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ANCIENT JAWBONE DISCOVERY EXPANDS INSIGHTS INTO DENISOVAN MIGRATION AND EVOLUTION
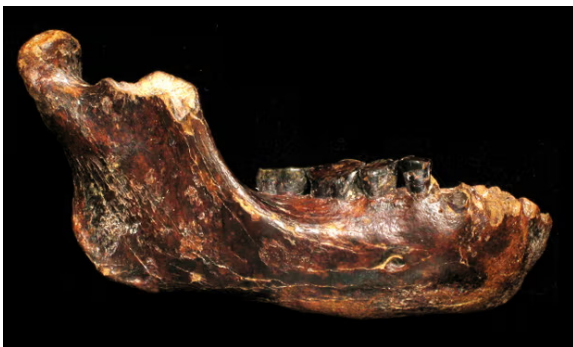
Context

- A remarkable **fossil of jawbone** discovery off the coast of **Taiwan** has provided new insights into the **geographic reach of Denisovans**, an enigmatic group of archaic humans.
  - The **jawbone** (known as Penghu 1) was recovered from the **Penghu Channel, near Taiwan,** during commercial fishing operations.

About Ancient Denisovans

- They are an extinct group of archaic humans, known primarily through limited fossil evidence, including a jawbone, teeth, and a finger bone.
- **Origins and Discovery:** Denisovans were **first identified in 2010** from DNA extracted from a **finger bone found in the Denisova Cave in Siberia**.
  - Genetic analysis revealed that they were a distinct lineage, closely related to Neanderthals and modern humans.
- **Physical Characteristics:** Reconstructions **based on DNA Methylation** patterns suggest Denisovans had a **wider skull** and a **longer dental arch** compared to Neanderthals and Homo sapiens.

Significance of the Findings

- **Geographic Range and Adaptability**: The discovery of the **Penghu 1 jawbone** highlights their adaptability to diverse environments, **from cold highlands to subtropical coastlines.** Key Geographical Range:

- **Taiwan (Penghu Channel):** Recent Discovery
- **Russia (Denisova Cave):** Teeth and a small finger bone fragment.
- **China's Gansu Province (Baishiya Karst Cave, Tibetan Plateau):** A mandible and rib fragment.

- **Laos (Cobra Cave):** A molar (believed to be from a Denisovan based on its shape).
- **Genetic Legacy:** Denisovans **interbred with Neanderthals and Homo sapiens**, contributing genetic material to **modern populations in Asia and Oceania.**
  - Their genetic influence is evident in traits such as **high-altitude adaptation in Tibetan populations.**

Challenges and Future Research

- **Dating the Fossil:** The exact age of Penghu 1 remains uncertain due to the absence of traditional dating methods.
  - Estimates range from 10,000 to 190,000 years, based on associated animal fossils.
- **Expanding Knowledge:** The discovery highlights the need for further exploration of submerged landmasses and other potential Denisovan habitats.
  - **Advanced techniques like paleoproteomics** *(analysis of ancient proteins)* could help identify more Denisovan fossils and refine our understanding of their distribution.
- **Nobel Prize for Physiology or Medicine (2022):** It has been awarded to Swedish geneticist Svante Pääbo for his research in the **field of genomes of extinct hominins and human evolution.**

Source: DD News

CONCERNS RAISED OVER THE AMENDMENT INTO THE RTI ACT

Context

- The Union Information and Technology Minister said that personal details that are subject to disclosure under various laws will continue to be disclosed under the RTI Act after the implementation of the new data protection rule.

About

- **Amendment to RTI Act (2005)** will come into effect once Digital Personal Data Protection (DPDP) Rules are notified in the coming weeks.
- **Section 8(1)(j) of the RTI Act** now includes a blanket prohibition on **disclosing personal information, even if it serves the public interest.**
- **Concerns Raised:**
  - The change makes it **harder to access information** vital for social audits and uncovering misuse of public funds or corruption.

- RTI requests have been **critical in verifying government programs** and ensuring accountability, e.g., checking food ration distribution.
- The original RTI Act balanced privacy and transparency; they reject the argument that the changes align with the Supreme Court's privacy ruling.
- The Union Minister stated the amendment won't restrict transparency or disclosure of personal information when legally required.
  - He cited the 2017 Supreme Court judgement affirming the right to privacy under Article 21 to justify the amendment.

RTI (Amendment) Act, 2019

- **Status and tenure of Information Commissioners changed:** The tenure of the Chief Information Commissioner (CIC) and Information Commissioners (ICs) at both central and state levels is no longer fixed at 5 years and has been reduced to 3 years.
  - Salaries, allowances, and service conditions of CICs and ICs are also determined by the Central Government, rather than being equivalent to those of Chief Election Commissioner and Election Commissioners (as in the original Act).
- **Rules under RTI Act (2022):** Online filing of RTI applications encouraged through the RTI Online Portal.
  - Revisions made to streamline appeals and complaint filing procedures.

Right to Information Act (RTI), 2005

- **Aim:** It was designed to promote transparency in the functioning of the government by giving citizens the right to access information from public authorities.
- **Scope:** The Act applies to public authorities, which include government departments, ministries, and organizations that are substantially funded by the government.
- **Information Accessible to the Public:** Citizens have the right to request information from public authorities. This includes the right to access records, documents, and other information.
- **Exclusions:** Information that may compromise national security, breach confidentiality, or harm the integrity of ongoing investigations.
- **Timeframe for Response:** Public authorities are required to respond to information requests within 30 days. In certain cases, this period can be extended to 45 days.

- **Penalties:** The Act provides for penalties against officials who withhold information without reasonable cause or provide false information.

Significance of the Act

- **Empowers Citizens:** By accessing information from public authorities, promoting transparency and accountability in government.
- **Holds Government Accountable:** Helps in holding public authorities accountable for their actions, preventing corruption.
  - RTI helped uncover misuse of funds in the National Rural Employment Guarantee Scheme (NREGS).
- **Promotes Good Governance:** It strengthens democratic processes by ensuring that the government operates transparently, fostering public trust.
- **Enables Social Audits:** Activists and NGOs use RTI to perform social audits of government schemes and services.
  - RTI was used to check if food rations were correctly distributed under the Public Distribution System (PDS).
- **Access to Public Records:** RTI requests have been used to obtain details of government contracts, exposing corruption or inefficiencies.
- **Strengthens Democracy:** Provides a tool for citizens to actively participate in the decision-making process, enhancing democracy.

Criticism of the Act

- **Overburdening Public Authorities:** It has led to an overload of information requests, putting a strain on public authorities and diverting attention from their primary duties.
- **Misuse of the Act:** Some individuals or groups use RTI requests as a tool for harassment or to settle personal or political scores.
- **Delay in Processing Requests:** Despite the stipulated time frames for response, some public authorities struggle to adhere to these deadlines, causing frustration among information seekers.
- **Capacity and Training Issues:** Some public authorities lack the necessary infrastructure, manpower, and training to effectively implement the RTI Act.
- **Exemptions and Ambiguities:** The Act's provisions regarding exemptions are sometimes vaguely defined, this ambiguity can be exploited to withhold information that should ideally be in the public domain.

Way Ahead

- The RTI Act has played a **significant role in promoting transparency, reducing corruption, and empowering citizens** to actively participate in the democratic process by holding government institutions accountable.

- It is a powerful tool for promoting good governance and ensuring that citizens have access to information that affects their lives.

- The amendment has not yet come into effect, as the rules for implementing the DPDP Act (Digital Personal Data Protection Act) are still in draft form.

- Civil society organizations are calling for these draft rules to be revised so that the changes to the RTI Act are not finalized.

Source: AIR

INDIA AND RUSSIA APPROVED STRATEGIC PROJECTS

In News

- India and Russia have agreed on **six new strategic projects** during the **8th Session** of the **India-Russia Working Group on Priority Investment Projects (IRWG-PIP)** held in New Delhi.

Background

- The **"Declaration on the India-Russia Strategic Partnership"** was signed in October 2000 during President Vladimir Putin's visit to India.

- In 2010, the partnership was elevated to a **"Special and Privileged Strategic Partnership,"** reflecting increased cooperation across key sectors: defense, politics, economics, and culture.

- India-Russia ties are characterized by high-level engagements, institutional dialogue mechanisms, and cooperation in multilateral forums like BRICS, SCO, and the UN.

Key Points of the 8th IRWG-PIP Session

- **Six New Strategic Projects:** India and Russia have agreed to collaborate on six new strategic projects with the goal of boosting bilateral investment.

  - Sectors involved include trade, technological innovation, and economic development.

- **Framework:** The IRWG-PIP operates under the India-Russia Intergovernmental Commission on Trade, Economic, Scientific, Technological and Cultural Cooperation.

Significance of the Agreement

- **Strengthens Economic Resilience:** Diversifies India's trade portfolio amid shifting global dynamics.

- **Reduces Overdependence on the West:** Reinforces strategic autonomy by balancing relations with major powers.

- **Boosts 'Make in India' & Atmanirbhar Bharat:** Encourages technology transfer, localization of production, and industrial growth.

- **Geopolitical Leverage:** Enhances India's role in a multipolar world and Eurasian regional dynamics.

India and Russia Relations

- They share a long-standing relationship, with **bilateral trade and investment ties** dating back to the Soviet era.

  - Over the years, their cooperation has strengthened, with trade growing from USD 1.4 billion in 1995 to USD 65.7 billion in FY 2023-24.

    - Key exports from India include agri-products, chemicals, pharmaceuticals, and machinery, while Russia primarily exports oil, fertilizers, and mineral fuels.

    - Both countries aim to reach a bilateral trade target of USD 100 billion by 2030.

- **Bilateral cooperation** is supported by key forums like the India-Russia Inter-governmental Commission on Trade, Economic, Scientific, Technological and Cultural Cooperation (IRIGC-TEC), which includes 15 Working Groups and 6 Sub-Groups.

  - The India-Russia Strategic Economic Dialogue (IRSED) also plays a vital role.

- **Multilateral engagement:** India & Russia cooperate closely at several multilateral platforms such as the UN, G20, BRICS & SCO.

  - India's Presidency of the G20 & SCO in 2023 afforded the opportunity for officials and ministers of both countries to meet on the sidelines of various events in India

- **Defence:** Bilateral projects include the supply of S-400, licensed production of T-90 tanks and Su-30 MKI, supply of MiG-29 and Kamov helicopters, INS Vikramaditya (formerly Admiral Gorshkov), production of AK-203 rifles in India and BrahMos missiles.

Source :Air

DELAY IN REPORTING BIRTHS AND DEATHS DATA

Context

- The Civil Registration System (CRS), to register births and deaths is facing glitches that have led to delays in issuance of birth and death registration certificates.

Civil Registration System (CRS) App

- The mobile app, prepared by the **Registrar General and Census Commissioner of India (Ministry of Home Affairs),** is expected to significantly reduce the time required for the registration of births and deaths.

- According to the **Registration of Births and Deaths (Amendment) Act, 2023**, all reported births and deaths in the country occurring from **October 1, 2023** are to be digitally registered.

- **The digital birth certificates** will be a single document to prove the date of birth for various services such as admission to educational institutions, government jobs and marriage registration.

- The centralized database will also help update the **National Population Register (NPR),** ration cards, property registration and electoral rolls.

National Population Register (NPR)

- NPR is the first step to the creation of the National Register of Citizens (NRC), as per the Citizenship Act.

- NPR, first collected in 2010 and updated in 2015 through door-to-door enumeration, already has a database of 119 crore residents.

Challenges in Implementation

- **Delayed Reporting by Hospitals:** Hospitals and healthcare institutions are not uploading data in real time, causing bottlenecks.

- **Technical Glitches:** The digital system requires seamless integration across states and facilities, which is not yet fully operational.

- **Training Issues:** Local registrars and hospital staff require digital training and infrastructure support to ensure accurate reporting.

Way Ahead

- **Data Privacy:** Robust cybersecurity measures must be put in place to protect sensitive data shared across multiple databases.

- **Monitoring:** Periodic audits and accountability mechanisms for non-reporting or delayed reporting institutions.

- **Strengthening Institutional Capacity:** Training programs for hospital administrators and registration officials on digital platforms.

The Registration of Births and Deaths (Amendment) Act, 2023

- The act was amended to the **Registration of Birth and Death Act 1969.**

- **Database of births and deaths:** The Registrar General, India (who may issue general directions for registration of births and deaths) will maintain a national database of registered births and deaths.

  - The Chief Registrars (appointed by states) and Registrars (appointed by states for local area jurisdiction) will be obligated to share data of registered births and deaths to the national database.

- **Connecting database:** The national database may be made available to other authorities preparing or maintaining other databases. Such databases include: **National Population Register (NPR)**, electoral rolls, ration card, and any other national databases as notified.

- **Use of birth certificate:** The digital birth certificates issued under this system will become a single document to prove the date of birth for various services,

  - admission to an educational institution,

  - preparation of voter lists,

  - appointment to a government post, and

  - any other purpose determined by the central government.

- **Digital records:** All reported births and deaths in the country are to be digitally registered.

Source: TH

INDIA NEEDS AN ECOSYSTEM THAT BETTER ENABLES DEEP-TECH INNOVATION

In News

- At Startup Mahakumbh, Commerce Minister Piyush Goyal criticized Indian startups for focusing on consumer-centric ventures like food delivery and boutique brands.

  - He contrasted this with **China's emphasis on high-tech** areas such as EVs, AI, and semiconductors.

Do you know?
- Startup Mahakumbh is a landmark event that showcases innovation and entrepreneurship in India.
- The **theme 'Startup India @ 2047**: Unfolding the Bharat Story.'
- It aims to promote global exposure and collaboration, drive innovation, and position India as a global startup hub by 2047.

Comparison with china

- **Indian** start-ups focus on food delivery apps, online services like betting, and influencer-driven content.
  - India lacks significant intellectual property (IP) in cutting-edge sectors, unlike China.
  - India lacks a globally competitive AI model and is still in the process of evaluating proposals.
- **Chinese** start-ups are focused on electric vehicles (EVs), battery technology, AI, robotics, and infrastructure.
- China is a global leader in electric mobility and it leads in AI with Deepseek, showing that an effective AI model can be built at a fraction of the expected cost.
- China has over 6,000 deep tech start-ups, which have raised nearly $100 billion in venture capital and private equity.

Challenges for Indian Start-ups

- **Innovation Deficit:** India is not fostering deep-tech innovation at the same pace as other nations.
  - Despite Indian talent succeeding globally (e.g. Google, Microsoft, Tesla), local innovation remains limited.
  - India ranks 39th in the Global Innovation Index 2024; China is at 11th — highlighting a major gap.
- **Funding Gap:** India invested $160B in tech from 2014–2024 vs. China's $845B.
  - **90% of the Indian population lacks financial flexibility** for discretionary spending, restricting these companies' growth.
- **Weak Education/Research**: Many engineers are unemployable; universities lack global research recognition.
- **Brain Drain:** Top talent moves abroad due to better opportunities.
- **Risk-Averse Venture capital (VC) Culture**: Indian VCs prefer low-risk consumer apps over long-gestation deep-tech.

- **Limited presence :** Many Indian start-ups like Flipkart, Zomato, and Swiggy are primarily focused on domestic markets, limiting their global potential.
  - India has made strides in smartphone assembly but remains dependent on Chinese parts for tech manufacturing.

Opportunities

- India is the **third-largest startup ecosystem** in the world with 1.57 lakh+ startups recognized by DPIIT (as of Dec 31, 2024).
- The country hosts 100+ unicorns, driving innovation across multiple sectors.
  - Major cities like Bengaluru, Hyderabad, Mumbai, and Delhi-NCR lead the startup boom.
- **Tier II & III Cities** contribute over **51% of startups**, showing strong grassroots entrepreneurial growth.
- Government initiatives such as **Startup India** have played a crucial role in fostering this growth and empowering future entrepreneurs.
- India has made significant contributions in the **Software-as-a-Service (SaaS)** sector, with companies like Zoho, Freshworks, TCS, and Infosys.
- India has also set a global template with the **Unified Payments Interface (UPI),** though monetization remains a challenge.
  - Paytm and PhonePe revolutionized digital payments.
- Startups like Digantara, Skyroot, and Agnikul show promise in space tech.
- Cybersecurity startups are emerging, though often acquired too early.
- **Deep-tech investment rose 78% in 2024**, reaching $1.6B.

Conclusion

- India has progressed in sectors like SaaS and fintech but lags behind China in deep tech and global reach.
- Startups need stronger support in funding, infrastructure, and innovation. Long-term-focused political leadership is essential for sustained growth.
- To emerge as a global tech leader, India must transition from consumer-driven ventures to foundational, deep-tech innovation through bold investment, policy support, and a culture shift.
- India must focus on sectors like AI, smart manufacturing, medtech, climate tech, defence, and computing.

Source :IE

WEAPONIZATION OF TRADE AND FINANCE

Context

- The Defence Minister of India highlighted the erosion of global order and multilateralism, driven by the weaponization of trade, finance, and emerging technologies.

What is Weaponization of Trade and Finance?

- Weaponization of trade and finance refers to the **strategic use of trade policies and economic measures** by countries to **exert political or economic pressure** on others.
- This practice departs from the traditional role of trade and finance as instruments of cooperation and globalization.
- **Tools of trade weaponization:** Tariffs and Sanctions, Restrictions on exports of critical technologies or materials, Currency Manipulation etc.

Recent incidents of trade and finance weaponization

- **Tariff War 2.0:** The ongoing US-China trade friction has seen high tariffs and investment restrictions being imposed to gain strategic advantage and secure supply chains.
- **Financial Sanctions:** The West's exclusion of Russia from the **SWIFT network** and freezing of its central bank reserves post-Ukraine invasion is a classic case of financial weaponization.
- **Technology Denial Regimes:** Restrictions on semiconductor exports to China and controls over AI or quantum computing hardware highlight technology weaponization.

Consequences of Economic Weaponization

- **Erosion of Multilateral Institutions:** The WTO's dispute settlement mechanism is losing credibility amidst unilateral tariff impositions.
  - Institutions like the **IMF or World Bank** face legitimacy crises as they're perceived as Western-dominated.
- **Decline of Rules-Based Global Order:** Growing unilateralism is leading countries to ignore international norms and treaties in favour of national interest.
- **Economic Fragmentation:** The world is witnessing "geo-economic decoupling" with regional trading blocs, such as RCEP or IPEF, gaining importance.
- **Global Inequality:** Supply chain disruptions, like those witnessed during the pandemic and Ukraine war, have further deepened global inequalities.

Steps taken against trade weaponization

- **Regional Trade Agreements:** Countries are forming regional trade agreements (RTAs) to enhance cooperation and reduce reliance on major economies.
  - Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP),
  - Regional Comprehensive Economic Partnership (RCEP) etc.
- **Alternative Financial Systems:** Russia's SPFS, China's CIPS, and proposals for a BRICS payment system are alternatives to the SWIFT network.
  - Development of **Central Bank Digital Currencies (CBDCs)** is being pursued to gain monetary independence.
- **Mineral Security Partnership (MSP)** to diversify and stabilize global supply chains of Critical Minerals.
- **Reform of the WTO:** Ongoing discussions to reform the World Trade Organization (WTO) aim to enhance its dispute resolution mechanisms and address the challenges posed by unilateral trade actions.
- **Indo-Pacific Economic Framework (IPEF):** It serves as a countermeasure to economic coercion by countries that use trade as a tool of influence, promoting a more equitable and rules-based trading system.

Concluding remarks

- The weaponization of trade and finance signals a new era of geopolitical contestation where economic interdependence is no longer a guarantee for peace.
- For India, which has always championed multilateralism and global cooperation, navigating this fractured world order requires strategic clarity, resilient institutions, and a robust technological foundation.

Source: TH

═══ NEWS IN SHORT ═══

JATRA UTSAV

Context

- Tripura is set to organise a Jatra Utsav with the aim of preserving its traditional art forms, culture, and heritage.

About

- **Jatra or Jatrapala** is a popular **traditional Bengali folk theatre form**, usually performed in open-air arenas, allowing interaction with the audience.

- ◆ The word **'Jatra' means "journey,"** indicating its origins as a travelling theatrical performance.
- **Region:** Jatrapala is popular in **West Bengal, Odisha, Assam, and Tripura**, reflecting the region's cultural and linguistic heritage.
- **Features:** It combines dramatic **storytelling, music, dance, and social commentary**.
  - ◆ Performances are marked by elaborate costumes, dramatic gestures, loud dialogues, and often moral messaging.
- **Theme:** Mythological stories, historical tales and contemporary social issues.

Source: IE

MAHAVIR JAYANTI

In News

- Mahavir Jayanti is being celebrated with great devotion across India.

Mahavir Jayanti

- It commemorates the birth of **Lord Mahavir (the 24th and last Jain Tirthankar)**
- It is a significant occasion for followers of Jainism to remember and embrace the core principles taught by Lord Mahavir.
- The celebration involves prayers, meditation, and compassionate deeds, serving as a reminder to lead an ethical life and show kindness to all living beings.
- It is primarily observed by Jains in India, Nepal, the US, and the UK.

Vardhaman Mahavira

- He has been accepted as the founder of Jainism.
- He was the **24th and the last Thirthankara (teacher)** of the Jains.
- He was born in 599 BC at Vaishali, the capital of the Vajji tribe.
  - ◆ His father Siddhartha was the chief of a clan of Kshatriyas

- He left worldly life at the age of thirty and led a very hard life to gain true knowledge.
- After he attained Truth, he was called Mahavira.
  - ◆ He strongly believed in the importance of **celibacy or brahamcharya**

Philosophy and Teachings

- He rejected the belief in **God, rituals, and the caste system**, advocating for equality among all people.
- He taught his followers four vows: **non-violence, truthfulness, non-attachment, and non-stealing.**
- He emphasized the path of Right Belief, Right Knowledge, and Right Conduct as the way to reach Moksha, or liberation from the cycle of birth and rebirth.
- His core principle was Ahimsa (non-violence), leading to practices like vegetarianism and extreme care to avoid harming even small life forms.
- Mahavira spent his life preaching in regions like Anga, Mithila, Magadha, and Kosala, and died in 527 BC at Pawapuri.

Do you know?

- The word Jaina is derived from a Sanskrit word jina, meaning the **'conqueror'**, i.e., conqueror of passion and desire.
  - ◆ The last tirthankara, **Mahavir** is called Jina as he conquered his passion after the attainment of the supreme realisation
- Mahavira's teachings were widely accepted due to his use of the common language, **Ardha Magadhi**.
- Jainism later split into two sects**: Digambaras (sky-clad) and Swetambaras (white-clad).**
- Kings like **Bimbisara and Ajatsatru** adopted Jainism, and Jain art, architecture, and literature flourished under their patronage.

Source: AIR

MAHATMA JYOTIRAO PHULE ANNIVERSARY

In News

- Prime Minister Narendra Modi and Union Home Minister Amit Shah paid tribute to social reformer **Mahatma Jyotirao Phule** on his birth anniversary.

Jyotiba Phule

- He was a pioneering social reformer who challenged caste discrimination, promoted education, and worked for the upliftment of

women and the oppressed in India.

- **Early Life:** He was born in a Mali (Gardner) family of Poona in 1827.
  - The Malis belonged to'shudra Varna and were placed immediately below the peasant caste of Maratha-kunbis of Maharashtra.
  - His resolve to fight casteism solidified after he was humiliated at a Brahmin wedding in 1848.
  - He was inspired by social thinkers and missionaries like Cynthia Farrar and Thomas Paine.
- **Key Contributions:** In 1848, Phule and his wife Savitribai Phule started **India's first school for girls**, later establishing 18 more.
  - He also started night schools for workers and farmers.
  - He founded in 1873, **"Society of Truth-Seekers"** which was an inclusive, anti-caste movement providing an alternative to upper-caste-led reforms like Brahmo Samaj and Arya Samaj.

Social Reforms

- He opposed **upper-caste dominance** in reform movements and clashed ideologically with figures like **Bal Gangadhar Tilak**.
  - Yet, he displayed compassion, helping bail out Tilak during imprisonment.
- He saw the Sepoy Mutiny not as a fight for freedom but a threat of return to Peshwa-era Brahminical rule, which oppressed the Dalits.
- In **Gulamgiri**, he compared caste oppression in India to slavery in America, calling out Brahminical dominance as a system of "selfish superstition and bigotry."
- He pushed for **compulsory primary education** and incentives like scholarships and prizes to attract poor families to send their children to school.
- In his writings like **Sarvajanik Satya Dharma Pustak,** he rejected sectarian religion and emphasized universal human equality, criticizing religious dogma and caste-based supremacy.
- In **Shetkaryanche Asud,** he urged the government to educate farmers, promote irrigation, improve soil fertility, and involve the military in building infrastructure.
- He **argued against polygamy** and pointedly questioned double standards in religion regarding gender roles and marriage.

Legacy

- Phule rejected the divine sanction of caste, questioned religious orthodoxy, and envisioned a just, rational, and egalitarian society.

- His fearless and compassionate activism laid the foundation for social justice movements in India and continues to inspire progressive thought today.

Source: PIB

CHITTORGARH FORT

Context

- The Rajasthan government informed the Supreme Court that it is "actively considering" a complete ban on mining activities up to 10 kilometres from the outer boundary of the historic Chittorgarh Fort.

About

- Chittorgarh Fort was constructed in the 7th century AD by Chitrangada Mori, a ruler of the **Maurya dynasty of Rajasthan.**
- In 728 AD, it was captured by the **rulers of Mewar,** who made it their capital and turned it into a center of Rajput power and resistance.
- The fort gained prominence as a s**tronghold of Mewar's pride and sovereignty.**
- As per **Malik Muhammad Jayasi's epic poem Padmavat**, **Alauddin Khilji besieged the fort** in his quest to obtain Queen Padmini, the wife of Rana Ratan Singh.
- It was declared a **UNESCO World Heritage Site in 2013** under the Hill Forts of Rajasthan.

- The fort is accessed through seven massive gates (pols). It is surrounded by thick stone walls with strong ramparts for defense.
- Internal complex include **Vijay Stambh (Tower of Victory) and Kirti Stambh (Tower of Fame).**
  - **Vijay Stambh (Victory Tower)** – Built by Rana Kumbha to celebrate victory over Malwa; 9 stories tall, intricately carved.
  - **Kirti Stambh (Tower of Fame)** – Dedicated to Jain Tirthankaras; adorned with Jain sculptures.
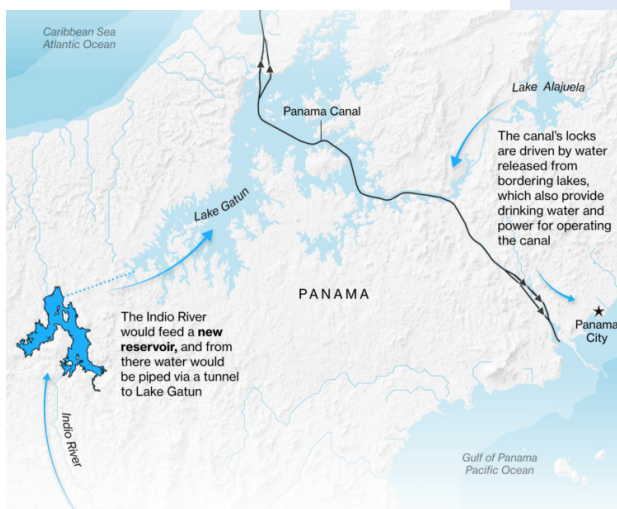
Source: IE

PANAMA CANAL

In News

- Panama confirmed that the United States recognizes its sovereignty over the Panama Canal, despite recent tough rhetoric from the US.
  - The two nations also announced new agreements aimed at deepening U.S. military training in Panama.

Panama Canal

- It is an artificial waterway connecting the Atlantic and Pacific Oceans.
- It is vital for global trade, with 6% of maritime world trade passing through it.
- It was opened in 1914 by the U.S., the canal symbolized American technological and economic power.
  - The U.S. controlled the canal until December 31, 1999, when it was handed over to **Panama under the Torrijos-Carter Treaties**.
  - The U.S. retains the right to defend its neutrality and ensure priority passage during military emergencies.

Do you know?

- The Panama Canal Treaty abolished the Panama Canal Zone and transferred control to Panama, while the Permanent Neutrality Treaty declared the canal neutral, allowing vessels from all nations to use it.

Source: TH

VITAMIN D DEFICIENCY

In News

- A recent study has revealed that one in five Indians suffers from Vitamin D deficiency.

More about the News

- The study found that Vitamin D deficiency is particularly severe in the eastern region of the country.
- Urban populations due to their greatly indoor-centric lifestyles and limited exposure to sunlight, are more affected than their rural counterparts.

Vitamin D

- Also known as calciferol, is a fat-soluble vitamin vital for overall health.
- Ultraviolet B (UVB) rays from the sun help the skin produce Vitamin D naturally and other dietary sources include eggs, meat or fish.
- Some dairy products, cereals, and plant-based milks are fortified with Vitamin D.
- It regulates calcium and phosphate metabolism in the body.
- Deficiency of Vitamin D could lead to Osteomalacia (softening of bones), Osteoporosis (loss of bone density) and Rickets in children.

Source: IE

DHARAVI REDEVELOPMENT PROJECT (DRP)

Context

- The Maharashtra government has approved the allocation of **256 acres of salt pan land** in Mulund, Kanjurmarg, and Bhandup for the **Dharavi Redevelopment Project (DRP).**

Dharavi Redevelopment Project (DRP)

- Dharavi, located in central Mumbai, is one of the largest informal settlements in Asia, spread over **240 square kilometres.**
- The DRP aims to transform the slum into a planned urban settlement with proper housing, sanitation, and infrastructure.
- The redevelopment is being implemented under a **public-private partnership (PPP) model.**

Significance

- **Decent Housing & Basic Services:** Contributes to **SDG 3 (Good Health and Well-being)** and **SDG 6 (Clean Water and Sanitation)** by providing better housing, water supply, and sanitation infrastructure.
- **Reducing Inequality:** By offering housing to ineligible dwellers, the project supports **SDG 10** (Reduced Inequalities), aiming to bridge social and spatial disparities.
- **Sustainable Urbanization:** The DRP directly contributes to **SDG 11** (Sustainable Cities and

Communities) by turning informal settlements into resilient, inclusive, and well-planned neighborhoods.

Source: TH

VIZHINJAM INTERNATIONAL SEAPORT

In News

- MSC Türkiye, one of the world's largest and most fuel-efficient container ships, docked at **Vizhinjam International Seaport,** marking a major milestone in India's maritime history.
    - This is the first time such a giant container ship has docked at any Indian or South Asian port.

Vizhinjam International Seaport

- It is an International Transhipment Deepwater Multipurpose Seaport and is an ambitious project taken up by the Government of Kerala.
- It is designed primarily to cater container transhipment besides multi-purpose and break bulk cargo.
- It is currently being developed in a landlord model with a Public Private Partnership component on a design, build, finance, operate and transfer ("DBFOT") basis.
- It is India's first deepwater transshipment port, with a natural depth of over 18 meters, expandable to 20 meters.

Source :IE

NATIONAL INVESTIGATION AGENCY (NIA)

Context

- A Delhi court sent 26/11 accused Tahawwur Rana to National Investigation Agency (NIA) custody, after his extradition from the U.S.

National Investigation Agency (NIA)

- **Established under:** NIA Act, 2008 after 26/11 Mumbai attacks.
- **Function:** Central counter-terrorism law enforcement agency.
- **Mandate:** Investigates offences affecting India's sovereignty, security, international treaties, etc.

- **NIA (Amendment) Act, 2019:**
    - **Jurisdiction extended:** Can investigate scheduled offences committed outside India involving Indian citizens/interests.
    - **Expanded mandate:** Covers offences under Explosive Substances Act, 1908 Human Trafficking, Cyber Terrorism Arms Act, 1959.
- **Governing body**: Ministry of Home Affairs, Government of India
- **Headquarters:** New Delhi
- **Special Courts:** Total NIA Special Courts: 51
    - Exclusive NIA Courts: 2 (Ranchi & Jammu)

Source: TH

SEA LIONS

In News

- An algal bloom off the coast of California has caused **sea lions** to become unusually aggressive towards humans.

Sea lions

- They are **pinnipeds** (**"fin-footed" mammals**).
- They are characterized by a coat of short coarse hair that lacks a distinct undercoat
- They have large, elongated, mostly skin-covered fore flippers.
- They are noisy and bark loudly and they can rotate their hind flippers to "walk" on land, making them more mobile on shore.
- They are highly social, forming large groups (herds or rafts) of up to 1,500 individuals.

Latest Study

- Their recent aggression is due to a **neurotoxin** called **domoic acid,** secreted by the **algae Pseudo-nitzschia**.
    - This toxin affects sea lions' brains, causing stress, aggression, muscle spasms, and even permanent brain damage.
- The algal bloom is driven by factors like upwelling, where nutrient-rich waters rise to the surface due to high-speed winds (linked to global warming), and effluent runoff containing nutrients that fuel the growth of toxic algae.

Source: DTE