet its domestic demand.
 - Mozambique is its main source for Tur/ Pigeon pea imports.
- The port of Nacala is located in the province of Nampula is the **deepest port in Southern Africa**.

Kursk Region

- **Ukraine had launched a surprise incursion** into Russia's southwestern province of Kursk.
- This is the **first ground invasion of the country** or the erstwhile Soviet Union since **World War II**.

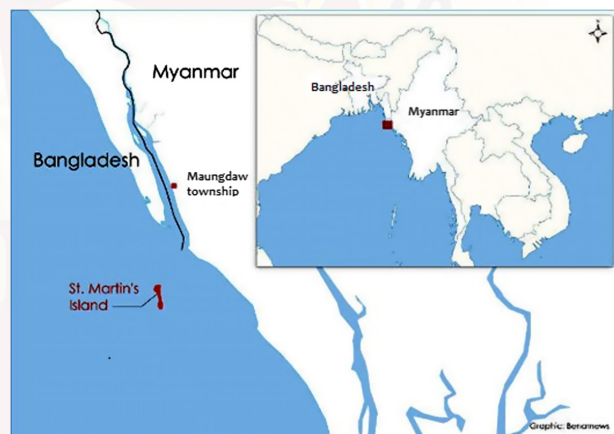
- Kursk falls in the western Russia along the **upper Seym River**, about **280 miles (450 km) south of Moscow**.
- **The Battle of Kursk** in 1943 was the **largest tank battle in World War II** and ended in the defeat of the Germans.

A limited advance

As of August 19, according to Ukraine President Volodymyr Zelensky, his forces were in control of 92 settlements in Kursk and 1,250 square kilometres of Russian territory



St Martin's Island



- The island was in the spotlight after reports claimed that Sheikh Hasina mentioned that the **US was behind her ouster from power** because she **did not hand over the island to it**.
- The island is located in the **northeastern region of the Bay of Bengal**, close to the border between **Bangladesh and Myanmar**.
- It is nine kilometres away from the southern tip of **Bangladesh's Cox's Bazar-Teknaf peninsula**.

- It is Bangladesh's **only coral island** — there are reefs from 10-15 km to the west-northwest.
- It is also a **breeding ground for sea turtles**.

Uhuru Summit



- The Divyangjan expedition team of **Himalayan Mountaineering Institute (HMI)**, under the aegis of **Ministry of Defence**, has unfurled 7800 sq ft Indian national flag atop **Uhuru Summit, Kilimanjaro, Tanzania**.
- Uhuru Peak, at 5,895 metres above sea level, is **the highest free-standing peak in Africa**.
- Also known as “Everyman’s Everest,” **Mount Kilimanjaro** is a popular hiking destination because making the climb is possible for hikers of all skill levels.

Gumti River

- The **Ministry of External Affairs** has published reports in Bangladesh media that the **Dumbur dam in Tripura** is causing floods in Bangladesh.
- Gumti River originates in the northeastern hilly region of Tripura.

- From its source it **flows about 150 km**, turns west and enters **Bangladesh near Katak Bazar (Comilla Sadar)**.
- Flash floods are common phenomena** of this river and it occurs at regular intervals.
- Previously it was known as the ‘**sorrow of Comilla town**’.



Marshyangdi River

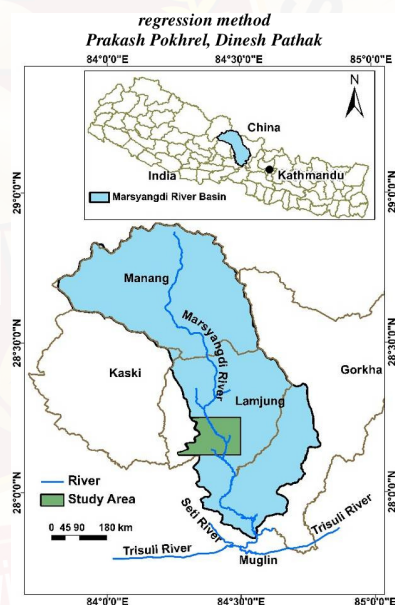


Figure 1: Study area

- An Indian tourist bus skidded off into the **Marsyangdi River in Nepal**.
- The Marshyangdi river valley is within the **Annapurna Conservation Area**.
- The river is one of the **major tributaries of the Gandaki** that in turn joins the **Ganga**.

- The major sources are the glaciers of **Annapurna Himalayan range, Manaslu Himalaya range and Larkya Himalayan sub range.**
- It is one of the world class rivers for water adventure sports like rafting and kayaking.

Nankai Trough



- After a **7.1-magnitude earthquake** shook **southern Japan**, the country's meteorological agency issued its **first-ever "megaquake advisory"**.
- A **megaquake** is an earthquake with a **magnitude larger than 8.**
- The Nankai Trough is an underwater **subduction zone** (nearly 900 km long).
- Here the **Eurasian Plate collides with the Philippine Sea Plate**, pushing the latter under the former and into the Earth's mantle.
- The trough has produced **large earthquakes roughly every 100 to 150 years.**

3 Sites added to Ramsar List

- India adds 3 new Ramsar sites in **Tamil Nadu and Madhya Pradesh**, taking the total of such sites in India to 85.
- The new additions are the **Nanjarayan Bird Sanctuary and Kazhuveli Bird Sanctuary in Tamil Nadu**, and **Tawa Reservoir in Madhya Pradesh.**

◆ The Nanjarayan Bird Sanctuary:

- ◆ It is located on the **banks of river Noyyal.**
- ◆ Originally a water reservoir **for irrigation use**, it has since become a significant ecosystem, supporting a varied range of avifauna.

◆ The Kazhuveli Sanctuary

- ◆ It is situated on the Coromandel Coast and is one of the **largest brackish water wetlands in south India.**
- ◆ The ecosystem's mix of **salt marshes, mudflats and shallow waters** make it a home to many globally endangered species, like the **black-headed ibis and greater flamingo.**
- ◆ It is also a stopover for migratory birds along the **East Asian-Australasian Flyway.**

◆ The Tawa Reservoir:

- ◆ It was created by damming the **Tawa River.**
- ◆ The reservoir became a massive wintering ground for migratory birds.
- ◆ Tawa provides irrigation water to farmlands, **drinking water to local communities**, and sustains the nearby fisheries.



India is one of the Contracting Parties to Ramsar Convention, signed in Ramsar, Iran, in 1971.

Species in News

Neelakurinji



- Neelakurinji (**Strobilanthes Kunthiana**), a purplish flowering shrub that blooms once every 12 years, has been included as **Vulnerable** on the IUCN Red List.
- This is the **first Global Red List assessment for this flagship species** of the montane grasslands in southwest India.
- **Endemic** to high-altitude shola grasslands (1,340–2,600 m), nearly 40% of its habitat has been lost, with threats from exotic species, infrastructure development, afforestation, and climate change.

Sturgeon



- **Wildlife crime is endangering sturgeon** fish species, heavily exploited for their roe (caviar) and meat.
- Despite bans, fishers in Bulgaria and Romania use **illegal hook lines (karmaci)** to catch **sturgeon**, leading to a sharp population decline.

- Of the six native sturgeon species in the **Danube River**, two are locally extinct, and the remaining four are listed as Threatened on the IUCN Red List.
- The stellate sturgeon, Russian sturgeon, and beluga are Critically Endangered, while the sterlet is Endangered.
- **Most sturgeons live in the ocean but ascend rivers to spawn.**
- Sturgeon species are primarily found in **temperate waters** of the **Northern Hemisphere**, including regions of **North America, Europe, and Asia.**

Dhaincha



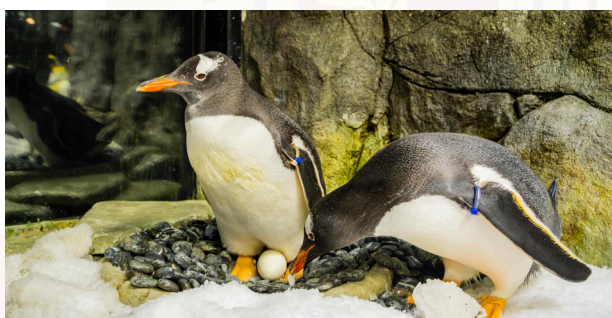
- The Tamil Nadu government has recently distributed Dhaincha (green manure).
- **Dhaincha (Sesbania aculeata)** is a leguminous green manure crop.
- It is used to **feed livestock and improve soil quality.**
- It can be **grown in all seasons having sufficient moisture in soil.**
- It **not only improves physical properties but also helps in meeting nitrogen requirements** of succeeding crops.
- It needs a **Sowing Temperature of 22-28°C and Harvesting Temperature of 30-35°C** and a Rainfall of **750-800mm.**

Northern bald ibis



- The northern bald ibis, or **Waldraap (Geronticus eremita)**, is a migratory Old World ibis found in grasslands, rocky mountains, and semi-deserts near water.
- Nearly **hunted to extinction by the 17th century**, it has been revived through breeding and rewilding efforts.
- Scientists guide their migration using microlight aircraft since the birds lack instinctual direction.
- With black and iridescent green plumage, a bald red head, and a curved beak, the species has **moved from “critically endangered” to “endangered.”**
- Wild populations are mainly in **Morocco**, with smaller reintroductions in **Turkey, Syria, and Austria**.

Gentoo Penguin



- Sydney gentoo penguin Sphen, whose same-sex love story made him and partner Magic an equality symbol worldwide, has died.
- **Gentoo penguin, (Pygoscelis papua)** is characterised by a band of white feathers extending across the top of the head from just above each eye.
- They are the **fastest underwater birds**.

- Found in **Antarctic Peninsula and numerous islands around the frozen continent**, they are the penguin **world’s third largest members**, reaching a height of 30 inches and a weight of 12 pounds.
- Gentoo parents, which often form **long-lasting bonds**, are **highly nurturing**.
- **IUCN Status:** Least concern

Purandar Figs



- The **Agricultural and Processed Food Products Export Development Authority (APEDA)** recently facilitated the export of **India’s first ready-to-drink fig juice**.
- This ready-to-drink fig juice is made from **GI-tagged Purandar Figs**, known for their sweet taste, size, and nutritional benefits.
- **80% of the fig produced in Maharashtra comes from Purandar** alone which is known as **Anjir Aagat**.
- Purandar has arid or semi-arid conditions with plenty of sunshine and moderate moisture in the air and soil making it ideal for fig cultivation.

Owlfly

- The research team of the Christ College, Thrissur, rediscovered the rare owlfly species **Glyptobasis dentifera** after 75 years.
- Adults of owlfly are **misidentified as dragonflies by non-taxonomists** because of their morphological resemblance.
- During the day, adult owlfly **perch on blades of grass growing in lateritic soils** and also in village households, surrounded by dense vegetation.

- They become active during dusk and take flight.
- They are also attracted by artificial lights at night.
- Owlflies can be **easily distinguished by their long distinct antennae**.
- They have **large eyes and crepuscular habits**, hence, the common name owlfly.
- They come under **Order Neuroptera**, while the **dragonflies come under Order Odonata**.



Keywords

- **Food Traceability:** It is defined by the **Codex Alimentarius Commission (CAC)** as: “The ability to follow the movement of a food through specified stages of **production, processing and distribution**”. It is based on fundamentally four pillars: **product identification, data to trace, product routing and traceability tools**.
- **Whitetopping Technology:** Central government plans to use whitetopping, that is the application of a **Portland Cement Concrete (PCC)** overlay on bituminous roads to prevent potholes on National Highways. Though initially more expensive than flexible overlays of asphalt, it is cost-effective and extends pavement lifespan by 20-25 years.
- **Vampire Stars:** Also called **blue straggler stars (BSS)**, they are stars that rejuvenate their youth by sucking up material from a companion. Recently found in the star cluster M67 located in the constellation Cancer.
- **Surrogate Advertising:** It involves **promoting a product by advertising a different good**. For example, the whiskey brand Imperial Blue advertises music CDs to indirectly promote its alcohol. This method is **often used for products banned or restricted from direct advertising**, such as alcohol, where substitutes like club soda or mineral water are featured.
- **Dark Tourism:** It refers to the practice of **visiting locations associated with death**, suffering, tragedy, or something unusual. It has gained increasing attention in recent years, especially through **TV shows like Chernobyl**.
- **De-influencers:** They are influencers who **promote critical thinking, fact-checking, and ethical consumerism** while debunking misinformation. They empower their audience to engage with social media content more responsibly.
- **Technology Doping:** It refers to the use of **technology that enhances an athlete's performance beyond natural capabilities**, potentially giving them an unfair advantage. There is ongoing debate about **whether superspikes, such as the Nike Vaporfly 4%, are unfair**, as they have been shown to increase running efficiency.
- **Orange Economy:** Also called **Creative Economy**, is a production model where goods and services **derive value from the ideas and expertise of their creators**. It includes businesses rooted in creativity, such as art, culture, research, science, and technology. The term “orange” represents creativity.
- **Macrophages:** They are a type of specialised **white blood cells** involved in the detection and destruction of bacteria and other harmful organisms. They develop in the bone marrow from cells known as **monocytes**.
- **Storm-2035:** It is an **Iranian operation using ChatGPT** to generate content aimed at influencing the U.S. election and other sensitive topics. OpenAI, the parent of ChatGPT, announced taking down accounts of alleged Iranian groups.

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Alfred O V IAS
Asst Collector
Palakkad



Sreedhanya Suresh IAS
Inspector General of
Registration



Meera K IAS
Sub Collector (SDM)
Ernakulam



Safna Nazarudeen IAS
Sub Collector (SDM)
Thiruvalla



Kiran P B IPS
Asst. Commissioner
of Police
Malappuram



Ankit Asokan IPS
City Police
Commissioner
Thrissur



Arun S Nair IAS
Asst Collector
Idukki



Jeeva Maria Joy IFS
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